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The Decline in Bus Services in English PTE Areas: the Quest for a Solution

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Executive Summary

The Problem

1. This report is concerned with the decline in bus use in recent times in English PTE areas, the former Metropolitan county areas. Overall bus use has declined by 50 per cent in these areas in the last 20 years, while fares have risen and service levels, measured in terms of miles operated, have fallen. The decline in demand has been faster than in the Shire counties, where bus use has also fallen, and it contrasts in particular with the situation in London, where bus use has increased.
2. The decline in bus use in Britain's biggest cities outside London is at direct odds with national and local government transport policy. Buses are the only public transport mode available to many people, and particularly those without access to a car. As traffic congestion rises, buses are seen as an answer that can provide an alternative to increasing car use. And this has been reflected in Central Government policy objectives which see increased use of buses as an important component of overall transport policy. In particular, the current objective is to achieve a 12 per cent increase in bus and light rail use in England, and in each region of England, over the ten year period up to 2010.
3. The policy framework to deal with declining bus use in PTE areas is currently subject to intense debate. In London the policy framework is settled. Provision of bus services is the responsibility of the Greater London Authority operating through Transport for London. There is a successful franchising framework that has delivered strong growth in bus use with services provided by profitable private sector operators. In the other large cities responsibility for bus services is fragmented. Private sector operators choose which services they wish to operate, and can set their own fares. Competition policy rules restrict the extent that the operators can co-operate through agreeing frequencies. The Passenger Transport Executives can fill gaps in the commercial network by competitive tendering of supported services, they provide information on the various bus services available, and they are responsible for concessionary travel arrangements. But they, and the operators, have not been able to arrest or reverse the decline in bus use.
4. Measures introduced in the 2000 Transport Act have also not proved successful in reversing decline. Voluntary bus partnerships have been introduced in many areas, but their impact has been mixed, and there are often difficulties in securing agreement between the different parties. Quality Contracts, though permitted by the 2000 Act, are seen by Central Government as a last resort. Opposed by many bus operators, proposals are still only at the planning stage.

Structure and Performance of the Bus Operators in the PTE Areas

5. This report considers whether the present regulatory framework in the PTE areas is delivering bus services that meet passengers' needs. Our report shows that the industry has become increasingly concentrated in the hands of five large operators, who operate about 90 per cent of mileage in PTE areas. In addition, concentration in individual PTE areas is even more concentrated with major operators. This is reflected in little direct competition between operators. Though there are some instances of competition

between commercial operators, we conclude that in the commercial market the impact of competition is generally rather weak. Though there is more competition in tendered markets in some areas, these markets account for a much smaller proportion of the total PTE area bus market, and the smaller operators providing the competition in this market are often providing niche services. In addition, competition can often serve to reduce rather than increase the quality of service that passengers receive.

6. Bus operators have been faced with declining demand and increasing costs of providing bus services, especially with rising fuel and labour costs. Given that demand for bus services is generally, at least in the short run, price inelastic, they have reacted by increasing fares, sometimes more than once a year. With managers' objectives often expressed as rates of return on revenue earned, they have also reduced service levels when fare rises have not restored profitability. The age of the fleet has also increased, and this does appear to have had some 'knock-on' effect on service reliability.
7. As part of our work we have carried out a detailed analysis of bus operator profitability at the PTE level. We have used techniques for estimating economic rates of return on capital employed which NERA developed in work for the Commission for Integrated Transport and Transport for London. Our calculations take account of the distortions in published accounting information caused by the use of historic cost depreciation, together with the use of vehicle leasing arrangements by some companies. In conclusion we show that the five largest bus companies are operating profitably in the PTE areas, with some excess profit margins over the cost of capital employed. Though these large companies have many other types of transport interest, we expect that they will continue to have an interest in operating in PTE areas, but that they would continue to increase fares and reduce services in the face of declining demand for their services.
8. Our analysis of the industry shows that present arrangements are not working well. While bus operators have been able to maintain profit margins so that their bus operations in PTE areas still contribute to their groups' overall financial success, bus passengers have suffered from the fares increases and the declining service levels. Changes in services provided and unreliability of services are additional problems for travellers. Bus services are not providing a high quality alternative to the private car as the Government had hoped they would do, and so motorists do not have incentives to switch to the only public transport mode that may be available to them.

Experience with Voluntary Partnerships

9. Voluntary partnerships in the form of Quality Bus Corridors have been introduced in all the PTE areas. Experience has been mixed. Better buses and better waiting facilities have led to increases in bus use, though we have found that evaluation of the impact on passenger numbers has been rather patchy. There have often been difficulties in securing effective bus priority improvements from the districts, while operators may not always meet commitments in regard to improvements in the vehicles operated. The inability to agree frequency levels between operators, and to include limitations on fares has significantly constrained the value of such partnerships. Other than promoting vehicle replacement and upgrading on the corridors covered by the partnership, they have not generally led to more wide-ranging improvements in

quality. The PTEs have increasingly been looking at alternatives in the form of Quality Contracts as a means of achieving a more comprehensive approach to raising quality and providing a platform for growth. Whilst statutory partnerships have yet to be implemented (though several PTEs have come close) they do not tackle the fundamental weaknesses associated with partnership arrangements. One of these weaknesses is that partnership-based investment must meet both commercial and public policy tests. It would appear that many parts of the network currently do not pass the first of these tests.

Prospects with the Status Quo

10. We do not believe that voluntary or statutory partnerships can, on their own, reverse the decline in bus use in the PTE areas. Analysis of the trends in bus use, service levels and real fares in each of the PTEs over the last ten years shows a common experience of declining demand, increasing fares, and reduced service levels. Future demographic changes as the population ages will not have a major impact. While we have not been able to model future trends with a formal model (and have found that no such formal model is yet in use to do so), we believe that bus use in the former metropolitan counties, the six biggest conurbations in England outside London) will continue to decline. This constitutes a major challenge for local and central government, in the context of a national policy to achieve patronage growth in every English region.
11. Over the ten years from 1994/95 to 2004/05 bus patronage in the different PTE areas has fallen on average by 20 per cent, while service operated has also fallen on average by slightly over 20 per cent. Projecting the annual growth rate in real fares over ten years rather than eight, real fares have on average risen by 19 per cent. Projecting these numbers forward gives an estimate that over the ten years from 2004/05 to 2014/15 bus patronage will again fall by 20 per cent, fares will rise by about 20 per cent, and service levels will fall by around 20 per cent. Free concessionary travel will have blunted the decline in 2006, but not in those PTE areas where travel by concessions was already free (Merseyside) or free for most potential concessionary travellers (West Midlands).
12. Past decline has taken place in the context of the relatively weak partnership arrangement in parts of all of the PTEs, as we have described above. Even if these arrangements continue to be developed in broadly their current form, there appears to be little or no prospect that the further declines we have suggested may take place over the decade ahead will be avoided. Whilst QCs in themselves will not stop or reverse this decline, there is a possibility that the framework will provide a basis within which other forms of pro-bus interventions may be deliverable. This will probably require additional funding, and significant relative improvement of bus speeds relative to car, together with service reliability improvements, particularly at peak periods.

1. Introduction: the Policy Context

This report has been prepared for pteg (which represents the six Passenger Transport Executives) by NERA Economic Consulting. We have been asked to look at the future prospects for bus services in the English PTE areas (that is to say, the former Metropolitan County areas, or ‘Mets’) in a ‘status quo’ situation where Quality Contracts (QCs), introduced in the 2000 Transport Act, are not implemented. Consideration of what would happen in the absence of the introduction of QCs is necessary to provide a counter-factual that can be used by DfT in the appraisal of any particular QC proposal, to provide a ‘do-nothing’ option against which specific proposals for Quality Contracts could be appraised.

Bus patronage in the Mets has been declining for many years, and this long-term decline has continued over the last decade at a faster rate than in the English shire counties. In contrast bus use in London has increased markedly over the last decade with the Mayor of London’s pro-bus strategy. As a consequence of these very different patterns in London versus the rest of the country overall bus patronage in England has remained stable. This means that whilst overall government targets for increased bus use look likely to met, the achievement of the element relating to ‘growth in every English region’ will rely heavily on the impact of new concessionary policies set by the government. The target was first set out in the Government’s Ten Year Transport Plan, which included a target of increasing bus use by 10 per cent by 2010. This target has been revised twice: in 2002, and in 2004, when it was revised to secure a combined increase of 12 per cent in bus and light rail use over the ten years to 2010, with growth to be achieved in every region. The recent review by the National Audit Office and Audit Commission draws attention to the failure to meet growth targets with regard to bus use.¹

In this report, we examine the bus market in the PTE areas. In the rest of this introductory chapter we compare the decline in patronage in the PTE areas with trends in patronage in other areas of England, show how fares and service levels have changed in the different areas, and provide a brief summary of the different options permitted by legislation. The rest of the report is structured as follows:

- In Chapter 2 we consider how well the present regulatory framework and consequent structure of the industry has worked to provide travellers in PTE areas with adequate bus services that can contribute to development of good public transport facilities in major urban areas outside London and meet transport and other objectives. The chapter contains a review of the structure of the bus industry in PTE areas, considers the increased concentration of the industry in each PTE area, the nature of competition in both commercial and tendered markets, the way operators have responded to declining demand, and levels of operator profitability.
- In Chapter 3 we review the experience with Quality Bus Partnerships (QBPs), showing how they have often not delivered what might have been expected, and drawing lessons from this experience. A detailed review of partnership schemes in each of the PTE areas is provided in Appendix A.

¹ National Audit Office and the Audit Commission, *Delivery Chain Analysis for Bus Services in England*, December 2005, page 24.

- Chapter 4 draws on various sources to review demand trends in each of the PTE areas to provide NERA's broad assessment of how bus patronage might be expected to develop in PTE areas in the absence of QCs. This section draws on a detailed analysis of patronage, fare and service levels provided in each PTE area which is set out in Appendix B.
- Chapter 5 draws together NERA's overall conclusions on the current policy framework and the prospects for the future under it.
- Annex C considers how demand for bus services in PTE areas can be modelled. We discuss the (still-developing) 'National Bus Model' and its application to demand forecasts in PTE areas. We also provide a review of the SIMBUS model developed by Steer Davies Gleave for PTEs, and the role of the Leeds Quality Bus Model (QBM) developed for DfT by the Institute for Transport Studies at Leeds for appraising quality improvements to bus routes.

1.1. Deregulation and Privatisation

The biggest change to the bus industry in Great Britain occurred with deregulation of services outside London in 1986. From October that year services were deregulated and operators no longer needed route licences to operate individual services. In addition, local authorities had powers to tender gaps in commercial services that they identified and were prepared to support financially to meet social needs. Deregulation was accompanied by a process of privatisation. National Bus Company and Scottish Transport Group subsidiaries were sold to the private sector. London Transport's bus operations were split into smaller companies and also sold to the private sector. In the Mets, the PTEs were initially obliged by central government to re-establish their bus operations as arms-length companies. However, in the 1990s central government required that these too be privatised. Most, but not all, other local authorities which operated their own bus companies have disposed of them to private sector buyers.²

In the twenty years since deregulation, there has been a significant amount of industry consolidation, with many of the smaller independent bus companies being taken over by the emerging 'big five' operators.³

There was one exception to the newly created open market – London. Faced with resistance to complete deregulation, the government chose to set up London Regional Transport in 1984. This was later (1989) split into London Underground Ltd and London Buses Ltd.⁴ London Regional Transport acted as a coordinating body. It was responsible for designing and specifying the bus network for London, but the private sector delivered the service through the award of franchises. These franchises were, and still are, awarded on the basis of competitive tenders. The process of awarding of franchises was completed by December

² The 2005 issue of *Bus Industry Monitor* identifies only 17 remaining municipals. Many were small, but a number of the operators in the largest cities outside PTE area remain in municipal ownership, including Cardiff, Lothian (Edinburgh) and Nottingham.

³ These are FirstGroup, Stagecoach, Go Ahead, Arriva and National Express Group.

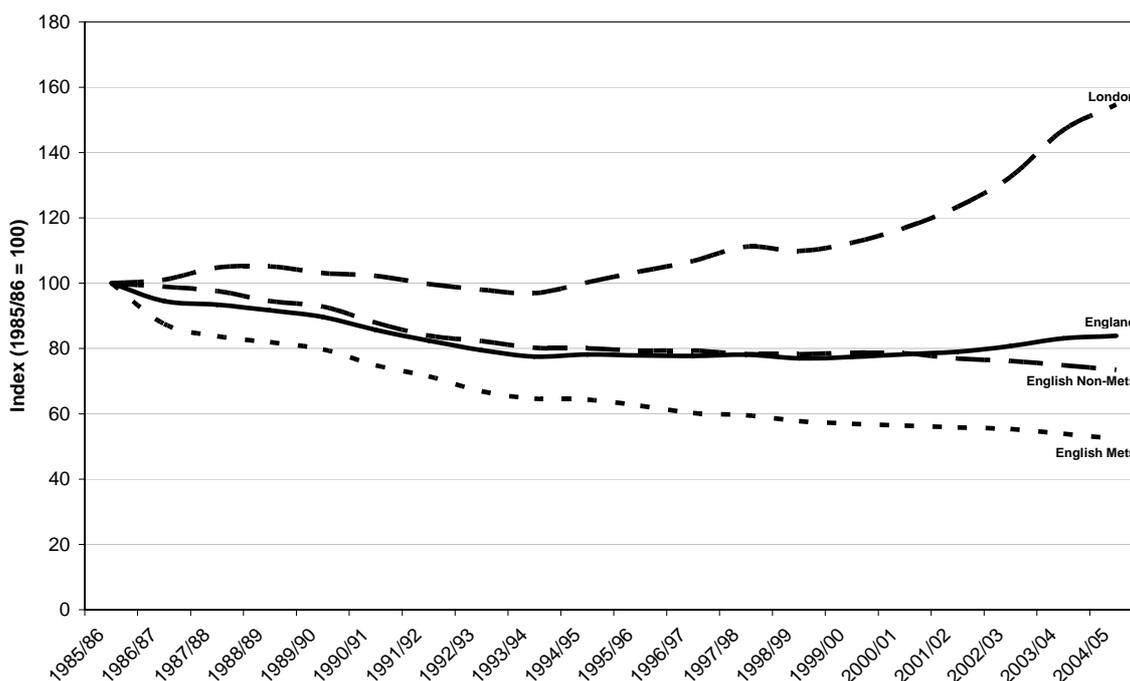
⁴ For more information on London Buses' strategic view of the future of bus services in the capital see: <http://www.tfl.gov.uk/buses/pdfdocs/busesstrategicreview.pdf>

1994. The largest market shares were awarded to Arriva, Go Ahead, First, and Stagecoach.⁵ The responsibilities of London Regional Transport were assumed by Transport for London after it was set up in 2000 to manage transport services and implement the Mayor of London’s Transport Strategy.

1.2. Decline in Bus Use: the Longer-Term Perspective since Deregulation

Figure 1.1 shows trends in bus patronage measured in terms of passenger journeys in England in the 20 year period since 1985/86. There was decline overall over the first decade, but then relative stability in the second. But the overall pattern hides very different experience in the three main areas, London, the Mets, and the Shires. Bus patronage initially held up in London and has increased in the last ten years.⁶ Patronage in the Shires has declined over the whole period. But patronage in the Mets has declined particularly rapidly, down 12 per cent in the first year shown on the graph, down 38 per cent in the first ten years, and down 48 per cent over the 19 years from 1985/86 to 2004/05.

Figure 1.1
Local Bus Services: Indices of Passenger Journeys by Area in England, 1985/86 to 2004/05



Source: *Transport Statistics for Great Britain*, 1997 and 2005 Editions.

⁵ Shares of scheduled mileage in London in the year to April 1st 2005 were as follows: Arriva 19.1 per cent; First 15.3 per cent; Go Ahead 17.5 per cent; Stagecoach 15.9 per cent; National Express 4.6 per cent; Transdev 9.6 per cent; Metroline 13.6 per cent; others 4.4 per cent. Source: London Assembly Transport Committee *Value Added?* (The Transport Committee’s assessment of whether the bus contracts issued by London Buses represent value for money) March 2006.

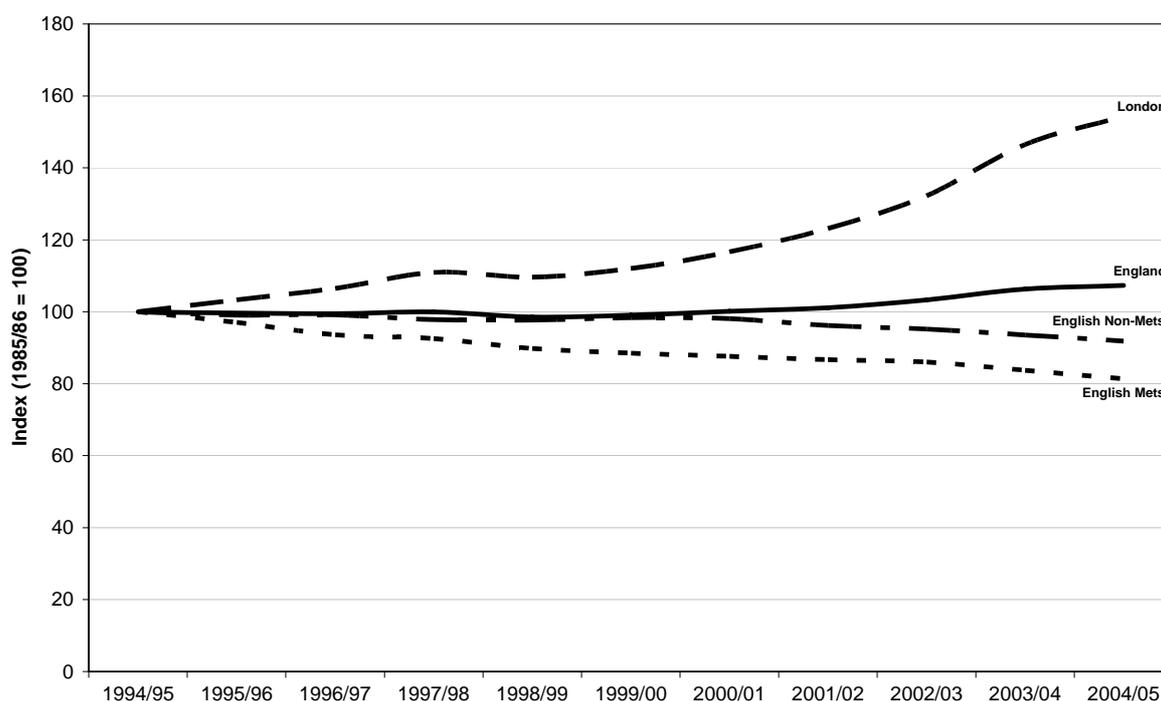
⁶ Over the ten year period since 1994/95, passenger journeys on buses in the capital have risen by more than 50 per cent, and continue to show a trend of strong growth.

1.3. The Last Ten Years: Patronage, Fares and Service Levels

We now compare trends over the last ten years.

Figure 1.2 shows patronage in the three main area types in England. This shows stability in total patronage up to 2000/01, and then some growth. But this results from growth in London and decline elsewhere. Again, decline in the Mets was greater than decline in the Shires.

Figure 1.2
Local Bus Services: Indices of Passenger Journeys by Area in England, 1994/95 to 2004/05



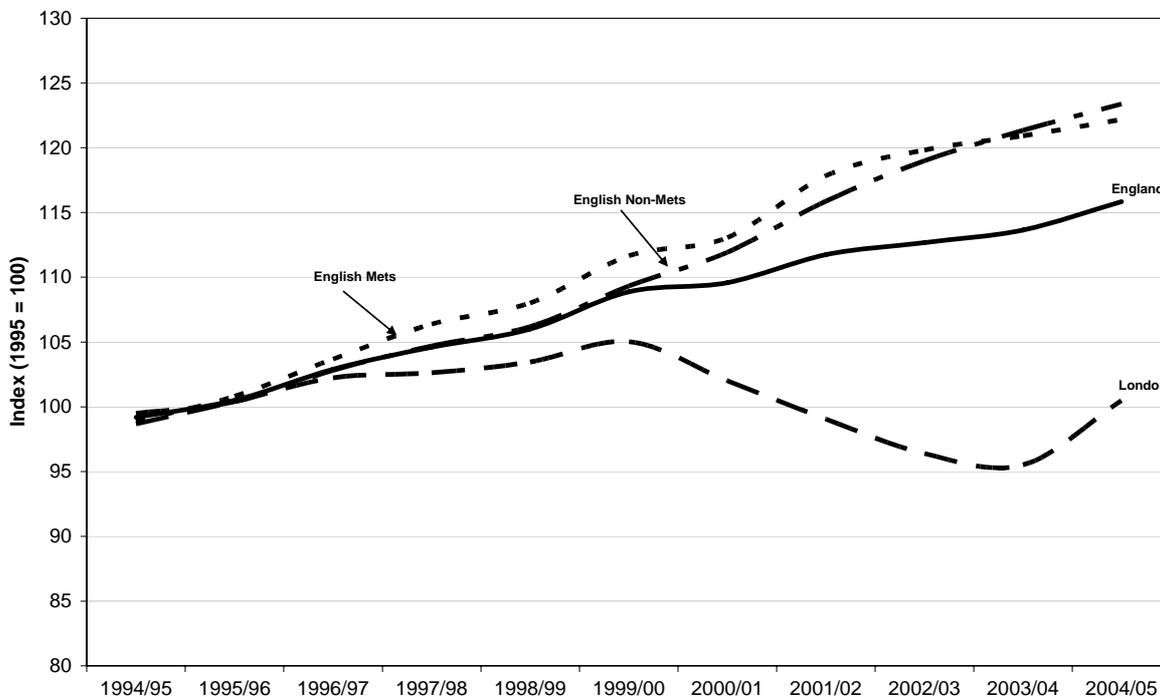
Source: *Transport Statistics for Great Britain*, 2005 Edition.

While patronage outside London has fallen, fares in real terms (that is, corrected for the impact of general inflation) have risen. This is shown in Figure 1.3. Initially fares in all areas rose in real terms, though at a slower rate in London than elsewhere. Real fares continued to rise, and at a broadly similar rate in the Mets and the Shires, but in London they fell sharply with the Mayor's bus strategy, though in the last year shown fares in London have started to rise again as financial constraints have started to bite. But in 2004/05 real bus fares in London were on average no higher than they had been ten years earlier. However, by 2004/05 real fares in the Mets and the Shires were on average over 20 per cent higher than they had been ten years previously.

The causes of these fare rises are not entirely clear. Certainly there have been increases in real fuel prices and labour costs which operators have passed on to passengers, but it appears

likely that operators have also increased fare levels to maintain profitability in the face of declining underlying demand.⁷

Figure 1.3
Local Bus Services: Bus Fare Index – Real Terms, 1994/95 to 2004/05

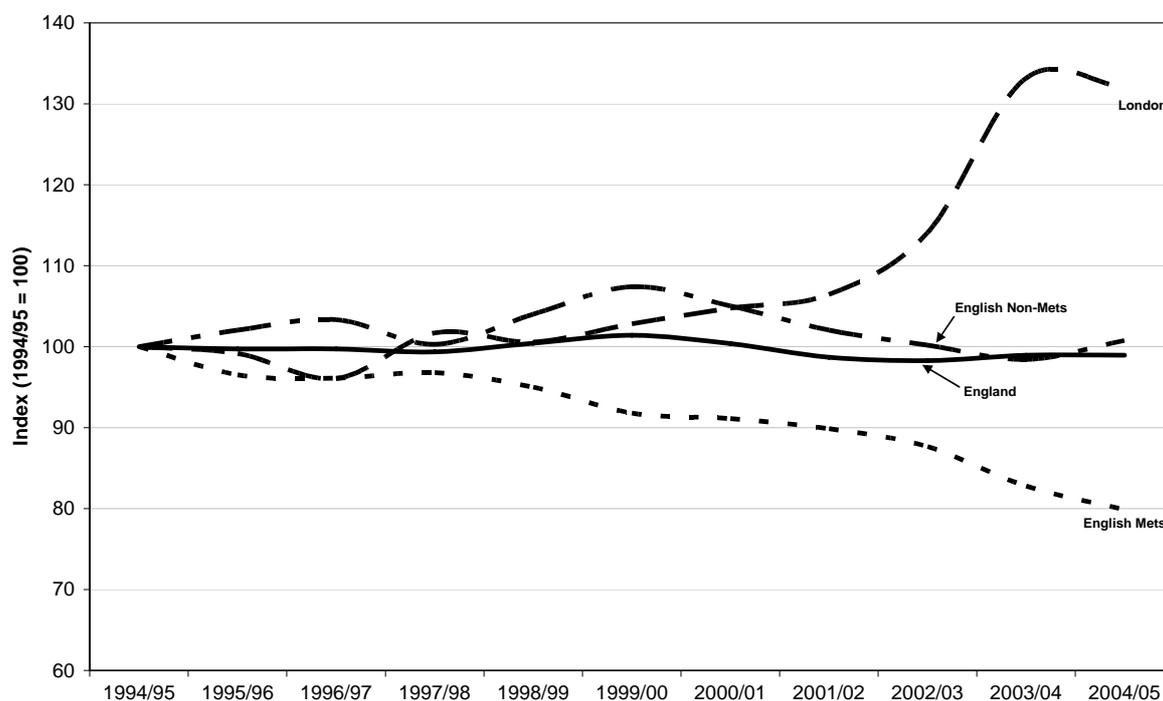


Source: *Transport Statistics for Great Britain*, 2005 Edition

Finally, Figure 1.4 shows indices of service levels in terms of vehicle-kms operated. Total service levels operated in England have remained fairly stable over the last ten years, but again the contrast between London and the rest of the country is clear. Mileage operated in London increased by 32 per cent between 1994/95 and 2002/03. Now too there is also a clear difference between experience in the Shires and experience in the Mets: in the Shires mileage has remained relatively stable over the decade, in the Mets it has fallen by 20 per cent.

⁷ If demand is inelastic (in the short run) then increasing fares will increase revenue from fares (in the short run).

Figure 1.4
Local Bus Services: Indices of Vehicle Kilometres, 1994/95 to 2004/05



Source: *Transport Statistics for Great Britain, 2005 Edition*

1.4. Policy Options

Local authorities and PTEs have two broad policy options, voluntary partnerships and statutory tools, to address the decline in bus patronage in their areas:

- **Voluntary partnership schemes** – working with other stakeholders and operators, local government bodies can engage in a range of voluntary schemes with bus operators to improve service levels and quality. These schemes, referred to as **Quality Bus Partnerships (QBPs)**, can encompass a range of policies and investments (within the confines of competition law⁸). However, as the schemes are voluntary, they are not legally binding nor enforceable by the parties involved.
- **Statutory tools** - the Transport Act 2000 provided government and local authorities with two principal legal options to engage with bus operators:
 - **Statutory Bus Partnerships (SBPs)** – Section 114 of the Act; and
 - **Quality Contracts (QCs)** – Section 124 of the Act.

⁸ See the OFT *Transport Act 2000 and The Transport (Scotland) Act 2001: Guidance on the Competition Test* document for more information.

The Statutory Bus Partnership option provides a legal framework for local authorities to engage with operators to deliver improved services but within the current deregulated environment. The primary distinction between QBPs and SBPs is the degree of formality of the arrangements. Under a QBP approach, local authorities and operators engage in a voluntary partnership without a contractual basis. By contrast a SBP sets out the contractual obligations on both parties to improve services. The improvements undertaken in both partnership options are negotiated between the parties involved. In Brighton and Hove, where a QBP has been in operation, the local authority has provided increased bus priority and improved street furniture, in return for improved frequency and product innovation from the operator. In Dundee the parties originally involved in a voluntary partnership have formalised the original QBP through the adoption of a SBP.

While parties are free to negotiate issues related to fares and service quality under both partnership options, the Transport Act does not give local transport authorities the powers to set fares or specify the frequency or timings of services as part of a SQP.

Quality Contracts represent the closest policy to that in operation in London. Under a QC framework, local authorities are responsible for specifying the network in terms of service levels and quality and have the right to set fares. The provision of this level of service then becomes the responsibility of the private sector operator with whom the local authority holds a quality contract for exclusive supply of bus services. The quality contracts would be awarded through a competitive tender, ensuring that competition occurs for the market, rather than in the market. Effectively QCs would generate a franchise system similar to that which has operated very successfully in London since privatisation.

All three options (ie QBCs, SQPs, and QCs) appear to acknowledge the importance of the quality of bus service to bus passengers. Pressures on operating margins, and the contractual requirements for new vehicles for services in London, mean that, not only has the quality of service in terms of service frequency declined in the areas outside London, but the physical quality of the service has fallen in many cases. As the Minister highlighted in his recent policy statement,⁹ to attract people from cars to buses requires buses to offer a credible alternative to cars. This means that buses not only have to be frequent and fast but also clean and comfortable. Both of the policy tools provided by the 2000 Act focus on facilitating delivery of this quality of service. The distinction between the options relates to the extent to which the private operator is mandated to deliver the standard. Under partnerships, the delivery is voluntary (as part of a wider agreement) but a QC approach removes operator discretion.

The relative balances of discretion and influence between local authority and operator between the options mean that there is disagreement between parties over the appropriate course of action. This disagreement is particularly pronounced in the PTE areas. South Yorkshire PTE and Nexus have started to actively consider and may pursue QC options.¹⁰ However, operators and CPT argue that quality contracts mark the return to a public sector dominated environment where innovation is stifled and should be considered as an option of

⁹ Speech by Rt Hon Douglas Alexander MP, Secretary of State for Transport, in York, 10th May 2006.

¹⁰ See: <http://ted.europa.eu/Exec?Template=TED/homepage.htm&DataFlow=hRead.dfl&hpt=ALL&StatLang=EN> (tender number 5759-2006) for more details on their joint OJEU notice.

last resort, should the partnership approaches fail to deliver the gains that all parts of the industry seek to achieve.¹¹

In its joint report with the Audit Commission published in December 2005, the National Audit Office, reflecting Department for Transport policy, provides some guidance as to when authorities should consider the use of QCs:

...Quality Contracts provide authorities with the means to intervene where this is the only practicable means of implementing their bus strategy.¹²

However, they do also note that:

Local Transport Plans need to...consider authorities work with operators, and where applicable show what consideration has been given to the case for the implementation of Quality Contracts to bring about an improvement in bus services and patronage, consistent with local transport and bus strategies.¹³

A serious issue in regard to implementation of Quality Contracts was raised by Mr David Rowlands, Permanent Secretary of the Department for Transport, when he appeared before the Committee of Public Accounts on 23rd January 2006 in connection with the Committee's review of the NAO/Audit Commission's report of delivery chain analysis for bus services in England. Reporting what Mr. Rowlands had said, the PAC wrote:¹⁴

To date, no local authority had sought approval from the Secretary of State to remove the right of commercial operators to register and run local services and to deliver its local bus strategy using Quality Contracts. The Department had sought to lower the potential barriers to the introduction of Quality Contracts, by reducing the qualifying period between setting the contract arrangements and introducing them from 21 months to 6 months. The hurdle had to be high as only a strong public interest reason could be used to remove operators' rights to the quiet enjoyment of their property, which the Department considered was protected under the Human Rights Act 1998. An Authority seeking to introduce a Quality Contract might face court action by the existing commercial operator. Quality Contracts could, however, be appropriate where a local authority wanted to introduce road pricing, and needed the flexibility to control bus fares and bus frequencies as well.

We understand that subsequently the government has been engaged in developing a 'third way' option that provides for solutions that move closer to a quality contract environment without the loss of the current deregulated environment. In a letter to Graham Stringer MP on the 16th March 2006, the Parliamentary Under Secretary of State for Transport, Karen

¹¹ <http://www.lga.gov.uk/Documents/Briefing/Final%20Joint%20Position%20Statement.pdf>

¹² National Audit Office and the Audit Commission, *Delivery Chain Analysis for Bus Services in England*, December 2005, page 31.

¹³ *Ibid*, page 14, Box 3.

¹⁴ House of Commons Committee of Public Accounts *Delivery Chain Analysis for Bus Services in England* Forty-third Report of Session 2005-06, HC 851, May 2006, p.12.

Buck, detailed a set of proposals being developed by the Department which they refer to as “Enhanced Quality Partnerships”. These proposals, which are still under development and have not been formally announced by the government, involve greater bargaining between local authorities and operators. The partnerships would be voluntary (and therefore are not likely to involve further legislation) and frequently renewed (probably once a year). Within the EQP, the local authority and operator will agree to the level of investment and demand management that the local authority will provide and, in response, the levels of quality, service, frequency and fares that the operator will provide. The key difference between these partnerships and those previously appears to be that under an EQP approach the local authority will be able to broker agreements between a number of operators simultaneously, rather than in the bi-lateral approach previously envisaged.

We note that, in her letter, the Parliamentary under Secretary notes that the EQPs would “rely on tough negotiating by local authorities”. In order for this “tough negotiating” to occur, local authorities need to have some degree of leverage within the bargaining process. This suggests to us that an EQP approach will require QCs to be a credible option for local authorities to pursue should partnership approaches fail to deliver the desired outcomes for passengers. But without having an alternative policy tool to fall back on, it is not clear to us how local authorities will be able to engage in “tough negotiating”.

2. The Industry

2.1. Introduction

We have seen in the previous section how bus services in the PTE areas have been subject to continuing decline, with reduced provision of services, increasing real fares, and a long decline in bus use (down by half over 20 years) which is directly contradictory to national and local government objectives for the industry.

In this section of the report we consider how far this decline is a consequence of the present regulatory structure in the industry. In particular how far has the competitive market framework with deregulated services led to a vibrant competitive sector delivering what customers want, and how far has the market structure contributed to decline? Competition authorities in the UK and around the world are concerned that competition should work to keep prices down to competitive levels, and to contribute to increased innovation and improved quality of service. Market investigations are usually concerned with whether established firms in a sector are pricing at competitive levels, so that profits are not significantly above the competitive level that enables the firms to provide an adequate return on the capital employed. They are concerned to ensure that firms do not have market power which would mean that they could abuse a dominant position. And they use market share as an initial test of whether firms might indeed possess such market power.¹⁵

In the rest of this section we first review the evidence on market share of bus companies within the PTE sector and within each individual PTE. We then present evidence on how competition is working within the PTE sector, both with regard to commercial services and with regard to tendered services. We note that market concentration is high, and that competition is generally weak. Competition is also generally defective in that it may encourage low quality competition rather than high quality competition. Furthermore, operators' responses to falling demand are defensive in that they are primarily concerned to protect profit margins, on a declining volume of business, by increasing fares and reducing service levels. Finally, we test whether, despite declining demand, operators are earning above 'normal' profits from services in PTE areas that would indicate that they are still able to exploit market power. At the end of the chapter we consider whether the present industry framework is 'fit for purpose'.

2.2. Extent of Concentration

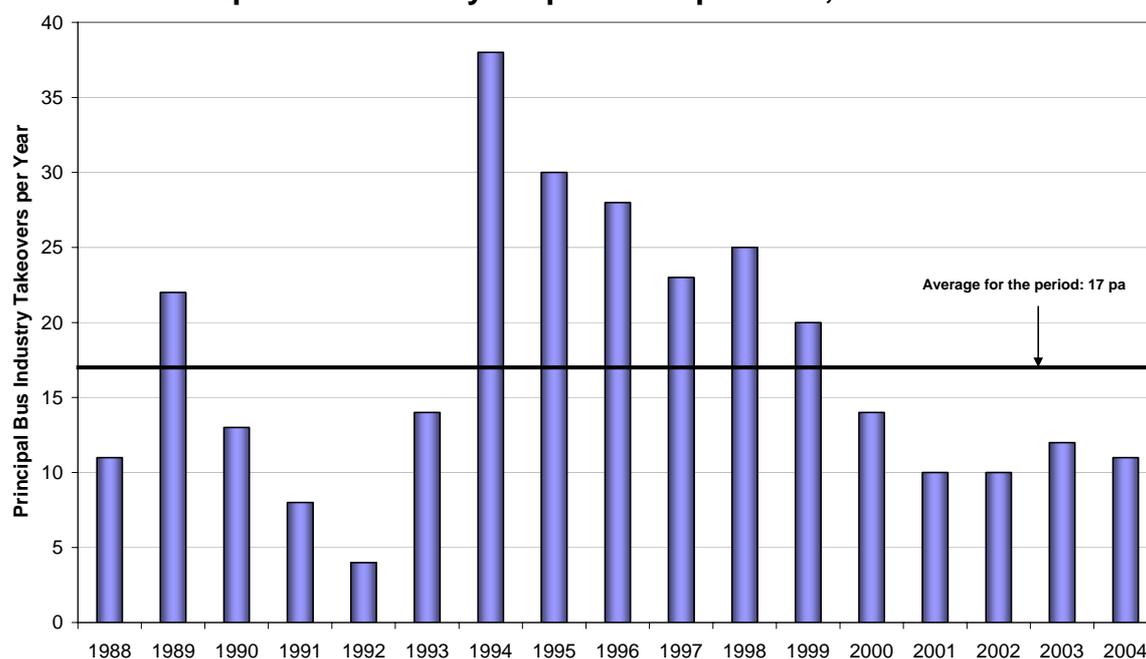
In the 20 year period since most of the industry was privatised, there has been considerable industry consolidation. Driven largely by acquisition activities by the 'big five' operators, the number of independent bus companies operating in England has declined significantly. While acquisition has been the primary driver of the consolidation, the aggressive competition pursued by the larger operating groups in many parts of the country also led to a number of the privatised operators ceasing operations.

Figure 2.1 shows data from *Bus Industry Monitor* on the level of industry acquisitions each year across the UK as a whole. The data focuses only on the principal takeover activity, but

¹⁵ But we should stress that a high market share does not necessarily imply that firm has a dominant position.

provides a good indication of the level of activity. The figure demonstrates the volume of acquisitions undertaken by the companies; just under 300 in total at an average of just over 17 per year. Although there has been some activity in every year over the period, with the least (4) in 1992, the mid to late 1990s saw the highest period of activity. Peaking at 38 takeovers in 1994, 60 per cent of the total number of acquisitions over the 17 year period occurred in the 7 years between 1994 and 2000. Stagecoach were particularly active over this period, acquiring around 35 other operators (or 20 per cent of the total for the period). However, FirstGroup and British Bus (itself acquired by Arriva in 1996) were also very active.

Figure 2.1
Principal Bus Industry Acquisitions per Year, 1998 to 2004



Source: *Bus Industry Monitor*, 2005, Appendix A.

As a consequence of this rapid consolidation, in particular that driven by Stagecoach, FirstGroup and Arriva, market concentration in the UK bus industry rose dramatically over the 1990s. By 2005 over a half of all the industry turnover (52 per cent) was attributable to three of the 'big five' operators (FirstGroup – 21 per cent, Stagecoach Group – 16 per cent, and Arriva – 14 per cent). Go-Ahead and National Express contributed another 16 per cent between them.¹⁶

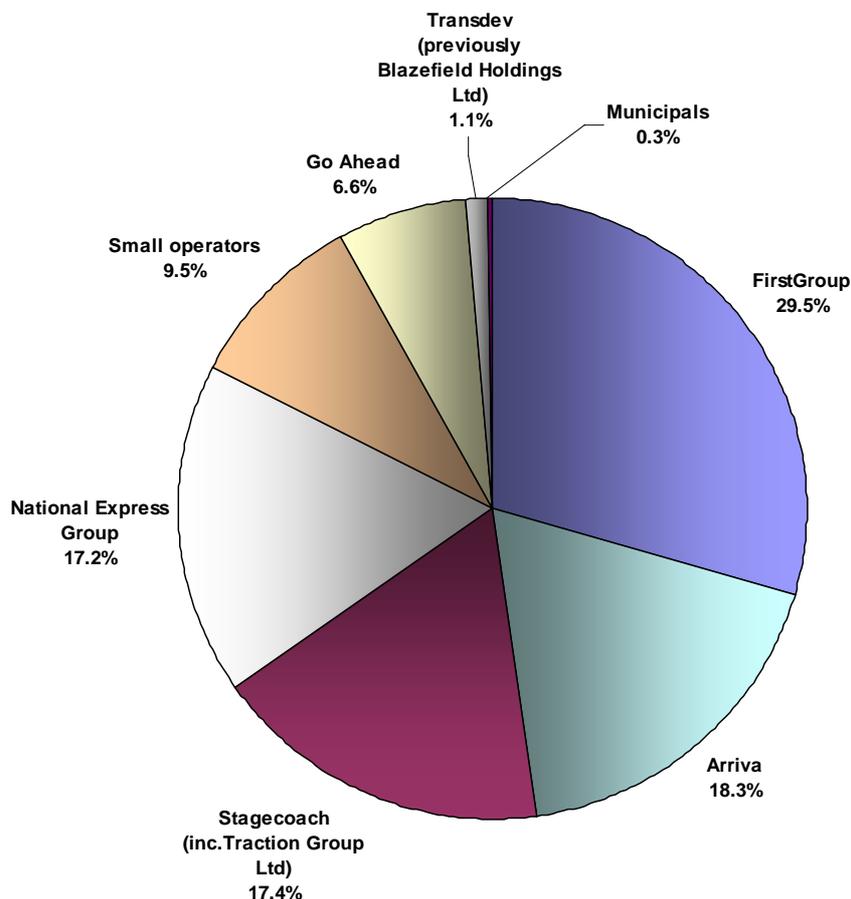
We now focus just on the position in the English PTEs.

As is shown in Figure 2.2, the market share held by the 'big five' is even higher in the English PTE areas than for the UK as a whole. Based on mileage operated, the 'big five' operators are responsible for around 90 per cent of bus mileage in PTE areas. The other 10 per cent, other than a small share held by Transdev, consists of a large number of small operators. With the acquisition of Blazefield by Transdev and Traction Group by Stagecoach

¹⁶ All turnover market share data from *Bus Industry Monitor 2005*, Table 28.

in 2005/06, there are now no medium size companies competing with large transport groups in the English PTE areas.

Figure 2.2
Market Concentration in PTEs: Mileage Shares by Operator



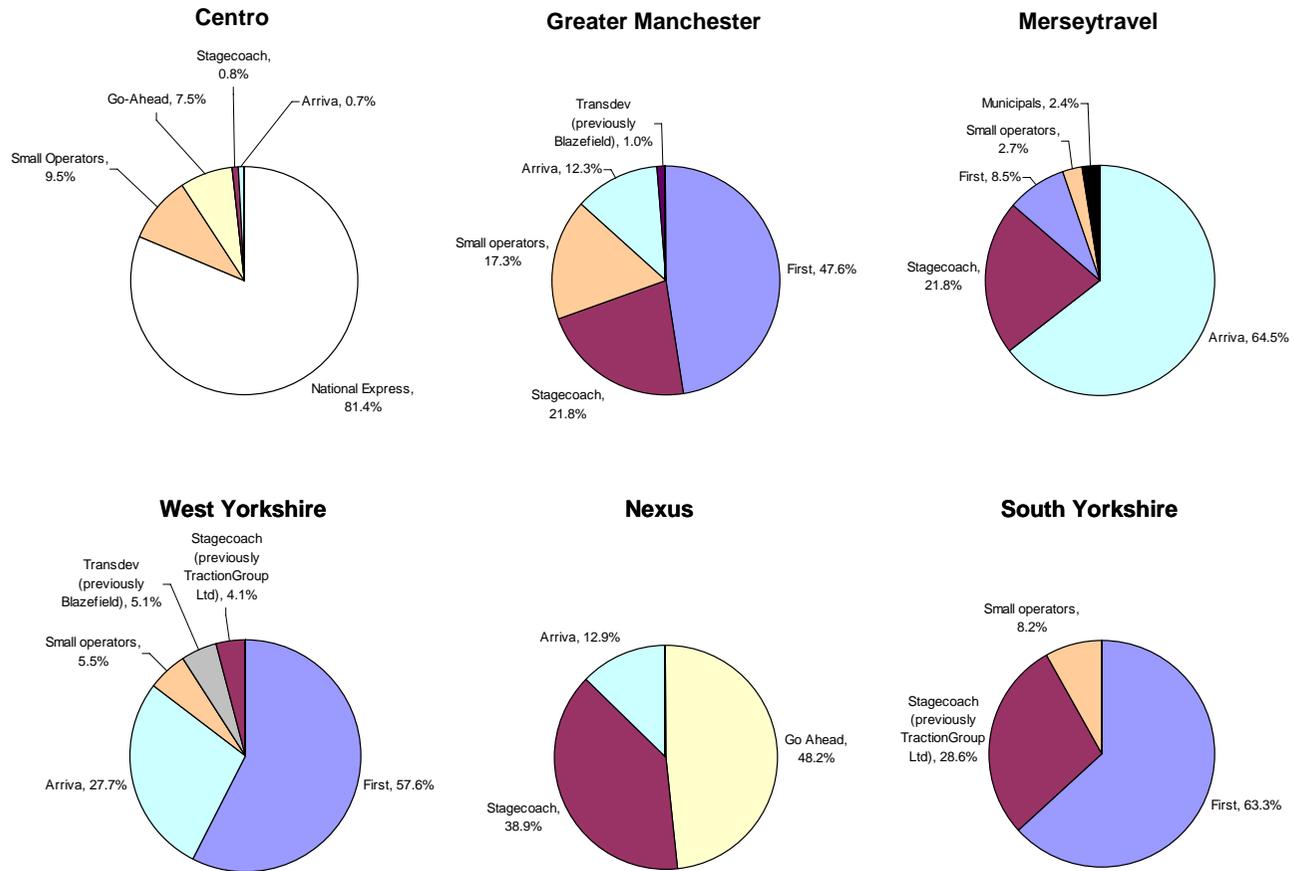
Notes: Estimates generated by pteg based on district level data. Approach to calculating market shares varies between PTEs but principally relies on analysis of route and timetable data. Data for each PTE is aggregated to the national level by using a weighted average where the weights are DfT vehicle kilometres operated data for each PTE. Source: pteg estimates for the latest available year.

Figure 2.2 shows shares of the different bus operators in total PTE mileage. FirstGroup are the largest operator of services in the PTE areas with a market share of just under 30 per cent of operated mileage. Arriva, Stagecoach and National Express all operate with market shares of between 17 and 18 per cent. However, these averages conceal different pictures from PTE to PTE, and within individual Districts.

Figure 2.3 shows that the markets at the PTE level are more concentrated than at the national level, as the ‘big five’ companies typically do not operate in all PTEs. The best example of this is National Express. Across the English PTEs as a whole, they operate 17 per cent of total mileage. However, within PTE areas, they only provide services in the West Midlands (under the brand Travel West Midlands), where they operate more than 80 per cent of total mileage.

Even at the PTE level, the market share data can provide a misleading picture of the actual degree of competition within the county. Within each of the Districts the composition of operators can be very different from that at the County level. For example, the data provided to NERA by pteg shows that, for South Yorkshire as a whole, First operate around 63 per cent of the mileage, followed by Stagecoach (through Yorkshire Traction) with 29 per cent, and various smaller operators with a total of 8 per cent. However, examination of the four Districts in South Yorkshire shows that in three of these First operate a share above 70 per cent, rising to 82 per cent, with Stagecoach's share being between 15 and 18 per cent. But in the remaining District, Barnsley, Stagecoach operate around 95 per cent of the mileage, with First operating less than 1 per cent.

Figure 2.3
Market Concentration by PTE Area: Mileage Shares by Operator in Each PTE Area



Notes: Estimates generated by pteg based on district level data. Approach to calculating market shares varies between PTEs but principally relies on analysis of route and timetable data. Source: pteg estimates for the latest available year.

2.3. Competition in the Bus Market in PTE Areas

2.3.1. Introduction to review of competition

While section 2.2 showed market concentration within PTE areas, the present section is concerned with the question of behaviour, in particular with the question of how far there is competition both in commercial and tendered markets, and the impacts of that competition which does occur.

2.3.2. Competition in the commercial market

We can distinguish between a number of forms of possible competition between operators providing commercial services: active on-the-road competition; passive on-road competition; potential competition; and yardstick competition.

2.3.2.1. Active on-road competition

In the early days after deregulation there were a number of instances of aggressive on-the-road competition between operators providing services on the same routes. In some instances this involved provision of excessive frequencies, continuous changes in schedules, with vehicles racing each other to pick up passengers at stops. Some of the extreme instances of this were investigated in the Monopolies and Mergers Commission investigation into bus services in the North East.¹⁷ This competition did not necessarily act in customers' best interests, since services were subject to continual change and therefore uncertainty, and frequencies were uneven and irregular as buses of different companies competed at the same time slots. Some commentators referred to 'wasteful' competition, a phrase that was not particularly fashionable with competition authorities. And some operators were judged by the competition authorities to have engaged in predatory behaviour.

As the industry has settled down, these instances of on-the-road competition are now less common, though examples do occur from time to time. However, there are some examples of on-road competition, despite the increased concentration of the industry, including increased concentration within individual PTE areas. Examples of on-road (but not predatory) competition include:

- Cases where different operators serve the same area. The best example of this is Oxford, where two operators, one owned by Go Ahead and the other by Stagecoach, have operated independently for many years across most of the city (and both companies operate separate express coach services between Oxford and London);
- Cases where smaller independent operators provide services on busy urban corridors in competition with larger operators. In these circumstances where there is high demand for bus services the independents do not need to advertise services but can operate their own buses on the same routes as the majors without worrying about detailed timetable planning issues. This still happens in Greater Manchester where there are a number of independents.¹⁸ Centro told us that the company People Express, which has since been

¹⁷ Monopolies and Mergers Commission, *The Supply of Bus Services in the North-East of England*, HMSO, 1995..

¹⁸ And where different Stagecoach operations offer different fare/quality combinations on the same route.

bought up by Go Ahead, operated in this way in Birmingham. Deregulation spawned a number of independent operators in Liverpool, but most of these were subsequently bought up by the main operator Merseybus or its private sector successors.

2.3.2.2. Passive on-road competition

What we refer to as ‘passive’ on-road competition arises where two or more companies operate along the same road where they provide different routes into a city centre and these routes converge as they approach the town centre. In these circumstances passengers on this trunk section of the route have a choice between different operators (though it is likely that they will board the first bus to arrive at their stop unless they are ‘locked in’ because they have purchased one operator’s multi-journey ticket).

2.3.2.3. Potential competition

While bus operators often have their own operating area where they may not face direct competition from other operators, there is still the possibility that if they provided poor service standards or charged high fares they would face competition from other operators who would be tempted to operate on these routes. Consequently the threat of potential competition might constrain operator behaviour in regard to fares, service standards and/or excessive profitability. Two examples of recent behaviour illustrate how this can work:

- Following their acquisition of Yorkshire Traction and the various increases in fares charged by First in South Yorkshire, Stagecoach have recently adopted a more aggressive approach to competition in the area. In late April 2006 Stagecoach announced that they were launching a new integrated bus and tram network in Sheffield. This launch was targeted specifically at First’s fares. According to Stagecoach’s press release: ‘Stagecoach’s integrated Sheffield network will be a major boost to local people who rely on public transport after suffering four bus fare rises in the last 12 months by the dominant city bus operator First’. Also ‘The reliable, value-for-money Stagecoach network will offer weekly tickets nearly 40% cheaper than prices charged by First, with Stagecoach passengers travelling on day tickets also saving around 20%.’¹⁹
- Although National Express has had a major share of bus services in the West Midlands conurbation since privatisation (and, as we will see in section 2.5 below, has had a high return on capital employed), Go Ahead has recently bought up two of the independent commercial route operators in Birmingham, Birmingham Bus and Coach, and Probus (operator of People Express).

2.3.2.4. Yardstick competition

Operators compete for funds in the capital market and the performance of the different groups is closely monitored and reported on by analysts and other observers. This provides another form of competition between operators.

¹⁹ Stagecoach Press Release *Stagecoach launches integrated Sheffield Transport Network*, 25th April 2006.

2.3.2.5. Overall conclusions on competition in the commercial market

While competition is certainly not completely absent in the commercial bus market, and the threat of competition may influence operators' behaviour in some respects, our belief is that overall it is not particularly strong in the PTE areas.

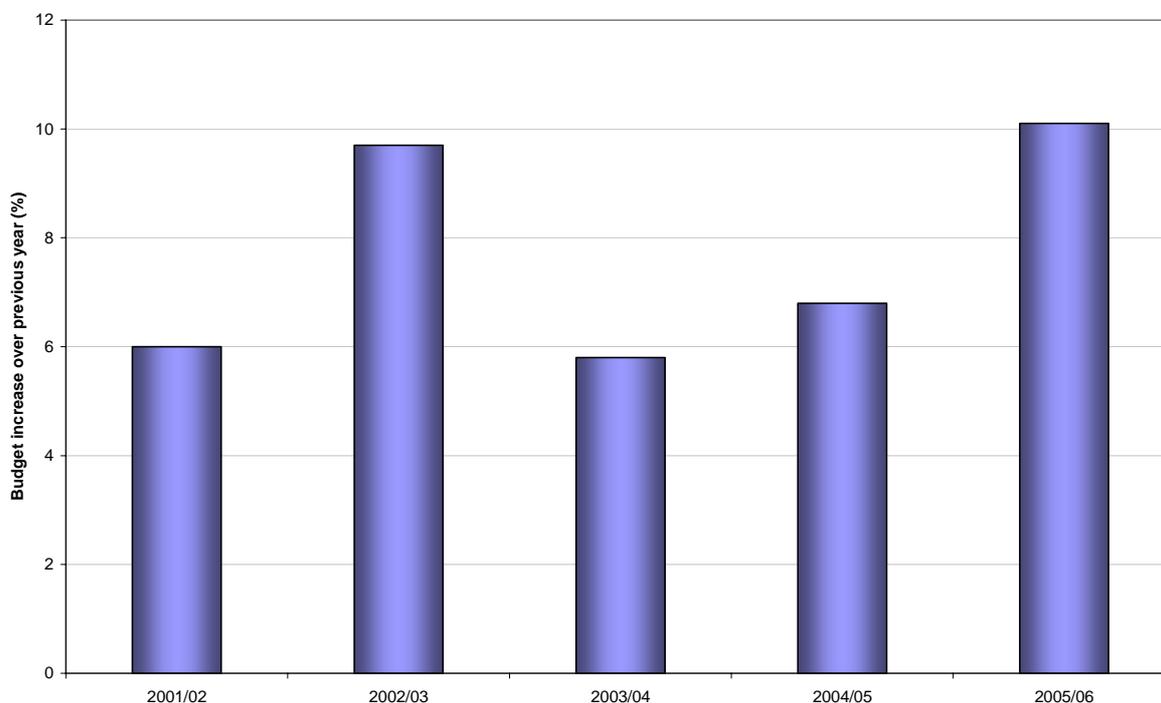
2.3.3. Competition in the tendered bus market

All the English PTEs design and fund tendered (or supported) bus services to fulfil social objectives and fill in gaps in the commercial network. The extent of the tendered network varies across the PTEs, but typically constitutes between 10 and 15 per cent of the total bus mileage operated. The principal exception to this is Centro, for which only around 7 per cent of mileage is tendered.²⁰ Typically the services supported by the PTEs are either evening service extensions to routes that operate commercially during the day, or weekend services, or all-day services in areas where demand for travel by bus is low.

A common theme which emerged during our discussions with representatives of the PTEs about tendered services was the extent to which costs of providing the services are rising. All PTEs are facing rising costs, in part reflecting rising industry costs (particularly fuel and labour) which are putting budgets under pressure. The consequence is that PTEs are facing increasing costs and reduced services. Figure 2.4 presents the results of the Association of Transport Co-ordinating Officers (ATCO) annual survey on local authority contracted bus services. Specifically, we present the average annual increase in PTE budgets for supporting bus services from 2001/02 to 2005/06. This clearly shows the substantially above inflation rises in spending that have been made over the period. In 2005/06 the increases in budgets were, on average, over 10 per cent for the PTEs.

²⁰ Data supplied to NERA by Centro. This is thought to be due to commitments by National Express on the level of bus service given to the Monopolies and Mergers Commission after the MMC investigation of National Express's acquisition of the Central Trains franchise.

Figure 2.4
Annual Budget Increase of PTE Supported Bus Services, 2001/02 to 2005/06



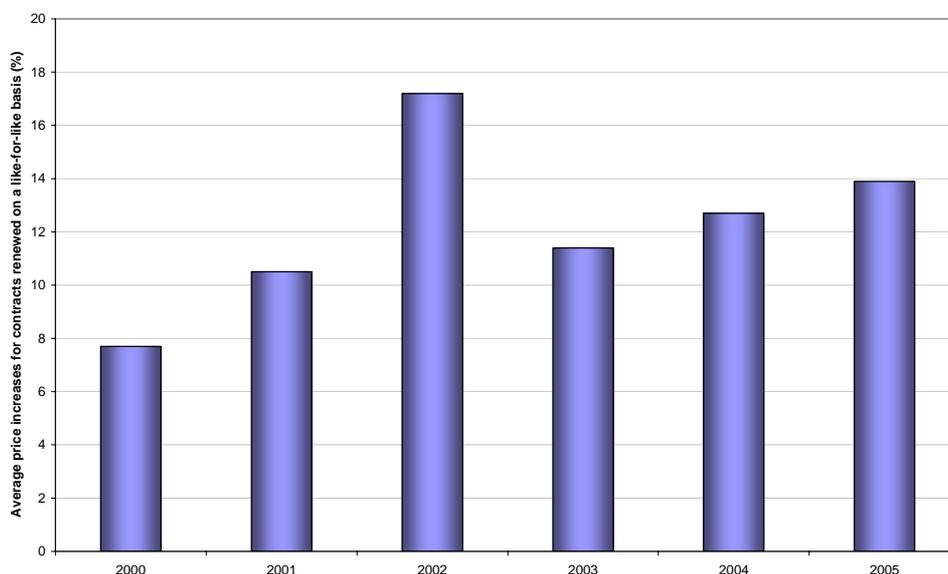
Source: ATCO, *Local Authority Bus Contracts: Price, Expenditure and Competition Survey, Section 7 (2001 to 2005 editions)*.

We have been told by the PTEs that there have been two underlying trends in the tendered market that have been driving these budgetary pressures:

- **Deregistration of commercial services** – a number of PTEs have reported to us concerns over the deregistering of services that had previously been operated commercially. These actions by operators mean that there are more services that need to be supported if the scale and frequency of services is not to be reduced. It is not clear to what extent this has been the result of increasing operating costs/reduced demand for these services, or strategic behaviour by operators. Where an operator believes it has a substantial advantage over new entrants in the provision of a service, they may choose to de-register a commercial service if they anticipate that it will be tendered and they will win the tender. The 2005 ATCO survey shows that the extra cost to English PTEs for replacing previously commercial services was £2.4 million in the 12 months to the end of September.²¹
- **Increases in tender costs** – in addition to the number of routes being supported, the cost of each route is, on average, rising. As is shown in Figure 2.5, the average annual increase in the cost of PTE supported services, on a like-for-like basis, has increased from just below 8 per cent in 2000 to just below 14 per cent in 2005. Ignoring 2002 which was based on an incomplete sample, costs have risen continuously over the period and are considerably above the level of general inflation.

²¹ ATCO, *Local Authority Bus Contracts: Price, Expenditure and Competition Survey, 2005*, page 15.

Figure 2.5
Average Annual Like-for-Like Increases in PTE Supported Bus Service Costs, 2000 to 2005



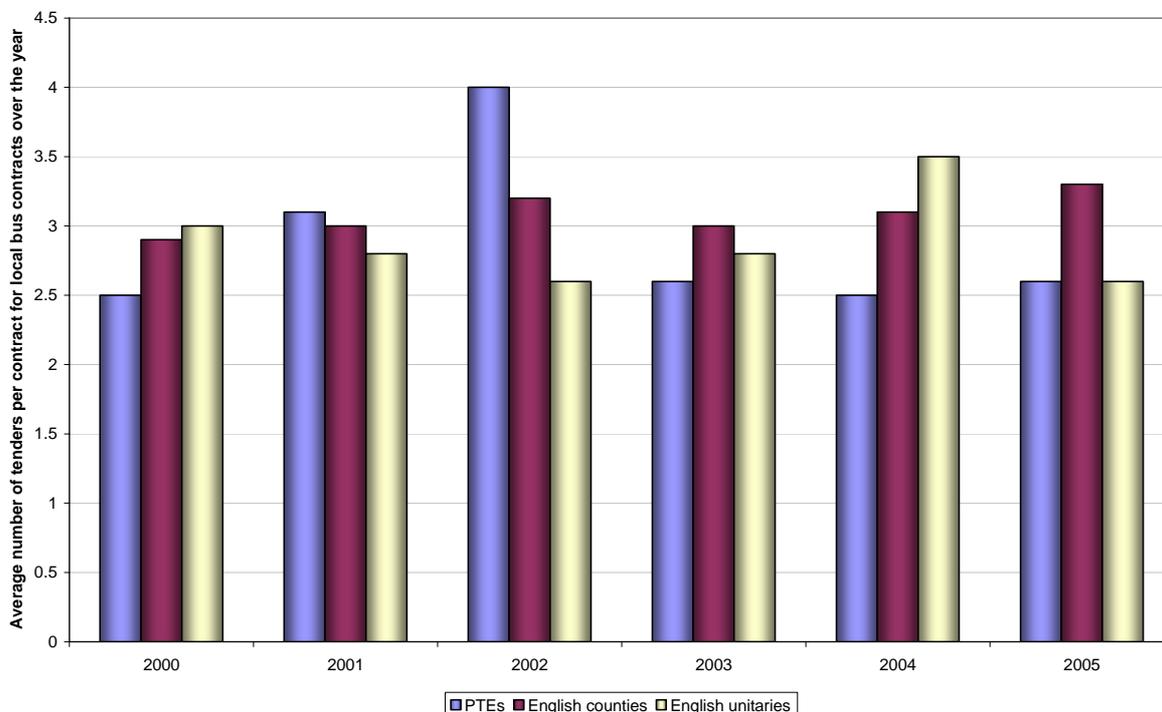
Note: The value for 2002 is only based on responses from 3 out of 6 PTEs.

Source: ATCO, Local Authority Bus Contracts: Price, Expenditure and Competition Survey, 2005, Section 7.

The drivers of these two trends are not immediately clear but they are likely to be connected. Operating costs for bus operators have risen which, in combination with declining patronage, will have reduced the commercial viability of a number of marginal services, resulting in commercial de-registrations. However, competition in the tendered market appears to be an important factor. Where competition is strong, operators will have reduced incentives to deregister commercial services, but also less ability to pass on costs in the tender prices. In the West Midlands, for example, competition for tendered services has been strong, with a number of operators having reportedly shown increased interest in operating tendered services. Centro informed us that they have observed tender prices falling.

In Figure 2.6 we present ATCO data on the average number of bids per tender across all the PTEs. We also present the same data for the English counties and unitary authorities for comparison. This shows that in all three areas there is some competition for tendered services, with the average number of bids per tender typically between 2.5 and 3.5. However, the number of bids in the PTE areas are generally lower, on average, than in the English Shires and the English unitary authorities.

**Figure 2.6
Competition for Local Bus Contracts, 2000 to 2005**



Source: ATCO, *Local Authority Bus Contracts: Price, Expenditure and Competition Survey, Section 7 (2001 to 2005 editions)*.

While Figure 2.6 appears to suggest that the tender market is broadly competitive it is slightly misleading. We have been informed by a number of the PTEs that this does not reflect the experience on the ground. This is for two reasons:

- The averages do not reflect the **differences between the PTEs**. While in some PTEs, such as Centro, there are as many as 4.7 bids per tender²² on average, for others the figure is much lower. West Yorkshire PTE, for example, has informed us that they receive only 1.03 bids per tender on average.
- The averages do not reflect the **differences between types of tendered services**. While services in the daytime may receive strong competitive interest (South Yorkshire PTE informed us that these types of may get as many as 7 or 8 bids), evening or weekend extensions attract considerably fewer bids, and sometimes only one.

2.3.4. Conclusions on the extent of competition in PTE bus markets

While there is some competition in the market for tendered services, and some smaller operators may only choose to operate tendered services, the tendered market is only a small part of the overall market for bus services in the PTE areas. So although competition is greater in the tendered sector than the commercial market, the overall contribution of the tendered market to competition in the bus services in PTE areas needs to be kept in

²² Data provided to NERA by Centro.

perspective. In addition, competition for tenders is sometimes the consequence of deregistration of commercial services, which the market has failed to provide without financial support.

We should also note that competition may not necessarily yield high quality services. On-route competition in busy urban corridors can be provided by low quality operators. Where a dense urban route delivers frequent buses to stops, passengers tend to board the first bus to arrive – in such circumstances there is little incentive for new competitors to undercut the main operator's fares. Passengers may be less concerned about quality on short distance journeys and so will still travel on the first bus, which means that the entrant has an incentive to keep costs down by operating older vehicles and/or cutting down on interior cleaning or even vehicle maintenance. Since some aspects of quality are often difficult to monitor on tendered services, smaller operators of tendered services may also be tempted to cut costs by reducing quality. We have found few examples (of which the former Blazefield, now Transdev, high-quality buses in Yorkshire and Lancashire are a sadly rare example) where smaller firms in PTE markets felt incentivised to offer improved quality of service.

The present structure of the industry and the competitive pressures have also led to a situation where fleet age in PTE areas is relatively high. London contracts require operators to renew their buses on a five year cycle, but in PTE areas average vehicle age is higher. We have calculated average vehicle age in PTE areas using data on fleet composition of those subsidiaries operating in PTE areas published in the 2005 *Bus Industry Monitor*, and estimate average vehicle age as 8.3 years. This compares with a figure for the country as a whole (which we presume to be England) of 7.9 years supplied by DfT in a supplementary memorandum to the Public Accounts Committee. Greater age might be expected to have some impact on reliability, and this appears to be confirmed by data on percentage of scheduled mileage lost due to mechanical (un)reliability also supplied to the PAC by DfT. In 2004/05 this was 0.4 per cent in London, but 0.5 per cent in the rest of the country (DfT had reported that separate data were not available for PTE areas). The message is that, the proportion of scheduled mileage lost as a result of mechanical problems is higher in those areas where buses are older.

2.4. Operator Responses to Declining Demand

In a market in which competition is quite weak and in which demand is falling over time, it is important to understand how operators respond to declining demand. Understanding operator behaviour is particularly important when undertaking any demand modelling or policy intervention appraisal work.

To gain some insight into this important issue we approached a number of senior managers at the big groups²³ to understand their views on how they respond to declining demand. In this sub-section we use the findings from these operator interviews to inform some broad conclusions on how we believe that the larger operators typically behave.

We showed in Figure 1.3 that real fare levels in the PTEs have been generally rising over at least the last ten years. At the same time, both patronage and service levels (ie vehicle kilometres) have been declining. There is a wide literature linking changes in fares levels to

²³ We have spoken to senior managers in the following groups: First, Go Ahead, Stagecoach, and Transdev.

patronage so this relationship is clear. However, it is less clear what is motivating the increases in fares and decreases in service levels. Our discussion with the bus operators appear to suggest that the two decisions (ie that of fares and that of service levels) are made separately, but not independently of each other.

Operators appear reluctant to increase fares both for reasons related to the long run impact on the total fare box (via the long run price elasticity of demand and the negative impact on patronage), and also because of political pressure and bad publicity that often accompanies any fare rises. Given these pressures, operators made it clear to us that increases in fare levels are motivated principally by increases in input costs. While there is some interaction with patronage and mileage run, operators informed us that the main drivers for cost, and therefore price, rises are increases in the costs of fuel, labour (including pensions costs), and insurance. Although some operators have been able to hedge against some of the fuel cost rises and source drivers from Eastern Europe, they have not been able to completely shield themselves from the effects of above inflation increases in input costs.

While fare levels appear to be principally determined by cost levels, it appears that operators adjust service levels and routes to achieve target operating margins. One operator informed us that they determine their operations on the basis of the largest network that is consistent with a 15 per cent operating margin. While we have not been able to derive an industry wide target margin, reflecting the relationship with the levels of risk associated with individual routes, an operator noted to us that:

Any return less than 8 per cent would certainly not be acceptable and in many instances it needs to be much higher.

Although the operators informed us that they faced significant local opposition to even small changes in service levels, they are not able to support unsustainable routes unless there is a strategic reason to do so. Therefore, in the face of declining patronage, and therefore profitability, service levels would be reduced.

2.5. Operator Profitability

A key indicator of the extent to which competition in the market is working is the profitability of the bus operators. If competition, or the threat of market entry, is not considered to be a constraint by the operators, we would expect them to pursue profit maximising behaviour that would lead to monopoly profits.

As private sector companies, all the bus operators need to finance their operations. They therefore need to be able to remunerate the providers of capital. This is equally true for operators in a competitive or uncompetitive market. Therefore, regardless of the degree of competition in the market, the companies need to earn a minimum level of profit to pay their capital costs. Economists refer to this minimum level of profit as their 'cost of capital'. In very simplistic terms, this represents the minimum amount of money shareholders expect the company to make before they switch their funding into other companies. Because this level of return needs to be made regardless of the nature of competition in the market (although the level may vary due to the changes implied to risk), we consider a company to only be making monopoly profits if the level of profits is in excess of this cost of capital.

One indicator, therefore, of the extent to which competition is operating in the PTE areas is to consider the extent to which operators are making monopoly profits. To do this we compared the return the operator is making with their cost of capital. These are typically expressed as rates (ie proportions of the level of capital).

However, there are a number of difficulties in undertaking this analysis:

- Ensuring that the analysis is **focussed on the PTE bus operations**. The major bus operators are all part of large public transport providers that operate in a range of transport sectors and countries. When undertaking any analysis of the bus operations in PTEs it is necessary to split these out. This applies equally to considering the rate of return achieved by the operators, but also when calculating the appropriate cost of capital. Rail and bus operations, for example, face different risk profiles for the operator so will imply different costs of capital. The large operator groups do have a number of subsidiary groups that operate the bus operations, and so it is possible to consider just these subsidiaries in isolation when considering their rates of return.
- Ensuring that the company **financing structures are taken fully into account**. There is a large amount of variation in the ways in which the operators choose to finance their operations. Of particular interest, however, is the extent to which they use operating leases. This form of off-balance sheet financing makes it difficult to achieve a like-for-like comparison when looking at accounting measures of return on capital employed (ROCE) as it distorts the capital base. In simple terms, two otherwise identical bus operators could operate an identical fleet of vehicles but with one operating a number of the vehicles on operating leases. This means that, when considering their returns on capital, the company using operating leases will have a misleadingly low asset base, and therefore higher ROCE than the company financing on-balance sheet.
- Ensuring that **assets are valued appropriately**. Published accounts focus on considering the accounting value of assets via straight line depreciation profiles and historic cost valuations. To derive a measure of economic return on capital (ie the relevant comparator to the cost of capital), assets and depreciation need to be revalued at the economic (or opportunity cost) levels.

NERA has developed a modelling tool that takes the raw accounting data for bus operator subsidiaries from their published accounts and consolidates the results for operating groups and the industry in the PTE areas. The model addresses the difficulties discussed above (and makes a number of other adjustments) to generate economic rates of return that can be compared to estimates of the cost of capital for the operations. The modelling approach has previously been employed by NERA in work for both the Commission for Integrated Transport and Transport for London, where our assumptions have been examined and validated by a range of industry stakeholders.

The work that NERA has undertaken for pteg using this modelling framework suggests that, depending upon the assumptions made relating to depreciation profiles, the main bus operators in the English PTEs are earning an economic ROCE of between 15 and 20 per cent. This figure is however distorted by Travel West Midlands (TWM) which, depending on the assumed depreciation profile, has an economic ROCE of between 21 and 35 percent (possibly reflecting the low levels of competition it faces). If we exclude TWM, the estimates of ROCE fall to 12 to 16 per cent.

Although it is difficult to generate accurate measurements of the cost of capital to compare these returns to (there are no ‘pure-play’ listed bus operators from which we can draw market data to facilitate the analysis), we are able to draw on two indicators:

- Market estimates of the level of cost of capital for the big groups as a whole - these are typically in the range of around 11 per cent (despite significant variation in the modal split between groups); and
- Rates of return for all non-financial corporations in the UK – these data are published by the Office for National Statistics and, based on the average over the period 1995 to 2004, point to economy wide returns of 13 per cent.

By using the mid-point of the estimated returns for the non-TWM PTE bus operations (ie 14 per cent), both these comparators would suggest that the bus companies are making some level of excess profits. If we assume that the PTE bus operations are broadly as risky as the groups’ operations as a whole, then it would appear that these excess returns may be around 3 per cent on average. However, if we assume that the operations are closer to the risk profile for the economy as a whole, then it would appear that excess returns are closer to 1 per cent.

In considering how they will develop their overall businesses, the largest bus operators will compare the profitability of their PTE bus operations with the profitability of their other activities, including bus operations in the shires, in London, and overseas, their rail franchise activities, and other transport and non-transport activities. We have computed shares of revenue and (reported/accounting) profits for the five largest groups and for the most recent years available from Bus Industry Monitor. These are shown in Table 2. 1.

Table 2. 1
Total Group Revenues and Profits from Buses

	Shares of Total Group Revenues (%)	Of which PTE subsidiaries (%)	Shares of Total Group Profits (%)	Of which PTE subsidiaries (%)
Arriva UK bus	36	8	44	8
First Group UK bus	36	10	49	19
Go Ahead Group UK bus	32	6	55	5
National Express Group UK bus (exc. coaches)	8.4	7.9	27	23
Stagecoach Group UK bus (core ops.)	40	6	49	7

Source: Bus Industry Monitor 2005

These figures show the importance of both UK bus operations and PTE bus operations to total turnover and profitability of the groups. Where we were able to interview senior managers we asked them whether they regarded PTE operations as likely to be important for the future of their groups they confirmed that they were indeed committed to future operation in PTE areas. And we may note that Stagecoach has recently sold their London bus

operations and that in reporting their preliminary results for 2005/06 they note that “the planned sale of our London bus business will allow us to concentrate on our successful growth strategy in our UK Bus businesses outside London”.

2.6. Conclusions

Our analysis of the industry shows that present arrangements are not working well. There has been increased concentration in the bus industry, particularly in PTE areas. Competition has been relatively weak, with little direct competition in the commercial market, and some competition in the less important tendered market. Even where competition has occurred, it has not necessarily increased service quality. Bus operators are reacting to increases in unit costs and declining demand for their services by increasing fares and reducing service levels. By doing this they have been able to maintain return on capital employed and earn some levels of excess profits. But passengers have suffered from the fares increases and the declining service levels. Changes in services provided and unreliability of services are additional problems for travellers. Bus services are not providing a high quality alternative to the private car, and so motorists do not have incentives to switch to the only public transport mode that may be available to them.

3. Responses to Decline: Bus Partnerships

3.1. Introduction

We now consider PTE experience with voluntary Bus Partnership schemes.

Over the period of the first Local Transport Plan (and, therefore, Bus Strategy) there has been extensive use of partnership approaches to bus service delivery across the English PTEs. The emphasis in approach has been, up until now, on voluntary partnership schemes (QBPs) operating under the generic title of ‘Quality Bus Corridors’ (although the PTEs have developed their own scheme brandings). There have been no Statutory Quality Partnerships, despite some moves to establish them. This in part reflects a process issue in that establishing a voluntary partnership may be viewed as a precursor to a more formal SQP. However, it is likely to also reflect the limitations of SQPs. While the legal agreements do allow PTEs and local authorities to tie-in participants, including themselves, to a minimum service and quality standard across a range of infrastructure and staffing issues,²⁴ they do not provide a mechanism to mandate or compel operators to run services to given frequencies and times, or to affect fares. Indeed, should an operator find that the route no longer represents a viable commercial opportunity, they can stop servicing the route. This means that, even under a SQP, voluntary agreements still need to be negotiated with operators over these important characteristics of the service offering, with no way of enforcing the outcomes.²⁵

Given these clear limitations in Statutory Quality Partnership scope, and the substantial time and cost implications involved in generating and agreeing the legal agreement, it is understandable that local authorities has preferred to adopt voluntary schemes (QBPs) in the first instance.

We have examined how each of the PTEs have used the policy tools made available to them via the 2000 Act in order to stem the declining bus patronage in their areas. Our review has focused on the use of partnerships in each of the Metropolitan Counties, and the extent to which they have been adopted, adhered to, and successfully delivered growth in patronage. A detailed review of this experience in each of the PTE areas is set out in Appendix B.

In short, experience in the six English PTE areas can be described as follows:

- On Merseyside, proposals were developed under the SMART network brand name and were seen as an important component in delivering the first Bus Strategy, with delivery to be achieved by Statutory Bus Partnerships. However, actual delivery was disappointing, with lack of investment by operators and erosion of the SMART brand. By the beginning of 2006 only one QBP was in place (in St Helens) and that was not a statutory scheme.

²⁴ Please see the SQP documentation for the North Sheffield proposal for a clear example of the level of service detail pursued. (http://www.sypte.co.uk/pdfs/nutall/STATUTORY_QUALITY_BUS_PARTNERSHIP_SCHEME- MAY 2006..pdf)

²⁵ These negotiations also need to comply with competition law restrictions – see *OFT Transport Act 2000 and The Transport (Scotland) Act 2001: Guidance on the Competition Test* document for more information.

- In Greater Manchester the PTA, the Districts, the Highways Agency, Manchester Airport, and the bus tram and train operators have been promoting partnership working through the Integrate Project since 1998. One of the principal components of this has been the development of Quality Bus Corridors (QBCs). These are still in the delivery phase, with a programme of 33 routes with five due to be in operation by March 2006. There is some evidence that patronage has grown on those routes where QBCs have been introduced, though GMPTE reported to us that there had been differences in the degree of co-operation provided by the districts through delivery of components such as bus priority.
- West Yorkshire's first Bus Strategy in 2000 pointed to partnerships, including statutory ones, as the primary means to implement the strategy, and the primary role for partnerships has been through Quality Bus Corridor schemes. A number of these, including the guided busways project, have been implemented, with some growth. Experience varies, with one operator, Blazefield, investing in high-quality vehicles, though Metro told us that other operators appear to have been less supportive.
- South Yorkshire's first Bus Strategy emphasised voluntary quality bus partnerships focused on quality corridors covering a core network. But there have been some difficulties in delivery both in regard to vehicles, to network stability and to bus priority measures. The PTE is now actively developing a Statutory Quality Partnership, with high level stakeholder (including bus operator) involvement, in North Sheffield.
- In Tyne and Wear QBCs have been in operation through voluntary partnerships between the PTE (Nexus), the districts and the three main bus operators Arriva, Go Ahead and Stagecoach. By early 2006 there were 41 such Superoutes in operation, covering about 30 per cent of the network and accounting for 36 per cent of all bus trips. While passengers have gained from better quality vehicles, better on-street facilities, fewer timetable changes, and some (limited) bus priority measures, the Superoutes have not reversed the underlying decline in bus use
- Finally, in the West Midlands Quality Bus Corridors have been marketed under the Bus Showcase Route brand. Showcase routes have high levels of accessibility and real-time information at stops, low-floor low-emission vehicles, ten minute frequencies, high cleaning standards, drivers trained to NVQII, standards, and some highway measures to improve reliability and speed. Showcase routes have seen patronage growth of up to 30 per cent, but the routes only constitute about 5 to 10 per cent of the network. All have been based on voluntary partnerships, and an SQP scheme planned for North Birmingham was not implemented after Birmingham City Council refused to put in the bus lanes that would have been crucial for success. There are also plans for a quality partnership in Coventry – one option for the city if the partnership approach fails is a Quality Contract approach.

On the basis of the detailed experience in each of the PTE areas (set out in Appendix A of our report and summarised above), we have drawn some conclusions on the effectiveness of partnerships in delivering overall patronage growth targets.

3.2. General Lessons from Bus Partnerships

The experience shows that Quality Bus Partnerships can be successful in improving services for the communities they serve. On the Showcase routes in the West Midlands, where the partners deliver an improved customer offering, patronage can increase, and this can be substantial. However, the number of schemes that have delivered these types of gains is limited, the proportion of the network is very small (5 to 10 per cent in the case of the West Midlands), and the commercial constraints in place mean that the schemes that are most likely to deliver passenger growth have already been focused on. There is therefore significant doubt as to the ability of the results to be replicated over even modest additional amounts of the network, let alone the entire PTE bus networks. The limited potential for the schemes in many areas is highlighted by a number of schemes (for example, those in Tyne and Wear) where the experience has been of very modest changes in patronage, which have failed to fully address the underlying patronage decline.

However, these mixed results do allow us to draw some general lessons from the existing partnerships:

- **Partnerships draw in planning resources** and therefore while they are being designed and implemented, less emphasis will be given to other routes.
- **Importance of stakeholder commitment** – partnerships, particularly voluntary partnerships, are built on trust and commitment to deliver improvements. It is essential in such an environment that all parties are fully committed to the scheme and deliver on promises (or legal requirements) in a timely manner and in the spirit of their commitment. As has been demonstrated in South Yorkshire and other PTEs, failure to deliver, or a perception of delivery failure, can rapidly erode trust amongst partners and impact on willingness to deliver on other aspects of the partnership. It appears that where success has been achieved in delivering on partnerships, there has been one of three possible scenarios that have ensured commitment:
 - A strong commercial incentive – the operator involved has a clear commercial gain available from the investment;
 - The level of commitment required is low – either operator spend needed is not that high, or the local authority does not encounter substantial resistance to imposing bus priority; or
 - There is a strong threat of Quality Contracts – in the event that partnership fails, the threat that the local authority/PTE will pursue a QC option.

It appears to us that the threat of imposing QCs has been important in achieving a number of partnership advances. For example, in Coventry the establishment of a Quality Network only materialised after the Council threatened to impose a QC. This raises further questions as to the potential for on-going gains from partnerships in the event that QCs are not retained as a credible threat.

- **Interdependence of scheme measures** – all of the primary partners in either QBPs or SQPs need to deliver important components of any quality bus scheme:

- Local authority – the imposition of highway and bus priority schemes is crucial to the establishment of buses as credible competitors to other modes (particularly cars);
- PTEs – on-street infrastructure, including information systems, are important to both overall route branding and quality; and
- Operator – as the most visible and customer-facing partner, the role of operators in raising service quality is crucial.

While all three primary partners have broadly well-defined delivery responsibilities, the failure to deliver one component may affect the impact of the other improvements and investments. The investments are highly complementary, in that to achieve the necessary quality standard, all three strands of work need to be completed. If, for example, an operator and PTE both invest in asset quality but a local authority does not put in place bus priority, the step change in quality will not be delivered as, without the complementary highway schemes, service reliability and frequencies (which may be critical to the operator's investment business plan) may not be improved.

- **Lack of focus on the passenger and network in planning** – it appears to NERA that the selection of corridors that currently operate quality bus schemes has been based principally on two concerns: commercial considerations for operators, and political considerations for local authorities. The passenger, and importantly the potential passenger, has not been the focus. Schemes that have been implemented, by the very nature of voluntary schemes, require buy in from all parties, therefore, schemes that involve difficult or controversial bus priority measures or provide low financial returns for operators are less likely to be pursued, even if they may deliver significant user benefits.
- **Difficulties in ensuring the long term continuation of improvements** – in the absence of a long-term contract that compels the public sector to put in place the necessary infrastructure improvements and the operators to use the facilities with services of the desired quality, it appears difficult to 'lock-in' the benefits of schemes into the medium to long term. Many of the local authority or PTE commitments under voluntary partnerships are front-loaded at the beginning of schemes (capex dominated), but the operator commitment is considerably more long term (more opex dominated). This imbalance in investment and financial commitment profiles means that there are incentives for operators to engage in partnerships in the short term to benefit from the public sector investment and then, over the medium term, to reduce their on-going commitments through lowering the quality of vehicles etc.
- **Little detailed monitoring and evaluation of scheme impacts** – while all PTEs have monitored the developments of patronage on all the quality corridors, there appear to be few, if any, detailed analyses or studies of the impact on patronage resulting from the investments in quality. It is difficult to assess the true impacts of the investment without considering the counter-factual in detail.

Although the move to SQPs by most of the PTEs in the second Bus Strategy may counter some of these difficulties experienced with voluntary partnership schemes, it is far from clear that they will fully address the challenges and limitations inherent in partnership solutions. Issues of service levels and fares are crucial and the options available to influence them are highly restricted under all partnership options. Also, given the difficulties experienced in

establishing the current schemes, where routes to upgrade can be cherry-picked so as to achieve the greatest returns (ie greatest increases in patronage), it is hard to see how voluntary agreement can be achieved on considerably less commercially attractive routes where the business cases for operator investment will be considerably more marginal or where there is no commercial justification for the operator, even where a wider public policy case may exist.

4. Prospects for Bus Services in the PTEs

4.1. Our Approach

In this section of the report we draw on a number of data sources to examine the trends that have occurred in bus patronage, service provision (in terms of mileage operated), and fares for each PTE.

The purpose of this analysis is to demonstrate how local bus markets have developed in each of the PTE areas under the current regulatory arrangements. Detailed analysis for each PTE is set out in Appendix B. Based on these trends, and forecasts of demographic changes, we draw some broad conclusions on how bus use will continue to evolve over the next decade or two under a 'do minimum' policy scenario. By our 'do minimum' scenario, we mean a policy environment where there are no quality contracts in operation. As we have explained in Section 3.2 we do not believe that either voluntary or statutory partnerships, while they may continue to be developed, will deliver any significant overall improvements in bus service quality, and therefore patronage, within the PTE areas. Therefore, our 'do minimum' scenario does not incorporate any specific assumptions regarding the development of these schemes.

We have analysed data from a range of sources.

Our starting point for each PTE was data on patronage and mileage operated published by the Department for Transport. This provides us with a consistent backdrop across all PTEs upon which to basis the analysis. We then move on to consider fares. In the absence of a published fares index for each of the PTEs individually from the DfT, we have constructed our own indices using DfT data on passenger receipts (at 2002/03 prices) and data on passenger journeys. For all the PTEs other than Merseyside, the passenger journeys data used for the fares index are from the DfT. Due to the discrepancy between DfT and Merseytravel data, we have used Merseytravel passenger journeys data for Merseyside. The England PTE wide fares index is also constructed by NERA through aggregating passenger receipts from each of the PTEs and the passenger journeys data (again, using DfT data for all PTEs other than Merseyside).

For both Merseyside and South Yorkshire we had concerns over the accuracy of the DfT data on passenger receipts for 1997/98. In the case of Merseyside, the estimate appeared too low when considered in conjunction with Merseyside data, so we have generated our own straight line estimate of passenger receipts for this year by taking the average of the 1996/97 and 1998/99 figures. For South Yorkshire, the receipts value was unusually high so we have used data from the Bus Industry Monitor 2004 for this year as it provides a more smoothed series. Both of these adjustments are reflected in our total index for the combined PTEs.

Comparison of our combined fares index for the PTEs with that published by the DfT (please refer back to Figure 1.3) does show that the two indices follow a broadly similar path, with our index suggesting a slightly lower overall increase over the period from 1994/95 to 2002/03.

We supplement this base data with more detailed data sourced directly from each of the PTEs by NERA through both face-to-face interviews with PTE officials and follow up data requests.

Our survey of PTE data focussed on data available for the period since deregulation (ie 1986). We requested that each PTE supplied us with patronage data disaggregated by:

- Commercial and supported (that is, tendered) services;
- Ticket type;
- Time of day; and
- Passenger type.

We also requested that they supplied vehicle mileage data disaggregated by commercial and supported services. The level of detail and disaggregation in the data provided varied significantly. However, there appears to be some broad consistency in experience between the PTEs so experience observed in the more data-rich PTEs are likely to be applicable to some extent to the other PTEs.

For each of the PTEs we finally present detailed population projections published by the Office of National Statistics to provide a context against which we can then go on to consider the prospects for each of the markets in the future in the final subsection.

4.2. Conclusions on the Future Demand for Bus Services

This section summarises the main conclusions from the data which we have collected and reviewed for each of the English PTE areas. To help draw general conclusions, Table 4.1 provides an overview for each English PTE on patronage, real fare levels and service level (as measured by vehicle kilometres). The table also shows population projections by age group.

Table 4.1
Bus Operations in PTE Areas

	Recent experience			Forecast population increases for 2003 to 2020 (population changes in thousands)			Concessionary travel free before 1 st April 2006?
	Patronage (change 1994/05 to 2004/05)	Real fares index (change 1994/05 to 2002/03)	Service level (change 1994/05 to 2004/05)	Young people (Aged 5 to 19)	Adults (Ages 20 to 59)	Older people (Over 60)	
Merseyside	Down 17%	Up 33%	Down 10%	Down 54 (20%)	Down 23 (3%)	Up 58 (19%)	Yes
Greater Manchester	Down 10%	Up 8%	Down 12%	Down 56 (11%)	Up 45 (3%)	Up 99 (20%)	No
West Yorkshire	Down 20%	Up 27%	Down 11%	Down 33 (8%)	Up 66 (6%)	Up 93 (23%)	No
South Yorkshire	Down 33%	Up 11%	Down 31%	Down 32 (13%)	Up 1 (<1%)	Up 65 (24%)	No
Tyne & Wear	Down 25%	Up 3%	Down 41%	Down 37 (18%)	Down 28 (5%)	Up 50 (21%)	No
West Midlands	Down 15%	Up 6%	Down 20%	Down 38 (7%)	Up 53 (4%)	Up 58 (11%)	Yes, but extended

Notes: Patronage refers to bus journeys, and service level is vehicle kilometres.

Table 4.1 shows that in all the PTE areas bus patronage went down, fares went up, and service levels were reduced.

On the basis of the analysis of trends in each PTE area, and the summary in Table 4.1, we can make some broad assessments of what would be likely to happen to bus use in the PTE areas as a whole under a 'do minimum' scenario. In this 'do minimum' scenario we presume that there are no major traffic restraint policies in the form of congestion charging. We also presume, on the basis of our discussion of the limited impact of bus partnership schemes in Section 3 of our report, that any further schemes will have no significant effect in reducing overall decline in bus travel in metropolitan areas outside London over the next ten years. We also assume that, in the absence of quality contracts, the various parties including in particular district councils are unable to deliver any significant increases in bus priority in the PTE areas.

Under these circumstances we cannot see any major reasons why the factors that have driven the decline in bus use over the last ten years (in particular over the period from 1994/05 to 2004/05) will not continue to operate. The PTE areas will have an ageing population, and the proportions of young people will fall and of old people will increase in all of them. In addition, in two out of the six, Merseyside and Tyne and Wear, total population will decline.

In particular, the factors causing underlying decline in the propensity to travel by bus (rising income and car ownership, and increased dispersion of population with the move to the suburbs) are unlikely to reverse. In addition, cost pressures in the bus industry from rising fuel prices and real labour rates, reinforced by the need to meet pension commitments, will continue to lead operators to increase fares in real terms. And the need to secure adequate rates of return to attract capital will also mean that bus operators will continue to reduce mileage operated. Pressure on funding and increased costs per bus-km operated will mean that the PTEs will be unable to replace lost commercial mileage with increased supported mileage.

By averaging rates of change over the six PTE areas (without weighting by size) we can make a set of broad projections. Over the ten years from 1994/95 to 2004/05 bus patronage by area has fallen on average by 20 per cent, while service operated has also fallen by slightly over 20 per cent. Projecting the annual growth rate in real fares over ten years rather than eight, real fares have on average risen by 19 per cent. Projecting these numbers forward gives an estimate that over the ten years from 2004/05 to 2014/15 bus patronage will again fall by 20 per cent, fares will rise by about 20 per cent, and service levels will fall by around 20 per cent. Free concessionary travel will have blunted the decline in 2006, but not in those PTE areas where travel by concessions was not already free (Merseyside) or free for most potential concessionary travellers (West Midlands).

5. Conclusions

This report has summarised the main streams of work undertaken by NERA for the Passenger Transport Executive Group (pteg). These streams of work have centred around the general themes of the decline in bus use in the English PTE areas, the alternative policies (particularly Quality Contracts) currently available to arrest this decline and contribute to overall Government targets to increase use of buses in England, and the likely broad impact of a 'do minimum' approach in which the Quality Contract approach is not implemented.

Under present circumstances there is a downward spiral of bus use in England's largest cities outside London. Underlying factors such as increasing car ownership and use, and the dispersal of population, reduce the demand to travel by bus. Increasing labour and fuel costs lead to upward pressure on fares, and increasing fares further reduce bus use. Since bus operators are particularly concerned with margins, they also reduce the services they operate commercially, as particular routes or sections of route or times of the day become unprofitable. This loss of service further reduces demand for travel by bus, particularly because the PTEs do not have the funds (nor necessarily the inclination) to tender out all the lost commercial mileage.

Reliability (in terms of the proportion of scheduled mileage operated) has also been a problem that PTEs have raised with some areas. Unreliability is clearly a problem for passengers. The Department for Transport publish results of bus passenger satisfaction in different areas of the country.²⁶ While satisfaction scores for overall service levels are typically higher in the Met areas than in London (we think this is primarily because of the impact of road congestion on the speed of bus services in London), reliability scores are higher in London than in the Mets: average score on reliability in 2004/05 was 70 (out of 100) in London, 66 in the Shires, and 62 in the Mets. There is no sign of significant increases in satisfaction since the surveys were introduced in 2000/01.

In our work we have reviewed the impact of Quality Bus Partnerships in each of the PTEs. We find that the results have been rather disappointing. Partnerships have generally been introduced only on the commercially most promising routes where impacts on patronage and turnover are expected to be greatest, but even there impacts have been relatively low in terms of increasing bus use above what it would have been in the absence of partnership. One clear difficulty has been in persuading district councils to deliver improved bus priority that has a significant impact on bus journey times and their predictability. Another has been to secure real improvements in the quality of services provided by bus operators in circumstances where operators who improve quality cannot be sure that they would not face competition from a lower cost entrant.

Quality Contracts might be expected to deliver the step-change in quality that could encourage increased bus use, and experience from different parts of the country shows that increases in bus service quality can increase patronage. Under Quality Contracts successful operators would be secure from competition, though we believe that the contract should include some quality incentives such as the QIC's now used in London. But real fare levels would also need to be controlled too so that the quality/price combination offered by buses

²⁶ DfT *Transport Statistics Bulletin: Bus Quality Indicators: England Q1 2005/06* Data April to June 2005.

would be more attractive than it is now in comparison with the quality/price combination offered by the private car. However, we think that there may be significant public sector budgetary implications from achieving this. In addition, really effective policies to increase bus use in our major cities also likely require greater controls on the use of the car in city centres, by means of controls on city centre parking supply and pricing, improved management of main radial traffic capacity with priorities for buses and, where appropriate, increased provision of park-and-ride schemes. Eventually, congestion-related charging for car users would need to become part of the policy implemented to increase bus use.²⁷ It is difficult to see this becoming possible without local authority control of the key bus service and fare parameters. The full budgetary implications would be dependent upon the degree to which other measures were employed, notably the extent to which increases in peak capacity were required and the commitment to raising revenue from motorists.

²⁷ A recently-published paper by Graham and Glaister suggests that a national system of congestion charging could increase bus use at the national level by 7 per cent. Daniel J Graham and Stephen Glaister 'Spatial implications of transport pricing' *Journal of Transport Economics and Policy* May 2006, pp.173-201. See p.187.

Appendix A. Bus Partnership Experience by PTE

A.1. Merseyside

In Merseyside's first Bus Strategy, for the five year period from 2001, bus partnerships were considered to be an important component in delivering the Strategy:

Merseytravel hopes that the policies set out in the Strategy can be achieved through its existing Partnership arrangements with operators and other stakeholders.²⁸

Despite a long running trend of declining bus patronage in Merseyside (see Section 4.2), the Strategy was aimed at delivering a 10 per cent growth in patronage over a 10 year period, in line with the Government's 10 year Transport Plan. However, over and above the Government patronage targets, Merseyside's ambitions for the bus network were also underpinned by the objective of supporting and fostering economic growth in the county.

To achieve the objectives for the Strategy, Merseytravel highlighted the importance of engaging with its partners in providing bus services. While the bus operators are clearly very important in any bus partnership, the Merseyside strategy explicitly recognised the importance of a wide range of partners, including local authorities, the police, central government, and the community. The forum established for focussing the efforts of these partners was the Integrated Transport Forum.

At the time it produced the Strategy, Merseytravel appeared optimistic about the prospects for the partnerships to deliver the improvements. While acknowledging that operators are constrained by commercial considerations, which may lead to a difference of opinion on a number of issues, Merseytravel did consider there to be "much common ground" between the parties, including a desire to improve quality of service provision and increase passenger use.

²⁸ Merseytravel, *Merseyside LTP: The Merseyside Bus Strategy*, 2000.

The approach adopted by Merseytravel to implement the Strategy was to split the network up into a number of components depending on the type of service operated, for example the SCHOOLS network, and the SOCIAL network. However, the key part of the network with regard to partnership was the SMART network. This part of the network focussed on a network of major corridors linking all the major centres across Merseyside. It was envisaged that these routes would be high quality, clearly branded and marketed, and operating at all times of the day. Merseytravel envisaged making a range of improvements to the quality of these routes including:

- Bus stop improvements;
- Bus priority measures and stricter enforcement; and
- Enhanced bus fleet and driver improvements, including low-floor buses and more highly trained drivers.

The delivery of these improvements was intended by Merseytravel to be via a statutory quality bus partnership agreement for each corridor. These corridors are listed in Table A.1.

Table A.1
Proposed Development of the SMART Network

LTP Smart Scheme	Description	Distance	Programmed Commencement Date
A	Liverpool/Bootle/Crosby/Formby/Southport	Approx. 47km	2001/02
B	Liverpool/Kirkby/Maghull	Approx. 16 km	2001/02
C	Three principal routes, two commencing from Liverpool, the third starting at Everton Valley. Route 1 is 6 km long, Route 2 is 12km long and Route 3 is 6 km long.		2003/04
D	Liverpool/Huyton/Prescot/Rainhill	Approx. 18 km	2001/02
E	Liverpool/Belle Vale/Netherley	Approx. 11 km	2001/02
F	Liverpool to Airport/Speke via Aigburth and Allerton	32 km long	2003/04
G	Liverpool to Birkenhead via Queensway and Kingsway Tunnels		2001/02
H	Liverpool-Ullet Road/Aigburth/Queens Drive	18 km	2002/03
J	Page Moss/Princess Drive/Croxteth/Fazakerley	8 km	2001/02
M	Prescot to Wigan (section in Merseyside)	12 km	2004/05
P	St Helens to Newton	12 km	2004/05
Q	Clinkham Wood/St Helens Town Centre/ Lea Green/Sutton Leach/Clock Face/Sutton Heath/ Thatto Heath/Grange Park/Ravenhead	18 km	2001/02
S	Birkenhead/Liscard/Wallasey/West Kirby	30 km	2004/05
T	Birkenhead to Heswall/Upton	13 km	2003/04
V	Birkenhead/Bromborough/Clatterbridge	18 km	2003/04

Source: Merseytravel, Merseyside LTP: The Merseyside Bus Strategy, 2000, Figure 18.

Outside of the high quality SMART network, the Strategy included proposals for the CORE network to be subject to a generic Quality Bus Partnership.

Despite these clear objectives and intentions by Merseytravel, progress in delivering the SMART concept has been disappointing. In its October 2004 *Merseyside Bus Strategy: Review for Consultation* document, Merseytravel note that:

Merseytravel is now very concerned that the agreed SMART package set out in the MBS is now being ignored by operators.²⁹

These concerns were focussed on two main issues:

- Lack of investment by operators – Merseytravel had by the time of the report undertaken a number of the capital support projects originally committed to under the Strategy.³⁰ However, it was felt that similar contributions were not being committed by the operators, restricting the improvements in quality that were hoped for. Unfortunately there is limited data available on the level of investment by operators, as is noted by Merseytravel, so it is difficult to assess the actual level of investment. In addition to the effects on the quality of vehicles, it was argued by Merseytravel (page 26) that the slow rate at which vehicle quality was being improved meant that the local authorities had been reluctant to introduce effective bus priority measures.
- Erosion of the SMART brand – high quality vehicles and service were intended to be the cornerstones of the SMART brand. However, this has been eroded by a number of issues. Firstly, where the route has received an upgrade in infrastructure, the low barriers to market entry mean that operators other than the SMART operator can operate on the route using lower quality vehicles. This undermines the SMART offering. Secondly, where the SMART operator engages in persistent substitution of high quality vehicles to low quality vehicles, without giving sufficient explanation or justification, there is an erosion of the quality of the brand.

The brand erosion problem was reported by Merseytravel to have been such that Arriva had decided to adopt their own brand, “Le Bus”, instead. The implication is that both the SMART brand, and the bus network integration that it was supposed to foster were damaged further.

It was intended that many of the difficulties identified with the SMART routes would be dealt with as part of the partnership agreements. However, despite intending to have statutory bus partnerships on each of the SMART routes, no such agreements have been put in place. In addition, progress in achieving any Quality Bus Partnership had been so slow that only one corridor in St Helens has such an agreement in place.

We are informed by Merseytravel that the experience in implementing the SMART corridors through bus partnerships has been so disappointing that the latest Local Transport Plan will continue to include QBPs but will acknowledge that there may be a need to move toward Quality Bus Contracts.

²⁹ Merseytravel, *Merseyside Bus Strategy: Review for Consultation*, 2004, page 23.

³⁰ See Merseytravel, *Merseyside Bus Strategy: Review for Consultation*, 2004, table 6 for more detail.

A.2. Greater Manchester

Greater Manchester's first Bus Strategy, published in 2002, was an important component of the first Local Transport Plan, and recognised the importance of the bus in delivering Greater Manchester's aspirations for improved public transport. Partnership delivery of bus services has been advanced within the County to contribute to the delivery of the Strategy.

Specifically, since 1998, the Passenger Transport Authority, the Greater Manchester District Authorities, the Highways Agency, Manchester Airport, and the transport operators (bus, tram and train) have been promoting partnership working through the Integrate Project.

One of the principal components of the Integrate Project initiative has been the development of Quality Bus Corridors (QBCs). Having first received funding at the end of the 1990s, the QBCs have been developed to deliver a step change in the quality of the bus offering on the chosen routes. GMPTE and the local authorities have invested in a range of improvements to bus stops, real time passenger information, relocating resident parking etc. The March 2006 *Greater Manchester Bus Strategy* identifies over £37 million of public sector capital spending on the Quality Bus Corridors in the period 2001/02 to 2004/05.³¹

As GMPTE acknowledge, the Quality Bus Corridors are still in the delivery phase. The programme includes a total of 33 routes, of which five were completed by March 2006,³² with the rest due to be completed by 2008.³³ However, despite this, the Integrate Project does appear to have delivered benefits. Against a wider backdrop of declining patronage, between 1998 and 2003 patronage on the QBCs has risen by 15-20 per cent.³⁴ It is difficult to know what the appropriate counter-factual is for evaluating this increase, but GMPTE estimate that patronage is around 10 per cent higher than if the actions had not been taken.³⁵

In addition, GMPTE report success in the partnership approach in stabilising the network, introducing joint ticketing initiatives, and the development of an Information Bureau and call centre which is jointly funded. In addition to patronage increases, GMPTE report increases in customer satisfaction on the corridors.³⁶

These benefits have been achieved because the operators on the routes have engaged in the process. Currently, all of the QBCs operate on a voluntary basis and there are no statutory partnerships. Under such arrangements, the cooperation of all partners is crucial. However, this voluntary nature means that there is not uniformity in the level of commitment by partners. GMPTE report that there has been variation in the degree of cooperation provided by the individual districts through the delivery of important scheme components such as bus priority.

³¹ Data from Table 2.

³² GMPTA, *Greater Manchester Bus Strategy*, March 2006, page 9.

³³ GMPTA, *Greater Manchester Bus Strategy*, March 2006, page 37

³⁴ GMPTA, *Greater Manchester Provisional Bus Strategy*, July 2005, page 16.

³⁵ Ibid, page 3.

³⁶ A survey of Greater Manchester residents reported in the Bus Strategy (March 2006) shows that "compared to equivalent 'control' high frequency bus corridors, QBC passengers were significantly more satisfied than other passengers with reliability, vehicle quality, pedestrian crossing facilities near stops, speed of journey, frequency of buses, feeling of safety at bus stops and having stops with shelter" (page 14).

While gains have been made in terms of patronage and service quality on the QBCs, GMPTE consider that the partnership services are still not meeting passenger requirements in a number of respects, including:

- Reliability;
- Punctuality;
- Network development; and
- Ticket integration.³⁷

In response to these perceived limitations to the current voluntary partnerships, the latest Greater Manchester Bus Strategy emphasises the importance of focussing agreements on the delivery of agreed outcomes, rather than inputs, but, importantly, the establishment of formal (ie statutory) Quality Partnerships for each of the QBCs as they are completed. In GMPTE's view, these more formalised arrangements will:

*guarantee standards and protect the investment made by both the public sector and the operators.*³⁸

However, like Merseytravel, we understand that GMPTE continues to consider all policy options, including the potential for quality contracts. Like many of the PTEs, GMPTE will also be making use of Performance Improvement Partnerships to seek to address poor reliability and punctuality across the bus network as a whole.

A.3. West Yorkshire

Like those of Merseyside and Greater Manchester, West Yorkshire's first Bus Strategy in 2000 emphasised the importance of partnerships in delivering the improvements in services needed by the people of West Yorkshire:

*WYPTA Policy: To ensure, in partnership with operators, highway authorities and others that bus services are as effective as possible in meeting the travel needs of the people of West Yorkshire, serving both existing passengers and attracting additional patronage, including mode switch from the car.*³⁹

The Strategy document points to partnerships, including statutory partnerships where appropriate, as being the primary means of implementing the strategy.⁴⁰ Partnerships are said to have delivered a number of improvements for passengers, including voluntary codes of conduct and voluntary ticketing schemes.

As observed in Merseyside and Greater Manchester, the primary role for partnerships has been through Quality Bus Corridor schemes. First introduced at the end of the

³⁷ Ibid, page 57.

³⁸ Ibid, page 56.

³⁹ West Yorkshire Passenger Transport Authority, *West Yorkshire Bus Strategy*, July 2000, front cover.

⁴⁰ Ibid, page 4.

1990s, West Yorkshire has implemented a number of QBCs. Quality Partnerships have delivered the guided busways projects, which have been associated with passenger growth. However, where growth in corridors has been achieved, for example on the Scothall Road corridor scheme, it is not clear whether the QBC was responsible entirely for the growth, or whether other factors have come into play.

One of the more high-profile Quality Bus Corridors is the Keighley-Bradford corridor. This 8 to 10 mile route received public sector capital spending in the form of refreshed infrastructure (primarily new shelters and bus lanes) but, in April 2005, the operator (Blazefield which is now part of Transdev) invested in new high quality buses. In order to reciprocate Blazefield's commitment, Metro then invested in further shelter improvements, including introducing information displays at all stops. This led to a 4 per cent increase in patronage on the route in the first year. But the route has subsequently returned to declining patronage. A more successful example of patronage growth is on Blazefield's Ripon-Harrogate-Leeds corridor where another QBC operates. Blazefield informed us that they saw an 18 per cent increase in patronage in the first year, which has now fallen back to 4 to 5 per cent growth two years on. The primary reason for the differential in the performance of these two schemes is likely to be the competition from rail; there is a lower priced, good quality, rail service competing on the Keighley-Bradford corridor, which is not the case in the Ripon-Harrogate-Leeds case.

Despite these advances that have been made with Blazefield, we understand from WYPTE that there has been less success in working with other operators to improve quality. In one major operator's case, the average age of the fleet in the county has risen as a result of failure to invest in new vehicles. Other operators were thought to be hostile to the concept of partnership working.

Despite this incomplete support, we understand that WYPTE continues to promote new partnership schemes, such as the A65 Quality Bus Initiative. The Consultation Draft of the *Metro Bus Strategy 2006-2011* also appears to support the continuation of the use of voluntary partnerships to deliver further improvements. However, there is an acknowledgement of the limitation of such agreements. In response, there is a greater emphasis on the use of more legally binding policy tools to guarantee delivery than was the case in the first Strategy. While the first stage in these more formal partnership processes will be the statutory partnerships, WYPTE's Strategy document does highlight some concerns held by the PTE regarding the capability of these tools to achieve their objectives. Of particular concern is the inability to specify requirements to fare levels or service frequency, timing, network and integration within a SQP framework. Under the Strategy, WYPTE will therefore give full consideration to the options available to them under Quality Contract frameworks to address these concerns.

A.4. South Yorkshire

In line with the approach adopted by other PTEs, South Yorkshire's first Bus Strategy (as part of the first Local Transport Plan) adopted the Government's 10 Year Plan target of raising bus patronage by 10 per cent over ten years. The approach adopted to deliver this target was improving the quality of bus services through a series of voluntary quality bus

partnerships. It was envisaged that the PTE would deliver improved facilities such as bus stops, local authorities would deliver the necessary bus priority and road changes, and the operators would invest in new vehicles. The partnerships were focussed on the development of quality corridors covering the 'core' network.

An example of the Quality Bus Corridor schemes introduced is that between Worksop and Rotherham. This £2 million scheme involved a partnership between SYPTE, Nottinghamshire County Council, Rotherham County Council, First and Stagecoach. As part of the QBC all bus shelters were upgraded to improve the environment and accessibility at the stop, the Local Authorities made highway improvements, and Stagecoach invested in new vehicles. Drivers received training to NVQII level and the network was promoted during construction and upon completion of the works.

While voluntary partnership schemes have been pursued by SYPTE, we have been informed by the PTE that there have been difficulties in the delivery of elements of the schemes. All voluntary schemes are dependent on all the participants delivering on commitments in the spirit of the partnership. When trust is broken down between partners, it can be difficult to maintain improvements. It appears that, to some degree, this has been the problem in South Yorkshire. Difficulties have arisen over issues such as:

- operator/PTE disputes over what constitutes new vehicles;
- concern that more of the budget is being spent on road maintenance over and above bus priority and complementary road enhancements; and
- fare increases and service deregistrations causing considerable unrest and leading to local politician mistrust of operators.

These difficulties have, as has been the case in a number of the PTEs, led to further consideration of alternative approaches to delivering the South Yorkshire Bus Strategy. South Yorkshire is at an advanced stage in considering use of SQPs and in January 2007 plans to introduce a scheme in North Sheffield based on the area around the Barnsley Road. The SQP is being made jointly with Sheffield City Council. The scheme agreement⁴¹ sets out in detail the standards of service that customers should expect. This requires both the PTE and SCC to undertake a range of improvements to both the road infrastructure and the bus network infrastructure. These improvements and actions are detailed in the agreement. While the operators are not a signatory to the agreement, in order for them to be able to access the infrastructure that the SQP provides, they must reach minimum service standards that are outlined in the agreement, relating to both driver and bus quality. However, in line with the limitations in the powers relating to SQPs, SYPTE are not able to impose any fares restrictions or specify service frequencies, hours of operation, timings or obligations to ensure services are retained at current levels.

The formal consultation on the SQP commenced in May 2006 for 12 weeks. This will enable any final amendments to be made to the scheme documentation.

⁴¹ http://www.sypte.co.uk/pdfs/nutall/STATUTORY_QUALITY_BUS_PARTNERSHIP_SCHEME- MAY 2006..pdf

We understand from SYPTE that the development work on the scheme is progressing well. Discussions related to vehicle standards and bus lanes are to be completed, and the scheme will be operational from January 2007. However, it should be noted that the steering group for the programme has been high profile with the inclusion of very senior representatives of the PTE, SCC and First, with regular review meetings involving Chief Executive at SCC, Director General at PTE, and Nicola Shaw and Moir Lockhead from First.

However, despite the progress with the development of the Statutory Quality Partnership, there are still concerns within SYPTE as to the extent to which the more limited-in-scope partnership approaches, be they voluntary or statutory, can deliver the improvements needed to achieve the patronage growth targets put in place by both SYPTE and the Government. To address these concerns, SYPTE is moving ahead with a programme to undertake preparatory work to understand the risks and costs associated with a Quality Contract regime.

A.5. Tyne and Wear

Tyne and Wear introduced Quality Bus Corridors around four years ago (autumn 2002) under the brand of “Superoutes” as part of the first Bus Strategy. The concept is operated on a voluntary quality partnership basis with Nexus (the PTE) partnering with the five district councils (who are the highway authorities) and bus operators (Arriva North East, Go North East, and Stagecoach North East).

There are currently 40 Superoutes operating in the county operating to the standards identified below, representing around 30 per cent of the bus network and 36 per cent of all bus trips.⁴² The partners involved have agreed that routes operating under the brand will have to meet certain minimum standards to ensure the step change in quality from standard services. These minimum standards cover:

- Operation of low-floor fully accessible buses supported by improvements to pavement heights;
- Services operating all day, every day, at least every 30 minutes (with a proposal to increase this to every 15 minutes daytimes);⁴³
- High quality stops incorporating route information and shelters; and

Accompanying highway measures – Nexus inform us that there are around 40kms of bus priority within Tyne & Wear.

While the Superoutes have clearly delivered some gains to passengers in terms of higher quality buses, better on-street facilities, restricted timetable changes, and gains from increased bus priority, (and the bus operators report growth on some Superoute services) Nexus inform us that the partnership has not reversed the underlying trend of declining bus use. This may in part reflect the fact that the improvements in quality have been relatively modest. But it may also reflect the fact that the routes chosen were chosen on a commercial

⁴² Data supplied to NERA by Nexus.

⁴³ Note that this would not be enforceable through a SQP.

basis, and therefore may have involved the least effort to achieve the required standards. We have been informed by Nexus that there have been a number of issues with delivery too:

- There were delays in putting in place the bus stop improvements, including delays to the information systems;
- Bus priority schemes have not been delivered in any significant or effective manner – we understand that bus priority measures have been primarily focussed on those areas where it is easy to do and cars would not be substantially disadvantaged;
- There have been concerns that the vehicles introduced by operators have not been up to the standard envisaged – for example, not all vehicles carry the Superoute branding.

The concerns over the consistency of delivery of the Superoutes, and the acceptance by all parties involved that the process needed to be changed, has led to some revisions to the strength and participation of the management board that coordinates the partners' efforts. The Nexus Bus Strategy for 2006 to 2011 does confirm the commitment to the concept in that it confirms that "further Superoutes will be designated in the future".⁴⁴

Despite the seeming commitment to the current approach (rather than SQPs), the latest Bus Strategy does highlight the importance of all partners engaging in the process. In the case that the voluntary approach does fail to deliver the services required by the people of Tyne and Wear, like South Yorkshire, Nexus has started to examine and put in place the processes necessary to implement Quality Contracts.

A.6. West Midlands

The West Midlands introduced its first Quality Bus Corridor in 1997 under the brand "Bus Showcase Route". Working together in a voluntary partnership, Centro (the PTE), Birmingham City Council, and Travel West Midlands introduced the concept on the Birmingham-Walsall – Pheasey route (number 33). Subsequently, over the period of the first Bus Strategy up to 2004, the number of Showcase routes in operation rose to four, with a further three in the final stages of completion, and around six in implementation.⁴⁵

As with Quality Bus Corridors operated in the other PTE areas, the Showcase routes require that the service level achieves a number of key features and standards, including:

- High levels of accessibility at stops (easy access curbs at all stops, pedestrian access links);
- Real-time information at bus stops;
- Low-floor buses with low emissions;
- 10 minute frequencies;
- Driver training to NVQ II;

⁴⁴ Nexus, *Tyne and Wear Local Transport Plan 2006-1: Tyne and Wear Bus Strategy*, page 9.

⁴⁵ WMPTA, *West Midlands Local Transport Plan: Bus Strategy 2005 – 2011*, page 62.

- High cleaning standards for vehicles; and
- Highway measures to improve reliability and speeds, including enforcement.

While the Showcase routes do constitute a substantial increase in quality of service compared to many traditional routes, Centro and its partners have also developed an additional, higher quality product referred to as “Super Showcase” or “bus rapid transport” (BRT).

BRT routes aim to “provide mass rapid transit services on key non-metro routes with buses that emulate many characteristics of light rail”.⁴⁶ These schemes involve significant route upgrades including improvements to the vehicles, substantial priority measures (bus gates, queue relocation, and selective detection at junctions).

We understand from Centro that these schemes are not currently operational. The schemes involve challenges in securing substantial levels of public funding (in the case of a proposed scheme for Coventry, £54 million) and scheme commitment as Centro is prevented from committing operators to operate services on the infrastructure.

All the partnership schemes in the West Midlands up to now have been developed on a voluntary basis; there are currently no SQPs. However, a scheme was planned for North Birmingham that would have been the first in the County. As part of the planned formal partnership, the major bus operator (Travel West Midlands) invested in a number of new vehicles (the so-called ‘bendy buses’), and Centro invested in the street infrastructure. We were informed by Centro that the SQP fell through due to Birmingham City Council’s refusal to put in the crucial bus lanes required under the scheme after a change in political control.

Despite this setback to the SQP approach, Centro does not rule out the option to adopt further schemes as part of the latest Bus Strategy:

*In certain cases statutory partnership agreements will be required to achieve the long-term objectives.*⁴⁷

Although the BRT and SQP schemes have not been fully implemented, the Showcase routes have been and the results appear to have been positive. Centro report that the schemes have seen patronage increases of up to 30 per cent.⁴⁸ While this is a significant increase, it should be noted that Showcase routes currently only constitute around 5 to 10 per cent of the network⁴⁹, and the commercial priority placed on partnership schemes is likely to mean that those chosen will be those with the highest potential yields. There are therefore doubts as to the wider replication of these results.

In addition to the Showcase routes, West Midlands have been involved in a “quality partnership” in Coventry. There have been concerns regarding the quality of service in the Coventry area for a number of years. In 2002/03 these concerns led Coventry City Council to

⁴⁶ Ibid, page 65.

⁴⁷ Ibid, page 13.

⁴⁸ Ibid, page 23.

⁴⁹ Data provided by Centro.

pursue a Quality Contract option for service provision in the area. As a response to this decision, the Council with Centro and Travel West Midlands jointly funded a study – the Coventry Area Network Study - by the TAS Partnership to develop a strategy for improving public transport provision in the area. The study recommended enhancements on more than 80 kilometres of bus routes along fifteen corridors at a cost of around £90 million.⁵⁰ To deliver these enhancements the study concluded that, in the event that partnership failed, a quality contract approach may be necessary.

Faced with concerns over the implementation of a quality contract, Travel West Midlands agreed to implement the recommendations of the study, leading to the Council putting the QC proposals on hold. However, we are informed by Centro that councillors in the city are continuing to monitor the changes, and if the improvements for passengers do not materialise, they may reconsider the implementation of a QC.

⁵⁰ http://westmidlandsltp.gov.uk/2005/section_20423115852516.html

Appendix B. Bus Service Supply and Demand Trends by PTE

B.1. Merseyside

Merseyside data are the most comprehensive for the PTE areas. In addition to data from the DfT on bus passenger receipts, Merseytravel provided detailed data from 1994/95 to 2004/05 on bus passenger journeys and miles, scheduled bus miles, average journey length and average bus loads. These data were split by such factors as ticket type, time period, and service type, which permitted more detailed analysis.⁵¹

In summary, the main conclusions from the Merseyside data are:

- Demand for bus services on Merseyside has been declining, both in terms of the number of passenger journeys and passenger kilometres;
- Mirroring the decline in patronage, scheduled bus miles have also fallen;
- Average bus loads seem to have been steady over the period;
- Growth in real fares on Merseyside has been higher than for the average English PTE area since 1994/95;
- Cash fares are the main bus journey ticket type, although their use (and that of concessions) is beginning to decline in favour of pre-paid tickets;
- The proportions of peak and off-peak weekday passenger mileage (around 40 per cent and 42 per cent of total passenger mileage respectively) are much higher than weekend mileage (around 18 per cent of total passenger mileage) and all are stable over time;
- The passenger mileage proportion for adults (aged 16 to 60) has been steady at around 46 per cent. The proportion of passenger mileage for children (aged 5 to 15) is less than that for adults but has increased from 10.7 per cent in 1994/95 to 13.2 per cent in 2004/05. Therefore, the passenger mileage proportion for all other passengers⁵² has declined;
- The 60+ age group is expected to form an increasing part of a slightly shrinking population in Merseyside in the period up to 2020. The 5-59 age range is forecast to shrink significantly. The overall impact on the market for bus services on Merseyside is therefore hard to predict, but on balance we think it is likely to lead to decline.

B.1.1. Patronage and service levels on Merseyside

The steady declines in the demand for, and provision of, bus services in Merseyside since 1994/95 are demonstrated in Figure B.1 and Figure B.2. The number of bus passenger journeys has fallen by 34.1 million (17 per cent) between 1994/95 and 2004/05, while the scheduled bus mileage operated has fallen by 5.7 million (10 per cent) over the same time

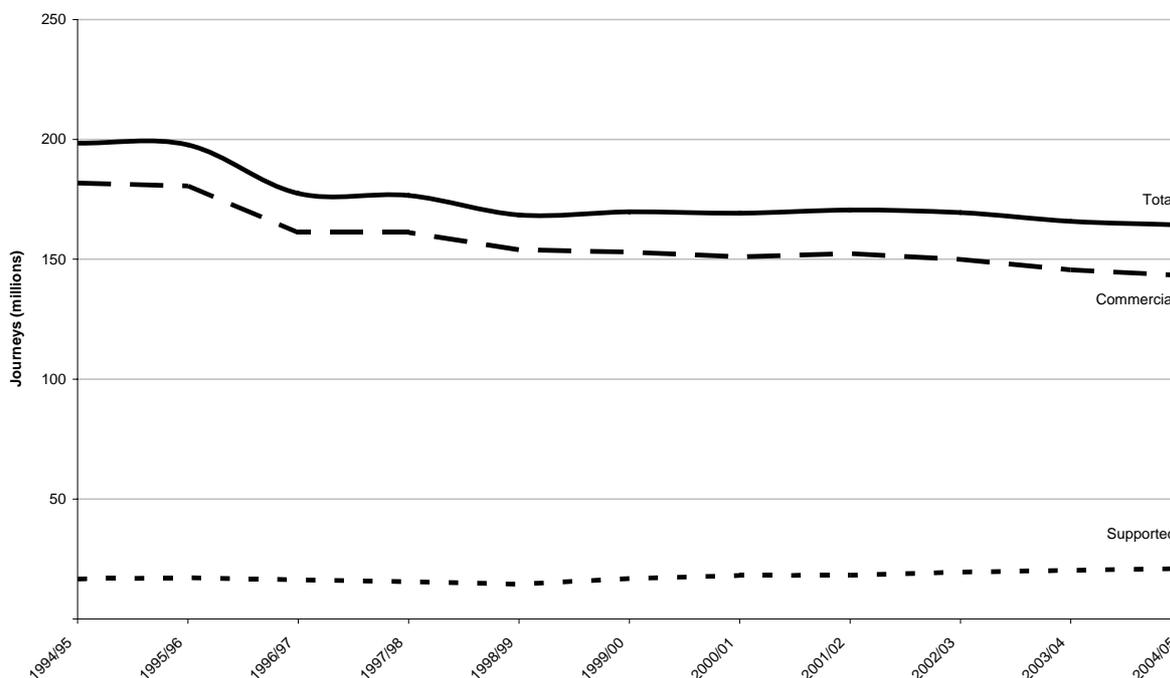
⁵¹ This information is published by Merseytravel in their document *Annual Passenger Services Monitor*, which is published quarterly.

⁵² Other passengers include those below the age of 5, those above the age of 60, students, solo ticket holders, operator prepaid ticket holders, pensioners and disabled passengers.

period. Commercial bus journeys and vehicle mileage have fallen between 1994/95 and 2004/05, while supported journeys and vehicle mileage have remained relatively stable.

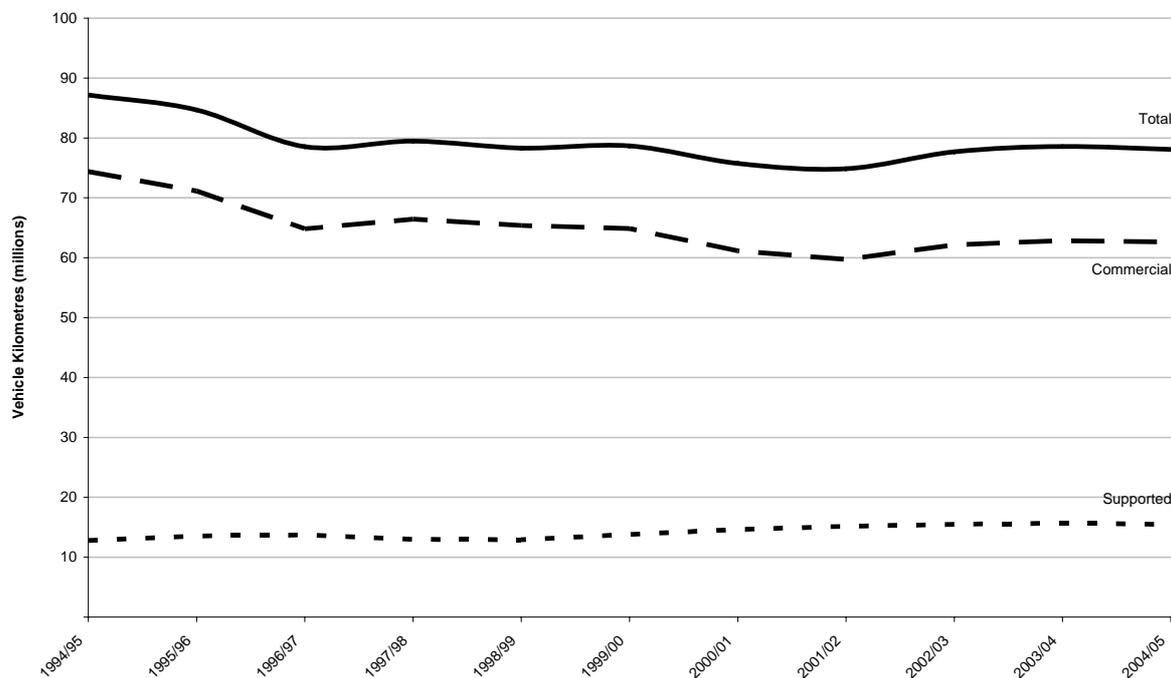
The data used for Figure B.1 and Figure B.2 are from Merseytravel, and are used in place of DfT data. The downward trend, and rate of decline, in bus journeys for each dataset are similar, but the bus journey levels from Merseytravel data are approximately 30 million greater than the corresponding levels shown in the DfT data. The opposite is true for service levels, with DfT figures showing approximately 10 million kilometres more than the Merseytravel data.

**Figure B.1
Bus Journeys on Merseyside, 1994/95 to 2004/05**



Source: Annual Passenger Services Monitor dataset supplied to NERA by Merseytravel.

Figure B.2
Merseyside Bus Vehicle Kilometres, 1994/95 to 2004/05

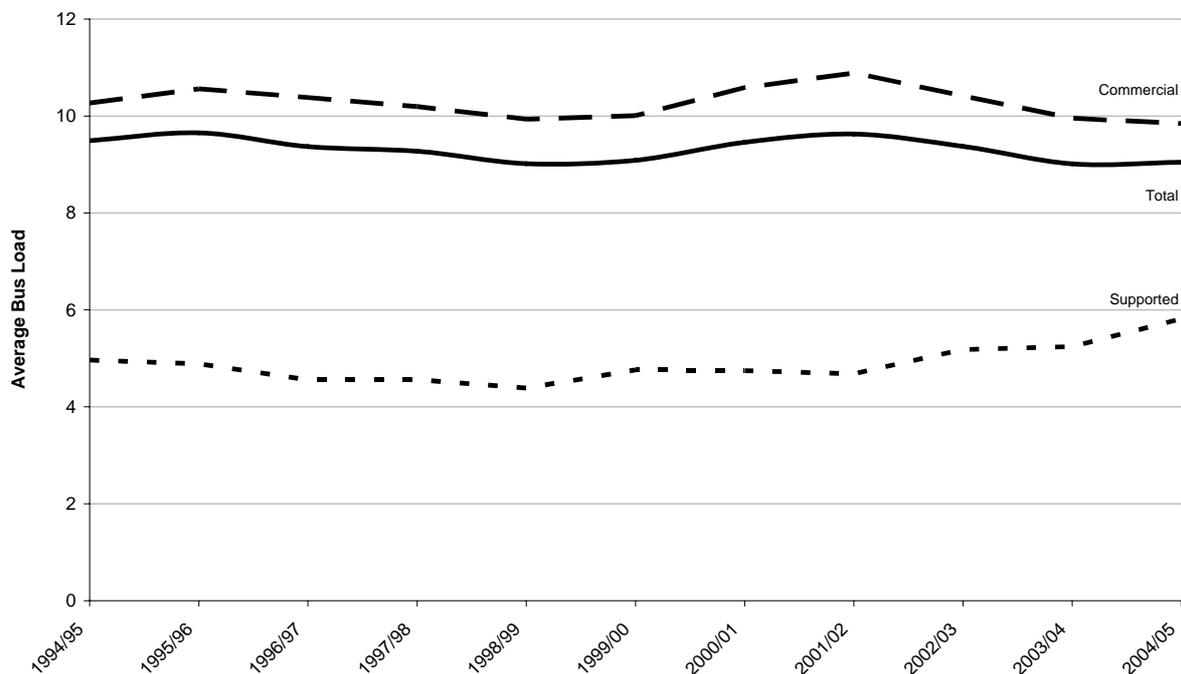


Source: Annual Passenger Services Monitor dataset supplied to NERA by Merseytravel.

The average bus load is calculated as the ratio of passenger mileage to scheduled bus mileage. The similar rates of bus patronage and vehicle service level decline are illustrated in Figure B.3 by the relatively steady average bus load of 9 to 10 passengers. The average bus load for commercial services is about 10 passengers over the period, relative to about 5 passengers for supported services.

The average passenger journey length was 4.2 kms in 1994/95 and 4.3 kms in 2004/05, a slight increase over the period. Therefore, total passenger kms from 1994/95 has been declining at a slower rate than the number of passenger journeys.

Figure B.3
Merseyside Average Bus Load, by Service Type, 1994/95 to 2004/05



Note: Average bus load = passenger mileage/scheduled bus mileage
Source: Annual Passenger Services Monitor dataset supplied to NERA by Merseytravel.

B.1.2. Bus fares on Merseyside

As Figure B.4 shows, the fall in patronage and service operated on Merseyside has been accompanied by rising real fares. The data show that, not only are real fares rising, but that the change on Merseyside is greater than the average for the English PTEs as a whole. In fact, it is greater than for any other English PTE. However, much of this growth occurred in the late 1990s; over the first few years of this decade, there appears to have been some fall back towards the PTE average increase for the period as a whole.

Figure B.4
Merseyside Bus Fares Index – Real Terms, 1994/95 to 2002/03



Notes: Fares calculated from DfT bus passenger receipts (£m 2002/03 prices) and Merseytravel data on passenger journeys (million). Indexed to 1994/95. The passenger receipts level for 1997/98 has been adjusted to achieve straight line growth over the period from 1996/97 to 1998/99 as we have concerns over the accuracy of the DfT figure.
Source: DfT and Annual Passenger Services Monitor dataset supplied to NERA by Merseytravel.

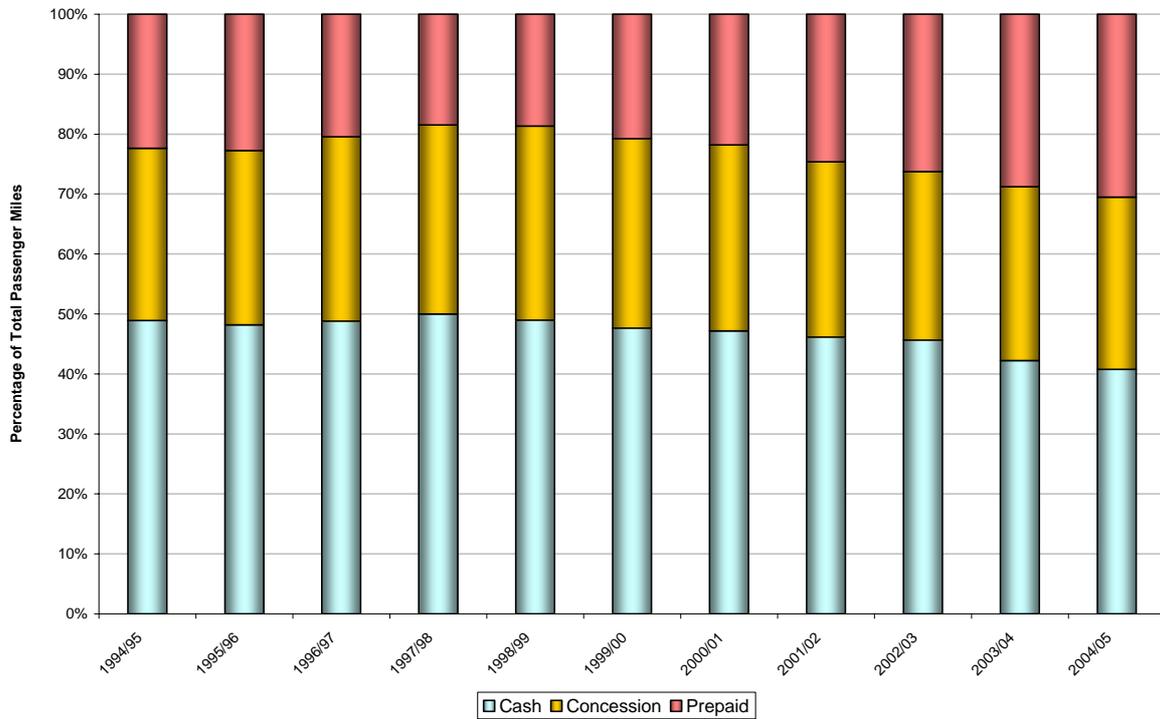
B.1.3. Bus travel by ticket type, time period, and type of passenger

As is shown in Figure B.5, the proportion of passenger miles travelled by passengers with pre-paid tickets has increased between 1994/95 and 2004/05 (from 22.4 per cent to 30.5 per cent). This has led to a decline in the relative importance of cash-paid tickets over the same period (48.9 per cent to 40.8 per cent). The proportion of passenger mileage by those with concessions has remained steady at approximately 29 per cent.

As shown in Figure B.6, the relative importance of the various time periods for passenger mileage has remained relatively constant. Peak and off-peak passenger mileage are similar proportions of total passenger mileage – at around 40 per cent each – while weekend mileage is significantly lower. The stable proportions illustrate the similar rates of decline for passenger mileage across different time periods.

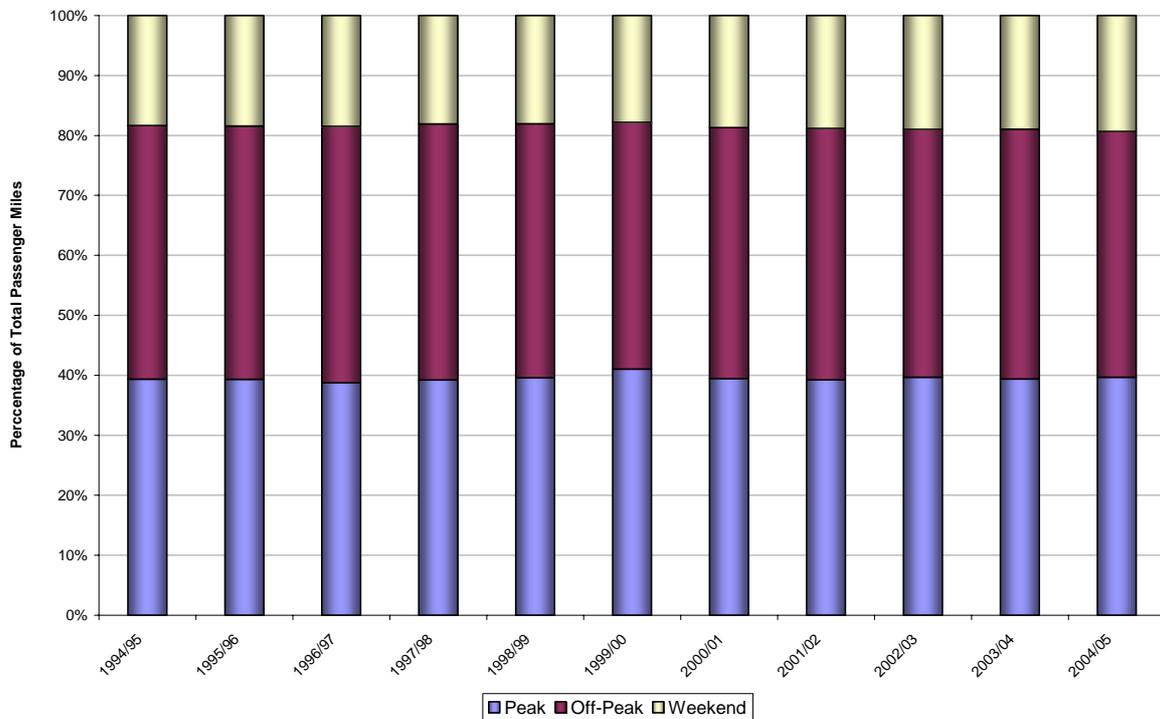
The bus passenger mileage data are also disaggregated by passenger age groups, the results of which are shown in Figure B.7. As a percentage of total passenger miles, child passenger mileage (aged 5 to 15) has increased from 10.7 per cent in 1994/95 to 13.2 per cent in 2004/05. Adult passenger mileage (aged 16 to 60) has been relatively steady at 46 per cent of total passenger miles between 1994/95 and 2004/05 (with a rise above 50 per cent between 2001/02 and 2002/03), meaning passenger mileage for all other passengers has fallen slightly over the ten-year period as a proportion of total passenger mileage.

Figure B.5
Merseyside Bus Passenger Mileage, by Ticket Type, 1994/95 to 2004/05



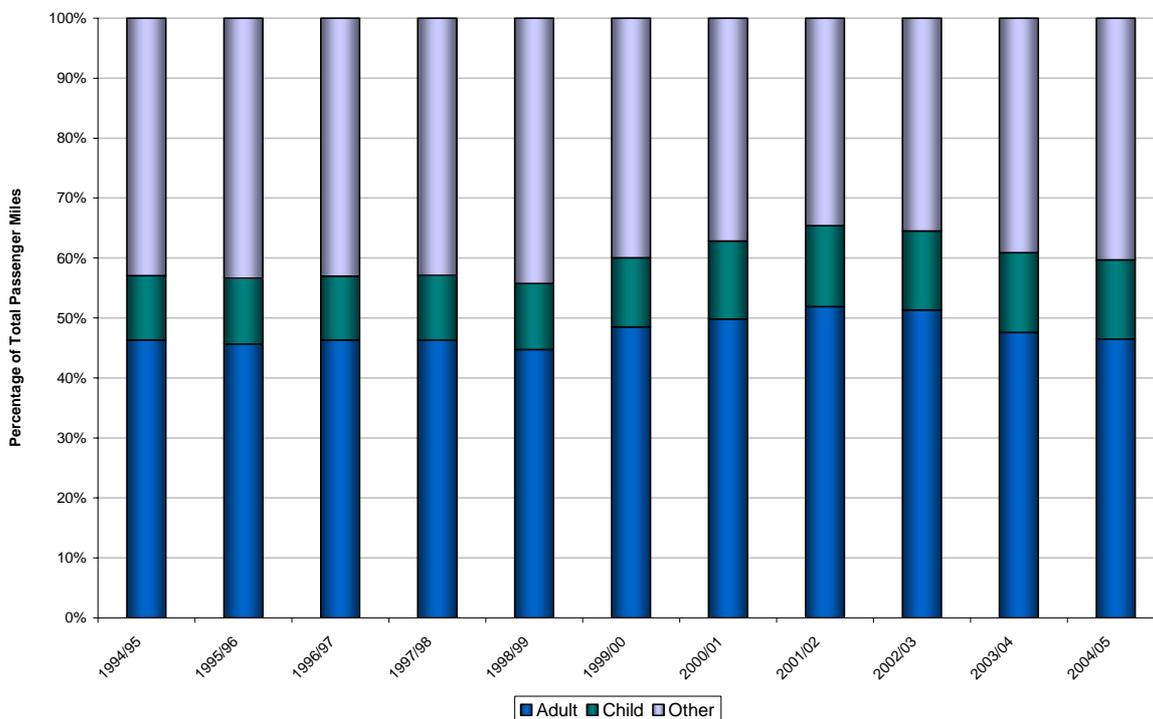
Source: Annual Passenger Services Monitor dataset supplied to NERA by Merseytravel.

Figure B.6
Merseyside Bus Passenger Mileage, by Time Period, 1994/95 to 2004/05



Source: Annual Passenger Services Monitor dataset supplied to NERA by Merseytravel.

Figure B.7
Merseyside Bus Passenger Mileage, by Passenger Type, 1994/95 to 2004/05



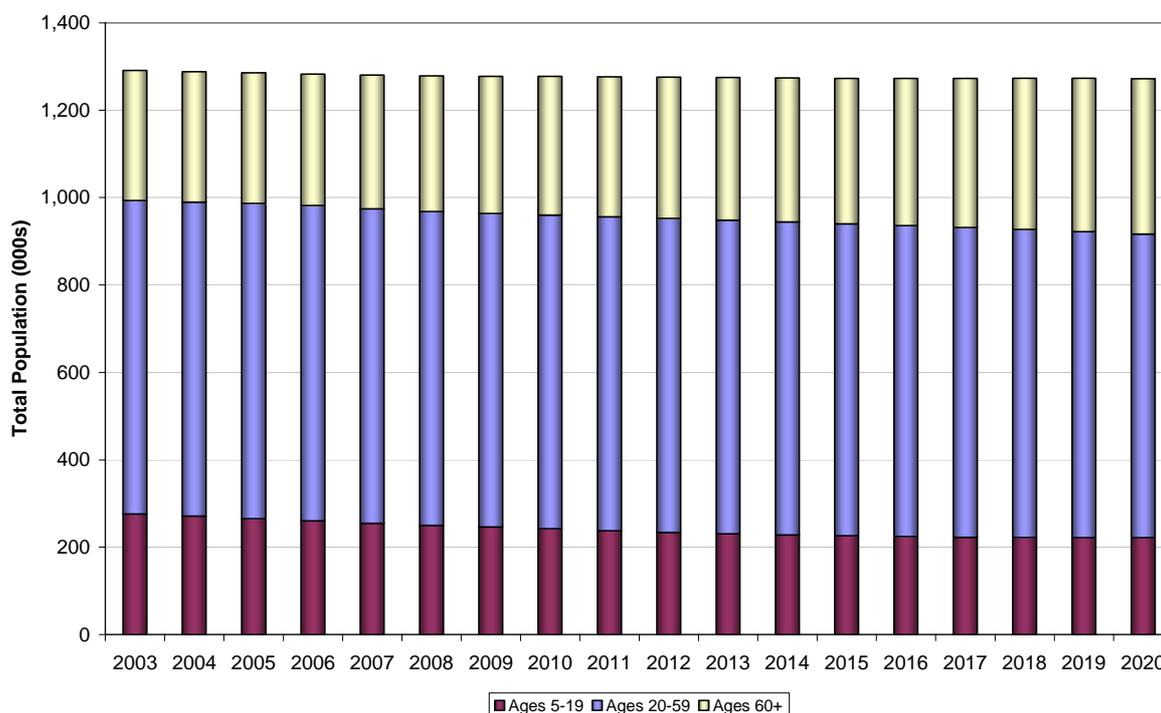
Note: Children are defined as 5 to 15 years of age, Adults are 16 and 60 – except for students, solo and operator prepaid ticket holders, pensioners and disabled passengers, which are defined as Other.
Source: Annual Passenger Services Monitor dataset supplied to NERA by Merseytravel.

B.1.4. Demographic forecasts for Merseyside

Merseyside is facing a declining and ageing population. Between 2003 and 2020 the Office of National Statistics forecasts that the number of people living on Merseyside will decline by around 19,000 people, or 1.5 per cent of the 2003 population. In addition to the population declining, it is also forecast to get older. The population of young people (those aged 5 to 19) is forecast to decline by 20 per cent over the period (54,000 less people). However, at the same time the population over 60 is expected to rise by 19 per cent (or 58,000 people).

These demographic changes will have implications for the bus market in Merseyside. Firstly, as the total population is declining, the potential market of passengers will fall over the period to 2020. However, the rebalancing of this total population is also important. Both the young and old are traditionally more intensive users of bus services than the population as a whole as a consequence of their lower levels of car ownership. Therefore the decline in the young population will have a negative effect on bus use, while the increase in the old population will have a positive effect, all things being equal. However, the use of buses by the older population has been lowered as the levels of car ownership amongst this group rises with time. Given these competing effects, it is difficult to draw any clear conclusions as to how the population changes will affect demand. However, analysis of trips per person per year data from the National Travel Survey would appear to suggest that younger people make more trips per year on average by bus than older people. This would appear to point to declining future patronage, all things being equal.

Figure B.8
Merseyside Population Forecasts, 2003 to 2020



Source: NERA analysis of Office of National Statistics data

B.2. Greater Manchester

In addition to the DfT data, the Greater Manchester Transportation Unit (GMTU) provided data on annual bus mileage, split by type of service. Greater Manchester PTE provided data on patronage, split by passenger type.

In summary, the main conclusions from the Greater Manchester data are:

- Bus patronage and the supply of bus services in Greater Manchester have both declined, although there has been some recovery in patronage since 1999/00;
- Passengers with concessions are falling as a proportion of total patronage, with all other groups increasing proportionately;
- Subsidised bus service mileage is increasing as a percentage of total vehicle mileage, while commercial mileage is falling;
- Real fare levels have risen at a lower rate than for the average PTE area and have remained largely constant in real terms for much of the eight-year period; and
- Greater Manchester is projected to have a growing and ageing population – the 5-19 age group shrinking, but both adult age groups are increasing. The growth in overall and older populations suggests a growing potential market for bus use. As with all PTE areas, the extent to which this potential is realised will however depend upon the extent to which older people choose to use cars in the future.

B.2.1. Patronage and service levels in Greater Manchester

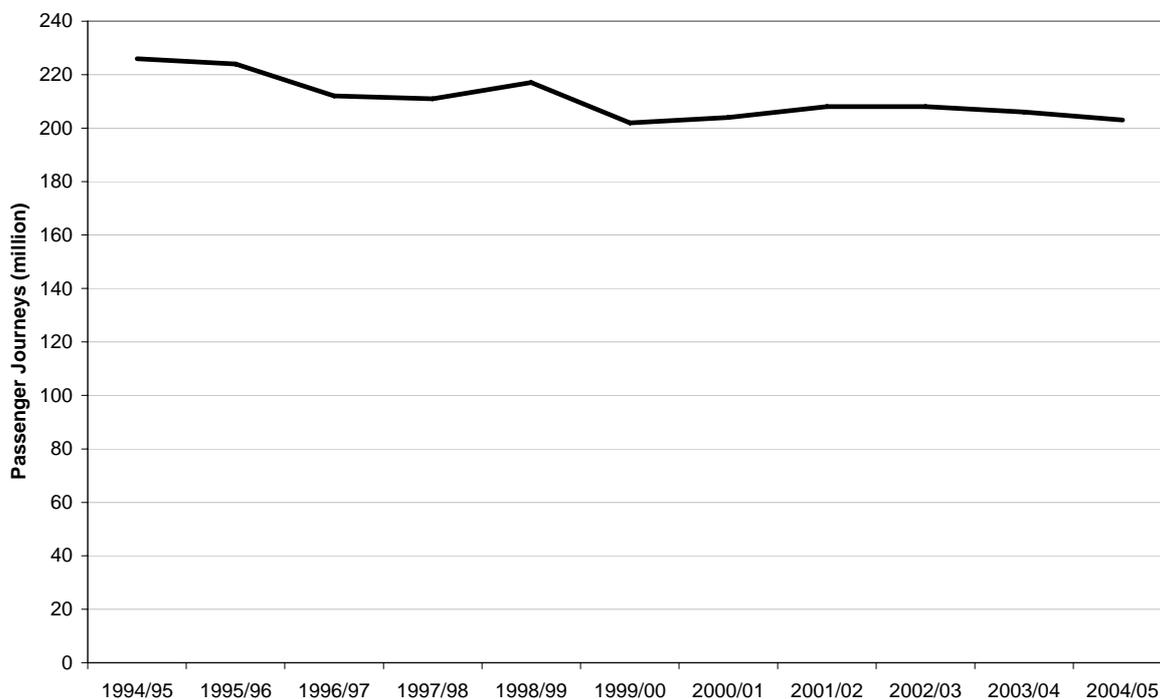
Figure B.9 shows that passenger journeys in Greater Manchester have fluctuated around a downward trend since 1994/95. The overall decrease in journeys has been 10 per cent between 1994/95 and 2004/05.

The level of annual bus vehicle kilometres has fallen by approximately 18 million kilometres (12 per cent) between 1994/95 and 2004/05. This is illustrated in Figure B.10.

Disaggregated by service type, commercial vehicle kilometres have fallen as a percentage of total vehicle kilometres from 88 per cent in 1994, to 81 per cent in 2004. Subsidised bus vehicle kilometres have remained relatively steady over time in absolute terms, and therefore have formed an increasing proportion of the declining total vehicle kilometres – from 12 per cent in 1994 to 19 per cent in 2004.

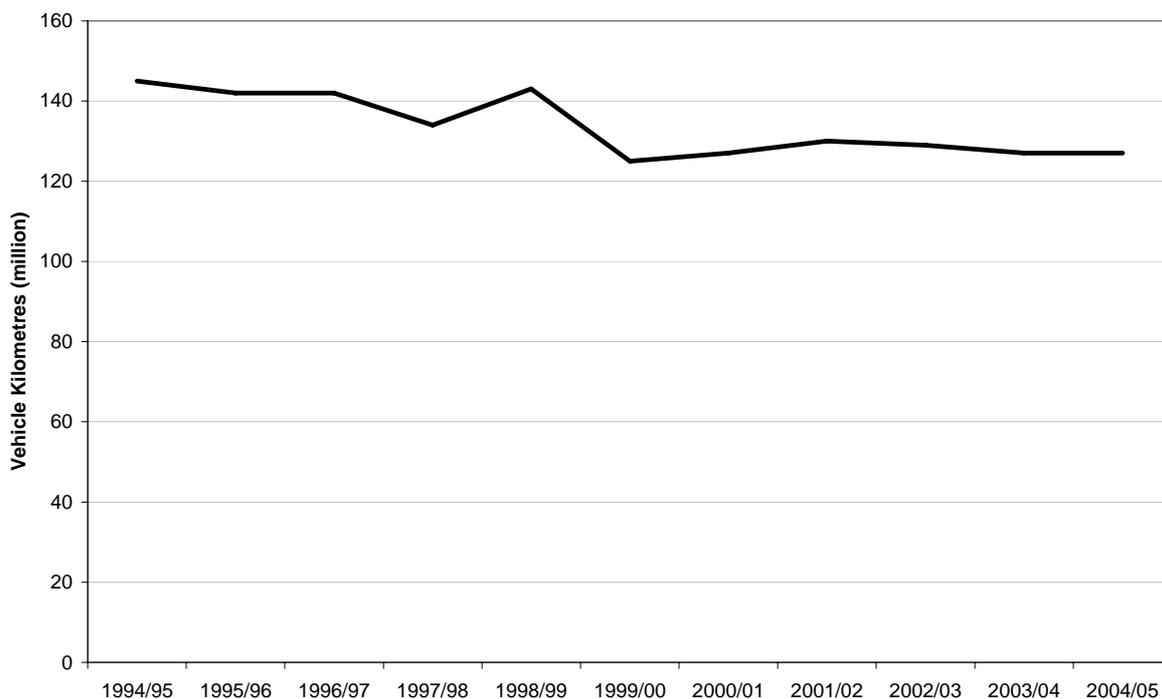
As is the case on Merseyside, the DfT data for patronage in Greater Manchester is consistently lower than the PTE data, although the rate of decline is similar. The vehicle mileage trend does, however, differ between the DfT and GMTU datasets. The GMTU data shows a faster rate of decline in vehicle mileage than the DfT data, mainly due to the plateau-effect since 1999/00 in the DfT data – shown in Figure B.10 – which does not occur in the GMTU data.

Figure B.9
Greater Manchester Bus Journeys, 1994/95 to 2004/05



Source: DfT Public Transport Statistics Bulletin 2005

Figure B.10
Greater Manchester Bus Vehicle Kilometres, 1994/95 to 2004/05

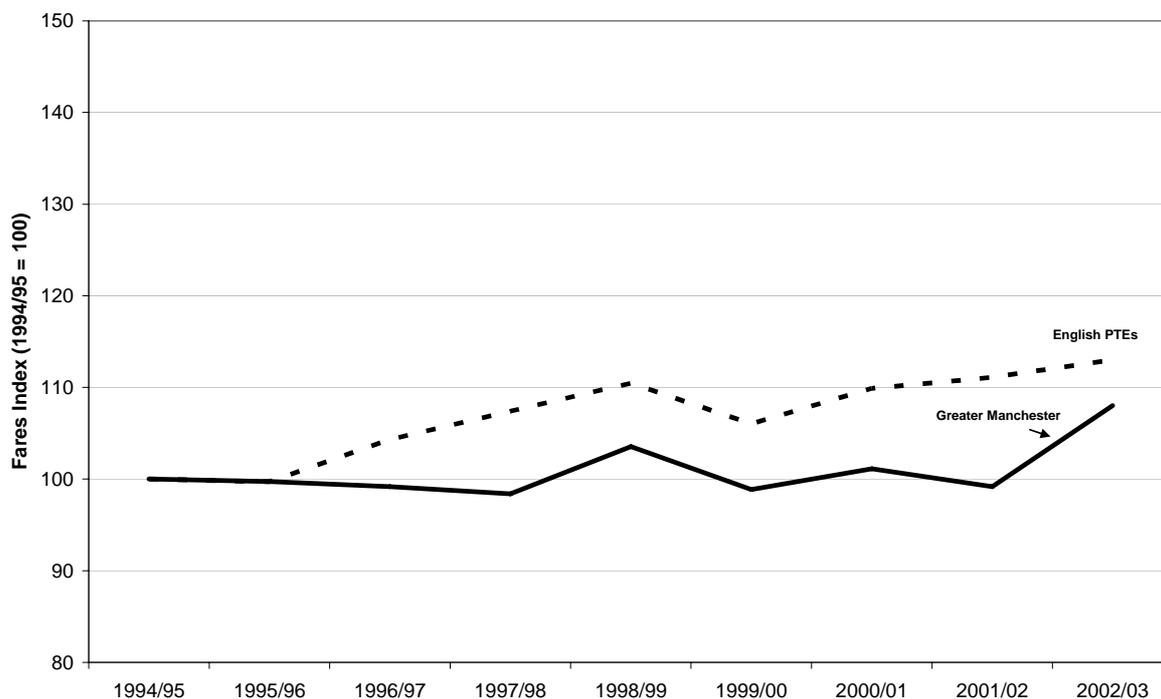


Source: DfT Bulletin of Public Transport Statistics: Great Britain 2003 and updated statistics supplied directly from DfT

B.2.2. Bus fares in Greater Manchester

Figure B.11 shows that, unlike in the case of Merseyside, the rate of change in real fare levels in Greater Manchester has been slower than the average for all English PTEs. The fare level index has fluctuated over the eight year period and now appears to be rising since 2001/02 towards the English PTE average real fare index level.

Figure B.11
Greater Manchester Bus Fares Index – Real Terms, 1994/95 to 2002/03

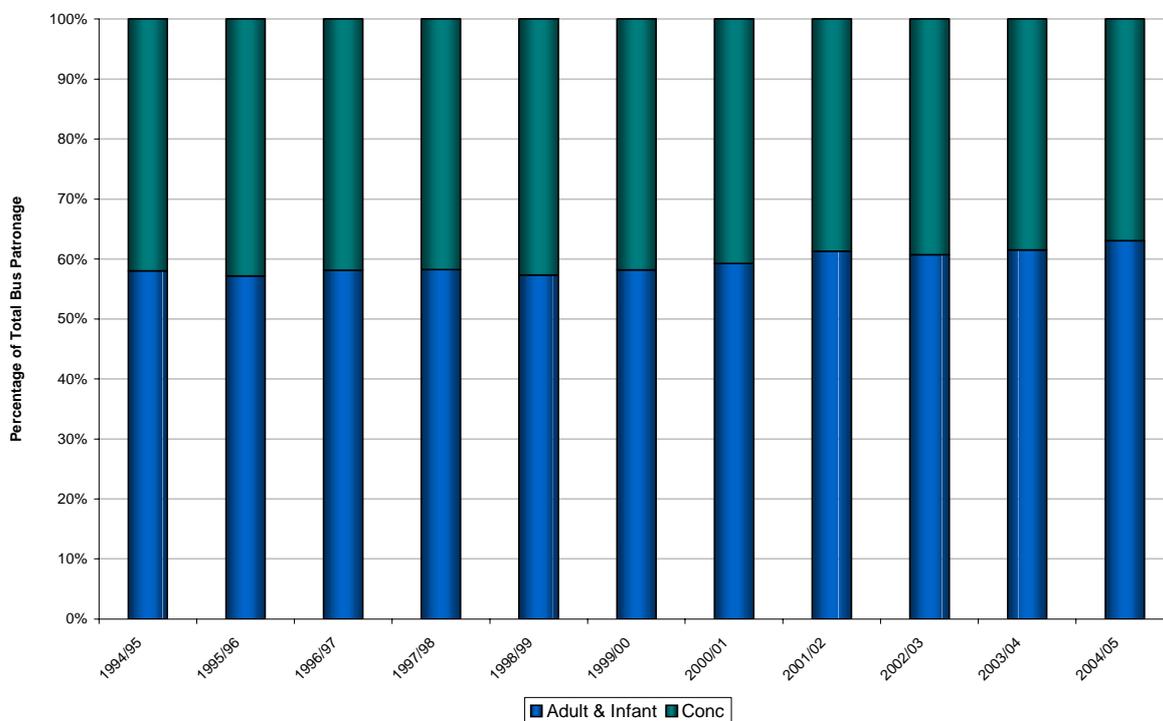


Note: Fares calculated from DfT data on bus passenger receipts (£m 2002/03 prices) and on passenger journeys (million). Indexed to 1994/95.
Source: DfT

B.2.3. Bus travel by passenger type

The patronage levels are disaggregated by passenger type in Figure B.12. There has been a decline in concessionary journeys and an increase in adult and infant journeys as a proportion of total passenger journeys. Of the total reduction in bus patronage of 31 million journeys between 1994/95 and 2004/05, more than 24 million are concessionary passengers.

Figure B.12
Greater Manchester Bus Patronage, by Passenger Type, 1994/95 to 2004/05



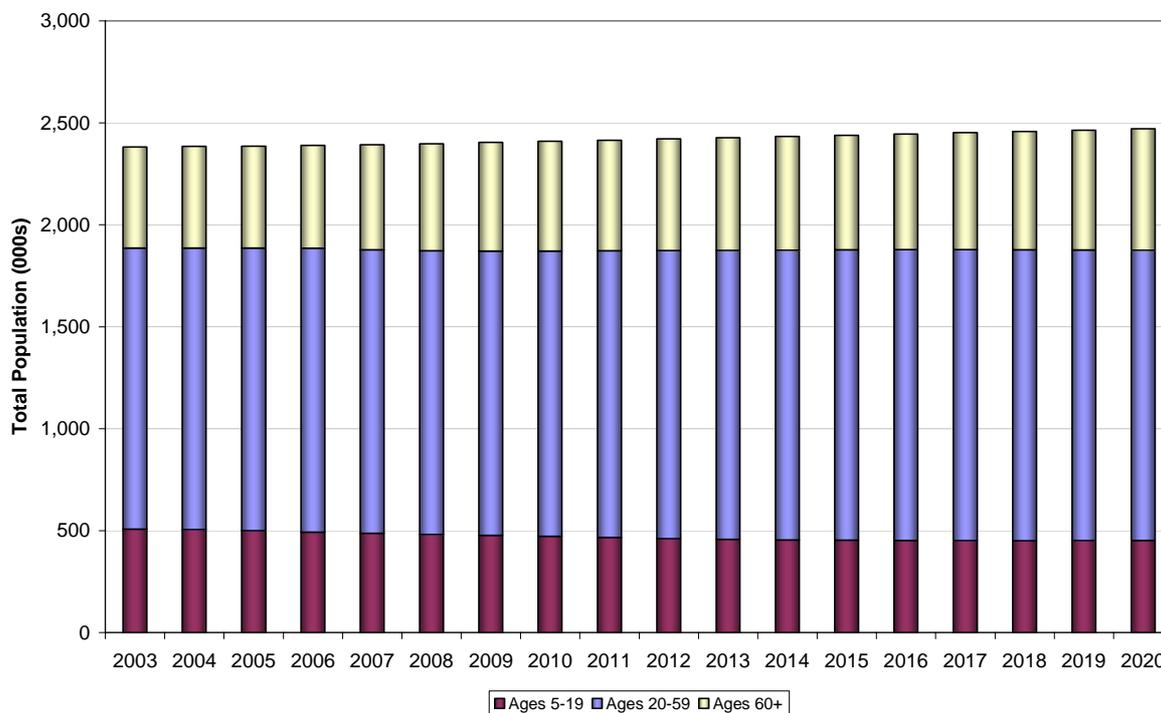
Source: Data supplied in a private communication from GMPTE (original source CPS)

B.2.4. Demographic forecasts for Greater Manchester

Unlike Merseyside, the population of Greater Manchester is forecast to grow between 2003 and 2020. This growth is driven by a significant increase in the older population. By 2020, ONS forecast that there will be another 99,000 over 60s than in 2003 (20 per cent increase). While this is, in part, offset by the decline in young people (56,000 people or 11 per cent less), a 3 per cent increase in the adult group also contributes to an overall expected population increase of 4 per cent (or 89,000 people).

The strong population growth overall and the growth for both the adult age groups suggests that, despite the decline in young people, the potential market for bus use should grow over the period 2003 to 2020, all other things being equal. However, the extent to which this potential is realised will depend upon the extent to which older people choose to use cars in the future

Figure B.13
Greater Manchester Population Forecasts, 2003 to 2020



Source: NERA analysis of Office of National Statistics data

B.3. West Yorkshire

West Yorkshire PTE provided bus journey data, split by time period and ticket type from October 2004 to September 2005. This is in addition to the DfT patronage and service level data, and the ONS population data.

In summary, the main conclusions from the West Yorkshire data are:

- The demand for bus services in West Yorkshire is declining, but to a lesser degree than in other PTE areas. Despite this decline in demand, the supply of bus services (ie vehicle kilometres) remained relatively constant until 2000/01 after which it also started to decline;
- The real fare index has increased faster than for the average English PTE;
- The majority of passengers travel during the weekday midday, and PM peak, periods, with 66 per cent of weekend passengers travelling during the Saturday daytime;
- Most non-peak period tickets are cash (56 per cent), but in contrast most peak period tickets are non-cash (52 per cent); and
- West Yorkshire has a projected growing and ageing population suggesting potential for a growing market for bus services. However, as with other PTEs, the extent to which this potential develops depends on future car ownership and usage.

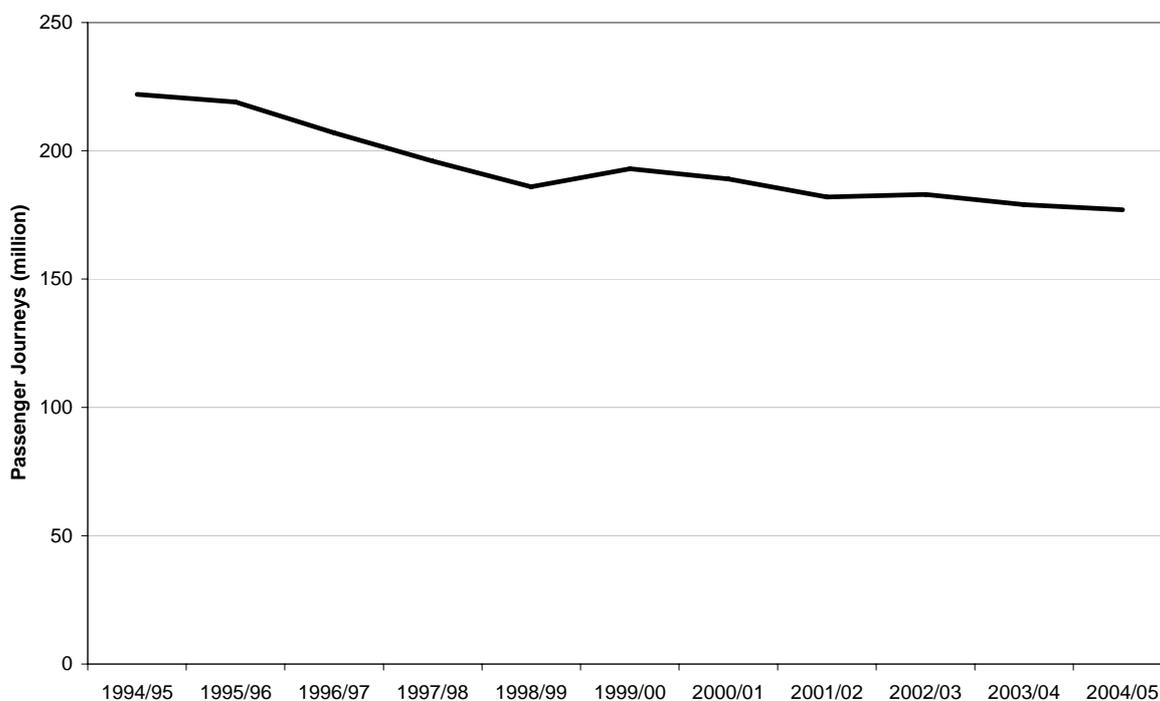
B.3.1. Patronage and service levels in West Yorkshire

West Yorkshire bus journey levels, summarised using DfT data in Figure B.14, have trended downwards between 1994/95 and 2004/05, reducing the number of annual bus journeys over this period by approximately 45 million (20 per cent).

Figure B.15 shows that, unlike in the other metropolitan areas, vehicle kilometres have remained largely stable over the period 1994/95 until 2001/02, but since then have declined.

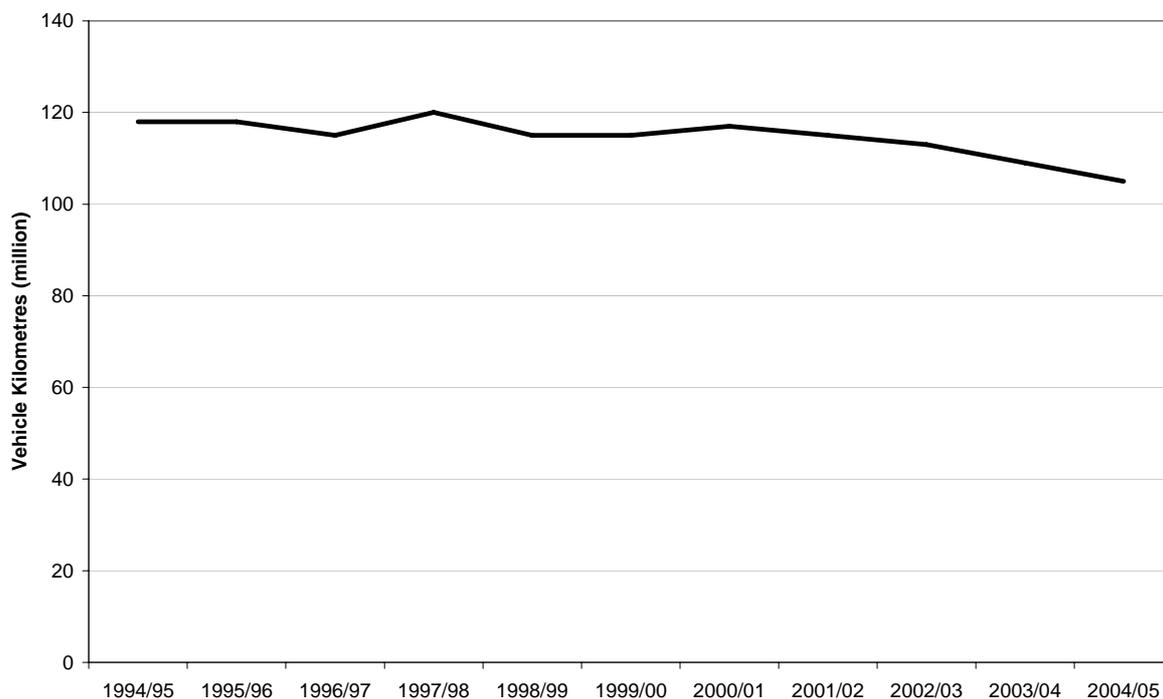
The downward trend in the PTE data on patronage is similar to that of the DfT data, but again the levels in the DfT data are lower and the decline is less severe. In addition, the PTE data show a recovery in passenger journey levels occurring from 1999/00 until 2002/03, whereas the DfT data show the recovery beginning in 1998/99 and ending a single year later.

Figure B.14
West Yorkshire Bus Journeys, 1994/95 to 2004/05



Source: DfT Public Transport Statistics Bulletin 2005

Figure B.15
West Yorkshire Bus Vehicle Kilometres, 1994/95 to 2004/05

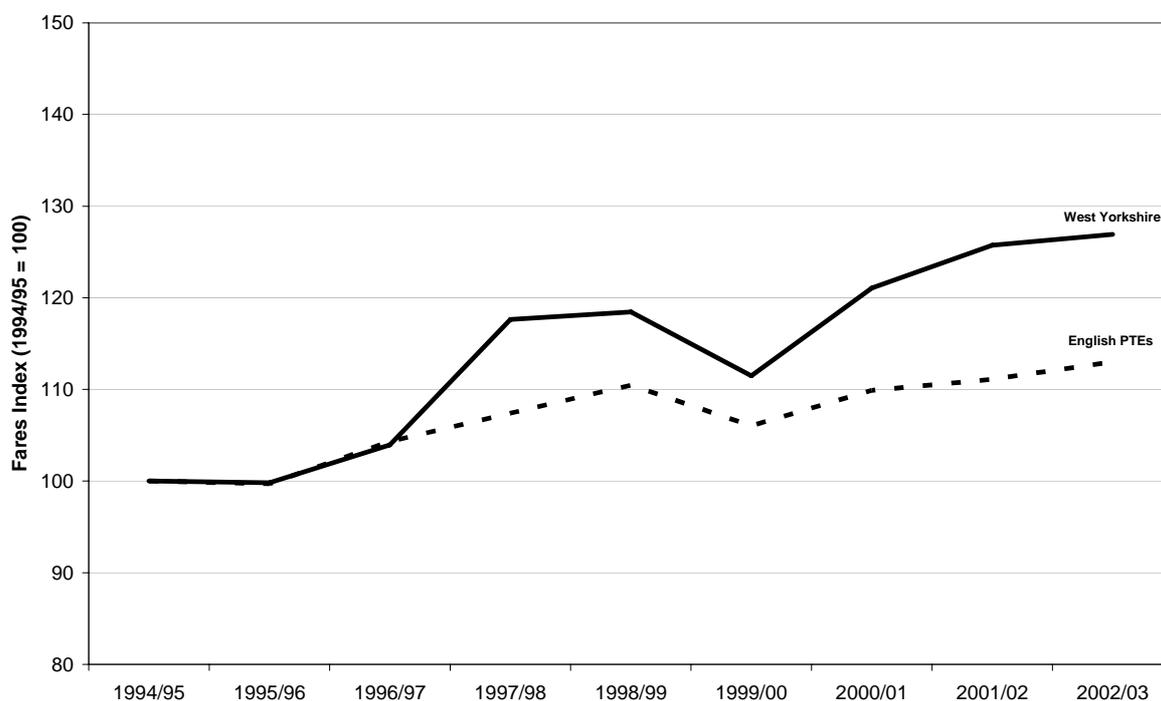


Source: DfT Bulletin of Public Transport Statistics: Great Britain 2003 and updated statistics supplied directly from DfT

B.3.2. Bus fares in West Yorkshire

Figure B.16 shows that the real fare level index for West Yorkshire bus services has risen faster than the average level of all English PTEs.

Figure B.16
West Yorkshire Bus Fares Index – Real Terms, 1994/95 to 2002/03



Notes: Fares calculated from DfT data on bus passenger receipts (£m 2002/03 prices) and on data on passenger journeys (million). Indexed to 1994/95.

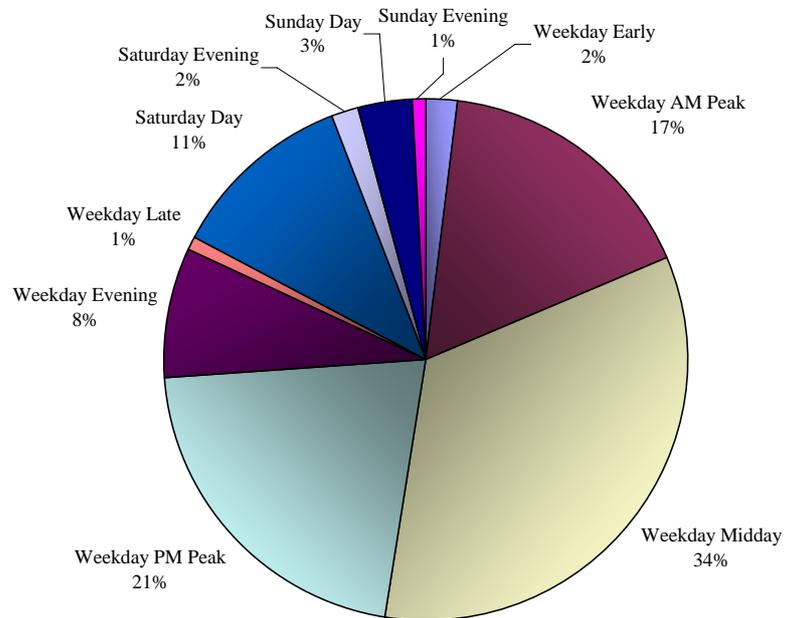
Source: DfT

B.3.3. Bus travel by time period and type of ticket

Figure B.17 summarises data on the number of bus passengers between October 2004 and September 2005, split by the time of day. As expected, significantly more passengers travel by bus on weekdays (83 per cent) than during the weekend (17 per cent). In addition, 34 per cent of passengers travel in the middle of the day, compared to 38 per cent who travel during a weekday peak period.

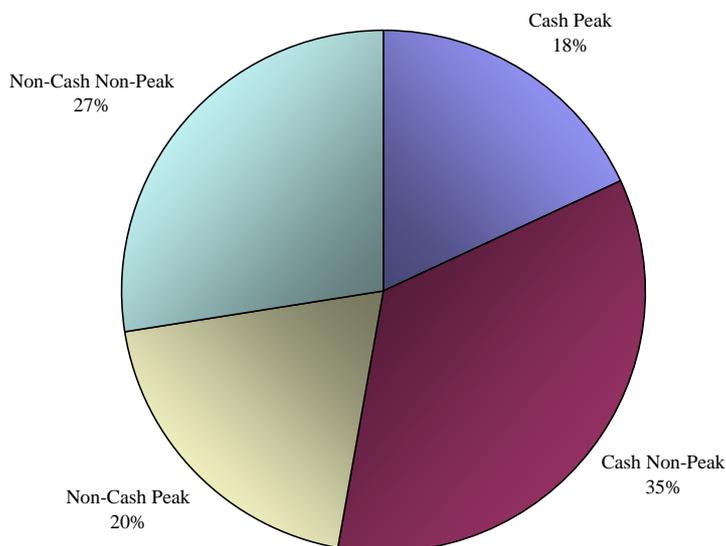
Figure B.18 shows that cash tickets are more common than non-cash tickets (53 per cent and 47 per cent of total passengers respectively). In the group of non-peak periods, 56 per cent of passenger tickets are cash, relative to 44 per cent of non-cash tickets. For peak periods, 48 per cent of tickets are cash, against 52 per cent of non-cash tickets.

Figure B.17
West Yorkshire Bus Passengers, by Time Period, Oct 2004 to Sep 2005



Source: West Yorkshire PTE

Figure B.18
West Yorkshire Bus Passengers, by Time Period and Type of Ticket, Oct 2004 to Sep 2005



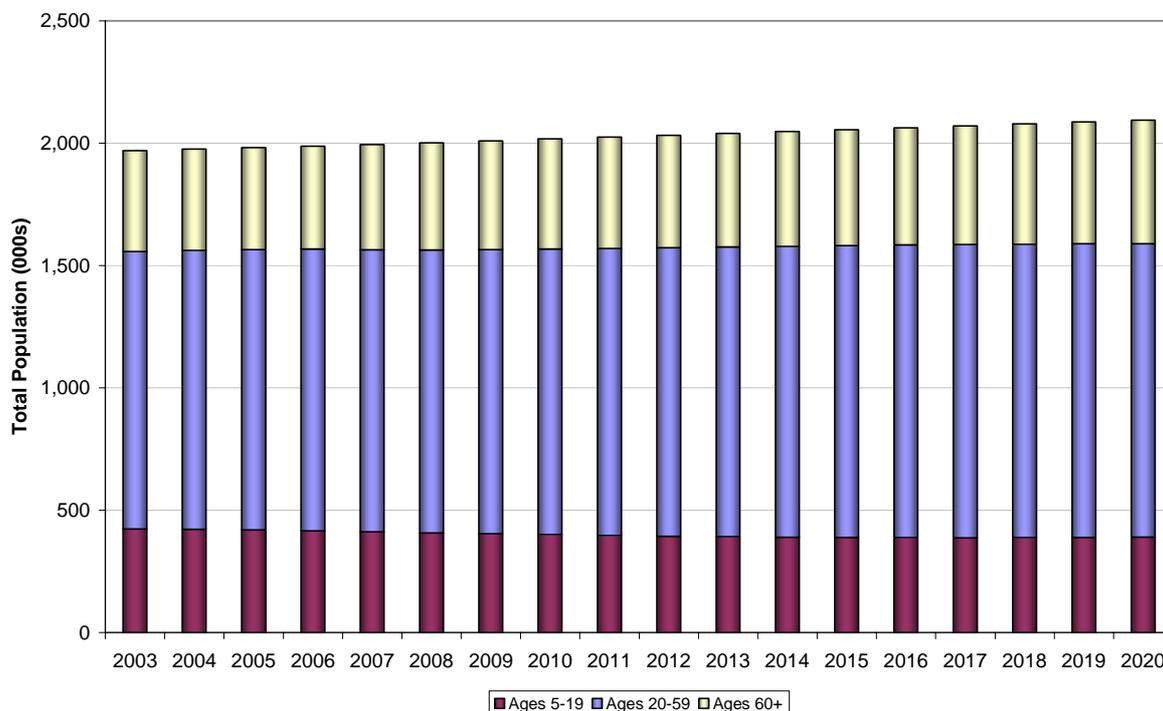
Source: West Yorkshire PTE

B.3.4. Demographic forecasts for West Yorkshire

As observed for Greater Manchester, the headline growth predicted for West Yorkshire is the result of stronger growth of the over 60s age group (93,000 people or 23 per cent) than the decline in the youngest age group (down 33,000 people or 8 per cent).

The implications for bus use in West Yorkshire are similar to Greater Manchester; the decline in demand associated with the reduced population of younger people should be offset by the overall population growth and, in particular, the growth amongst the over 60s, all other things being equal.

**Figure B.19
West Yorkshire Population Forecasts, 2003 to 2020**



Source: NERA analysis of Office of National Statistics data

B.4. South Yorkshire

South Yorkshire PTE has provided us with bus vehicle kilometre data from 1994/95 until 2005/06. The data are split by service type from 2001/01. This is in addition to the patronage data and vehicle kilometres data from the DfT, and the population data from the ONS.

In summary, the main conclusions from the South Yorkshire data are:

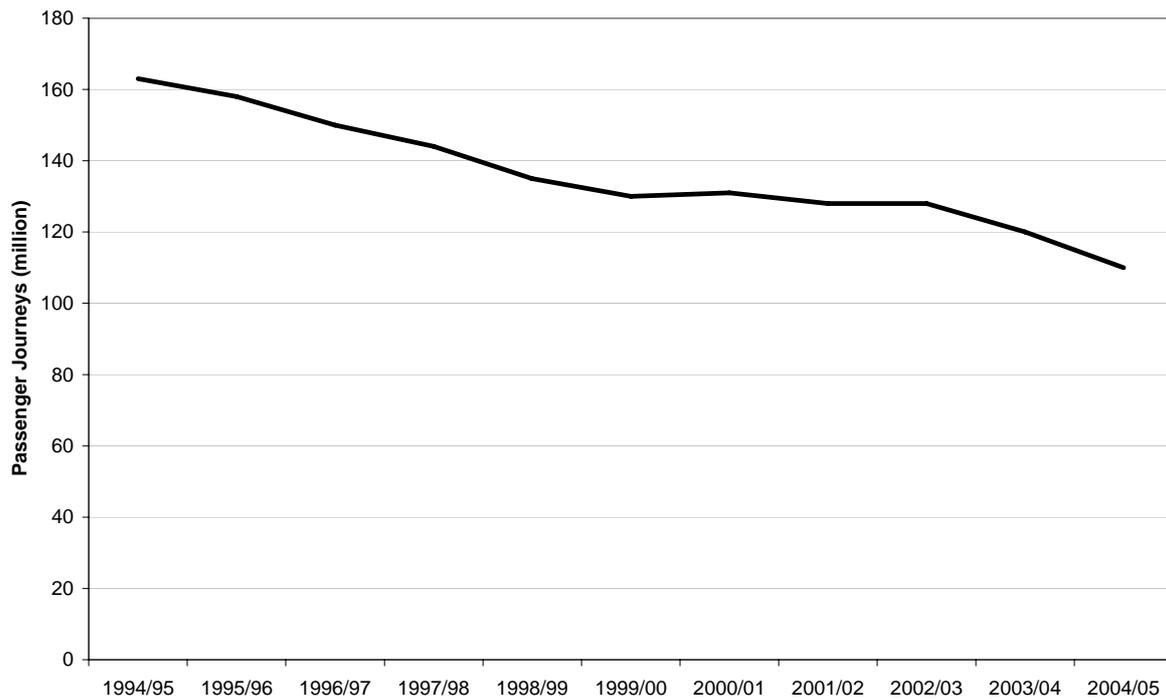
- Bus patronage and vehicle kilometres in South Yorkshire have declined over the period, slowing slightly in 1999/00 and accelerating in 2002/03;
- Tendered vehicle kilometres are increasing over time, but are a small percentage of the overall mileage and therefore only partially offset the fall in commercial vehicle kilometres;
- The change in the real fare index is close to the average for all English PTEs, meaning that real fare increases in South Yorkshire mirror trends for the typical PTE; and
- South Yorkshire is projected to have a growing and ageing population from the period of 2003 until 2020, with an ambiguous effect on bus patronage.

B.4.1. Patronage and service levels in South Yorkshire

The number of bus journeys in South Yorkshire has fallen between 1994/95 and 2004/05, as shown in Figure B.20. Passenger journeys have fallen by 53 million (33 per cent) over this period; the reduction being smooth, except for a slight plateau between 1999/00 and 2002/03.

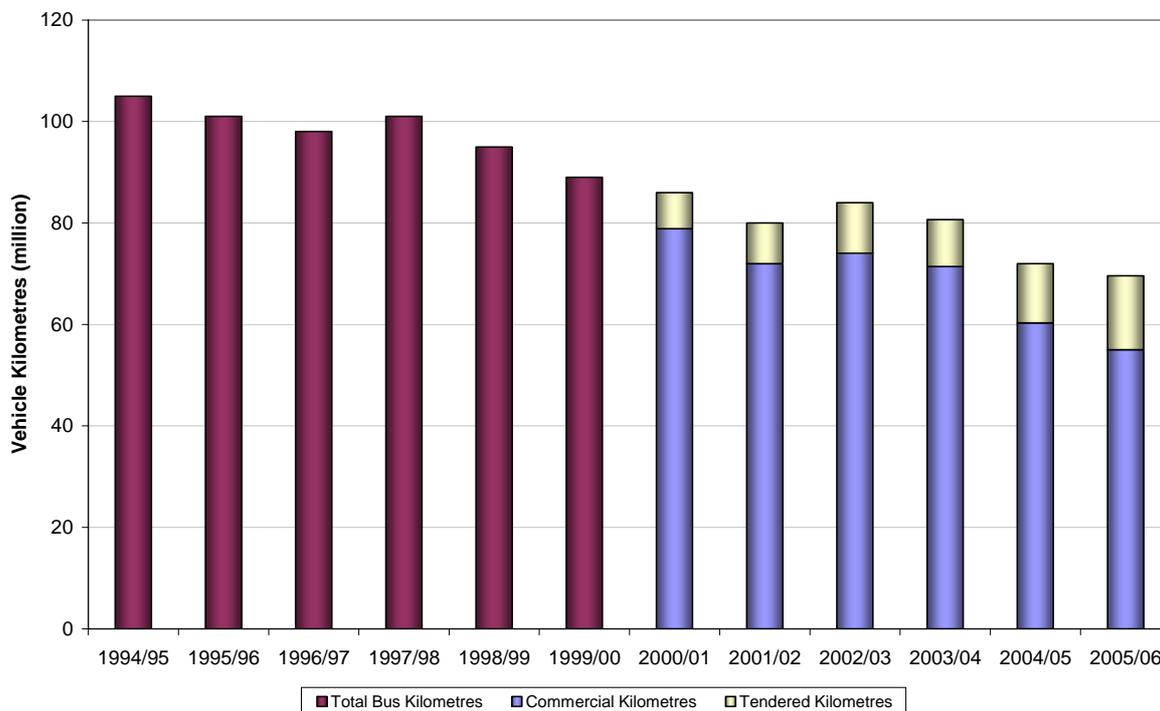
The level of bus vehicle kilometres has also fallen over time. Figure B.21 shows South Yorkshire bus vehicle kilometres, split by commercial and tendered kilometres from 2000/01 to 2004/05. Commercial vehicle kilometres form the majority of total vehicle kilometres (79 per cent in 2005/06) and have declined by 30 per cent between 2000/01 and 2005/06. Tendered vehicle kilometres increased by 106 per cent over this same period.

Figure B.20
South Yorkshire Bus Journeys, 1994/95 to 2004/05



Source: DfT Public Transport Statistics Bulletin 2005

Figure B.21
South Yorkshire Bus Vehicle Kilometres, by Service Type, 1994/95 to 2005/06



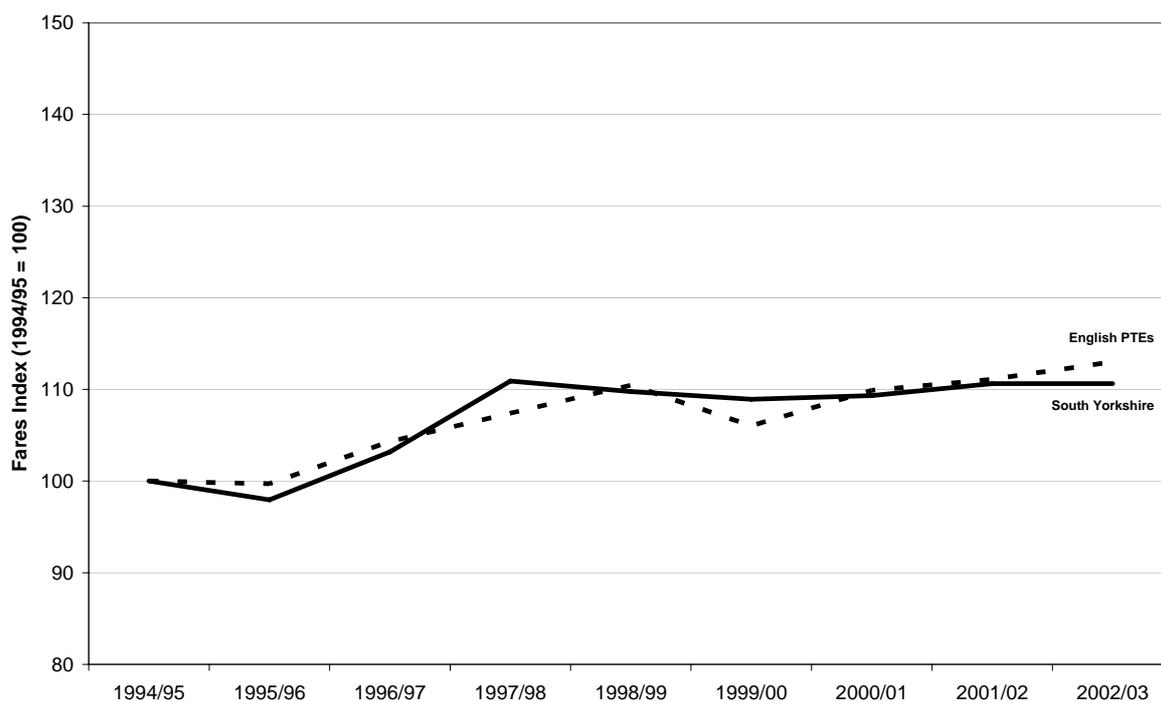
Notes: SYPTE informed us that “Operational miles will be adversely affected by operator strikes in 2003/4 so figures include estimate of lost miles for this period.”

Source: South Yorkshire PTE but originally DFT - FDR Claims

B.4.2. Bus fares in South Yorkshire

Figure B.22 shows the changes in real fares for South Yorkshire and for all the English PTEs. The real fare level changes for South Yorkshire mirror those for the English PTE average, meaning that the trend in the real fare index in South Yorkshire closely resembles that of the average English PTE over the period.

Figure B.22
South Yorkshire Bus Fares Index – Real Terms, 1994/95 to 2002/03



Notes: Fares calculated from DfT data on bus passenger receipts (£m 2002/03 prices) and on passenger journeys (million). Indexed to 1994/95. The passenger receipts level for 1997/98 has been replaced with data from Bus Industry Monitor 2004 as we have concerns over the accuracy of the DfT figure.

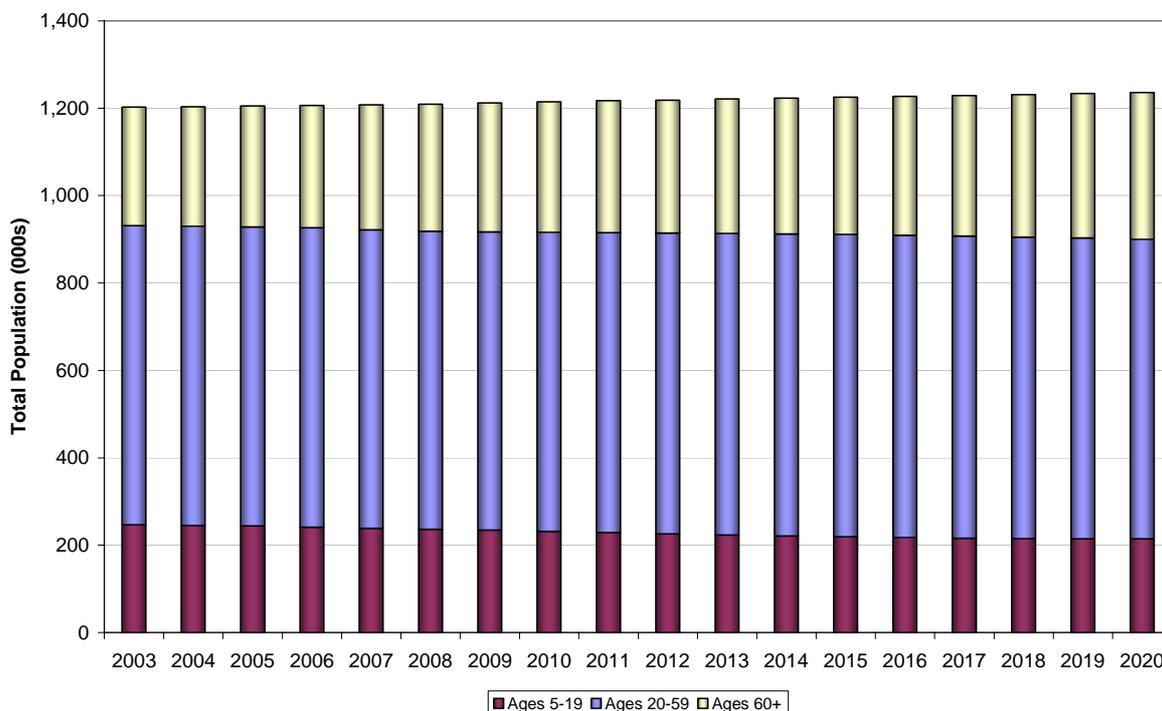
Source: DfT and Bus Industry Monitor 2004 (see Notes above).

B.4.3. Demographic forecasts for South Yorkshire

Again, the demographic forecasts for South Yorkshire show similar trends to those seen in Greater Manchester and West Yorkshire; a growing but ageing population. The population growth in the over 60s (up 24 per cent or 65,000 people) outweighs the loss of young people (down 13 per cent or 32,000 people).

The consequences for bus demand should be broadly similar to the consequences for Greater Manchester; that is to say an improved market, all other things being equal.

Figure B.23
South Yorkshire Population Forecasts, 2003 to 2020



Source: NERA analysis of Office of National Statistics data

B.5. Tyne and Wear

Nexus provided a large amount of data related to bus patronage and passenger kilometres, split by such factors as service type, passenger type and ticket type. This is in addition to the data on patronage and service provision from the DfT and the ONS demographic data.

In summary, the main conclusions from the Tyne and Wear data are:

- There has been a smooth fall in the number of bus journeys over the period;
- The supply of bus services (in vehicle kilometres) has been falling sharply – especially since 2002/03;
- The proportions of commercial and supported passengers have remained relatively stable over the period;
- Travel by full fare adults is increasing as a percentage of total patronage, with a steady proportion of elderly and a falling proportion of children;
- Concessionary tickets are declining as a proportion of the total, while non-concessionary tickets are a larger proportion and are increasing;
- The real fare index is increasing at a slower – or sometimes equal – rate than the average for all English PTE areas; and
- Tyne and Wear is projected to have a shrinking and ageing population over the period 2003 until 2020, meaning the overall effect on bus services is difficult to predict.

B.5.1. Patronage and service levels in Tyne and Wear

The smooth decline in bus journeys in Tyne and Wear can be seen in Figure B.24. Total journeys have fallen over the 1994/95 to 2004/05 period by 43 million (25 per cent). The Nexus data shows that the patronage level has fallen by 57 million over the ten-year period. The overall trend is similar between the two datasets.

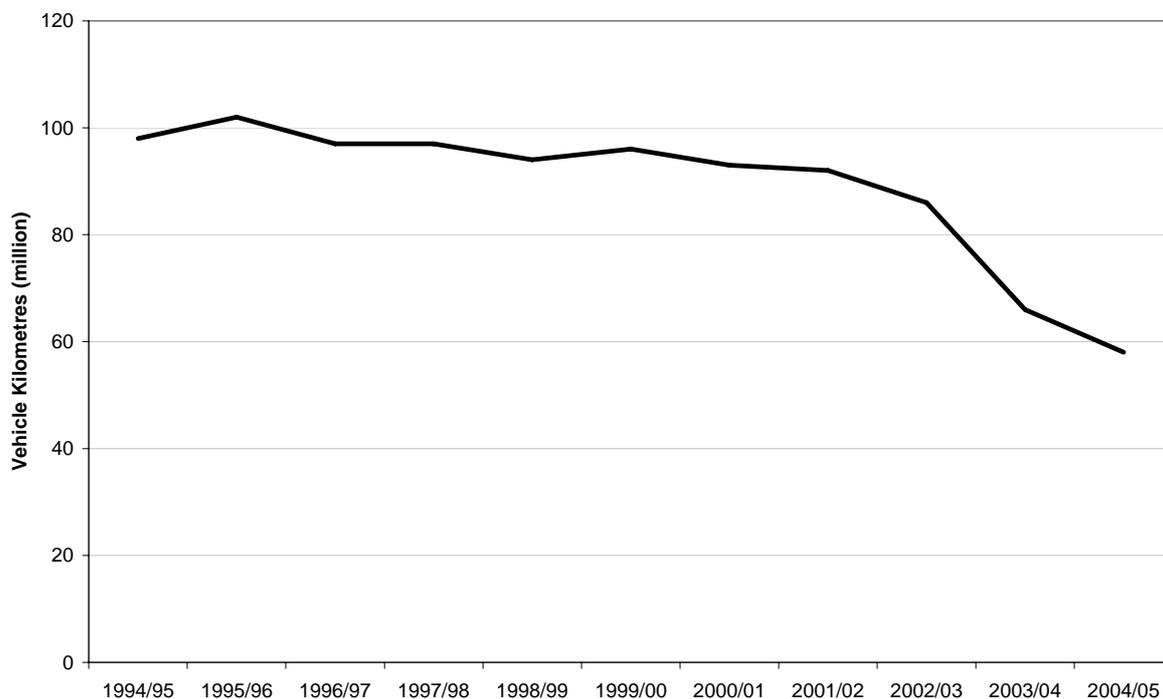
The decline in annual bus vehicle kilometres in Tyne and Wear, shown in Figure B.25, is less smooth. From a peak of 102 million vehicle kilometres in 1995/96 there has been decline to a level of 58 million in 2004/05.

Figure B.24
Tyne and Wear Bus Journeys, 1994/95 to 2004/05



Source: DfT Public Transport Statistics Bulletin 2005

Figure B.25
Tyne and Wear Bus Vehicle Kilometres, 1994/95 to 2004/05

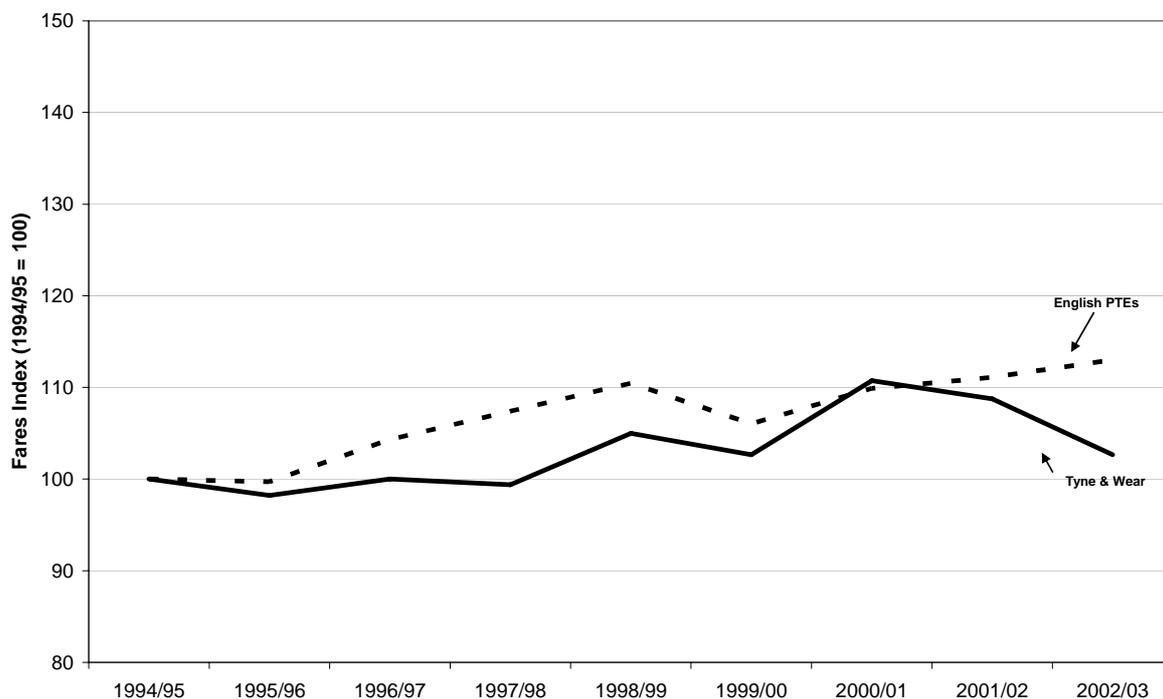


Source: DfT Bulletin of Public Transport Statistics: Great Britain 2003 and updated statistics supplied directly from DfT

B.5.2. Bus fares in Tyne and Wear

The real bus fare level index in Tyne and Wear has been increasing below, or equal to, the real average English PTE fare level index during the time period studied, as shown in Figure B.26. Although the real fare index is increasing, it is doing so at a slower rate than for the average English PTE.

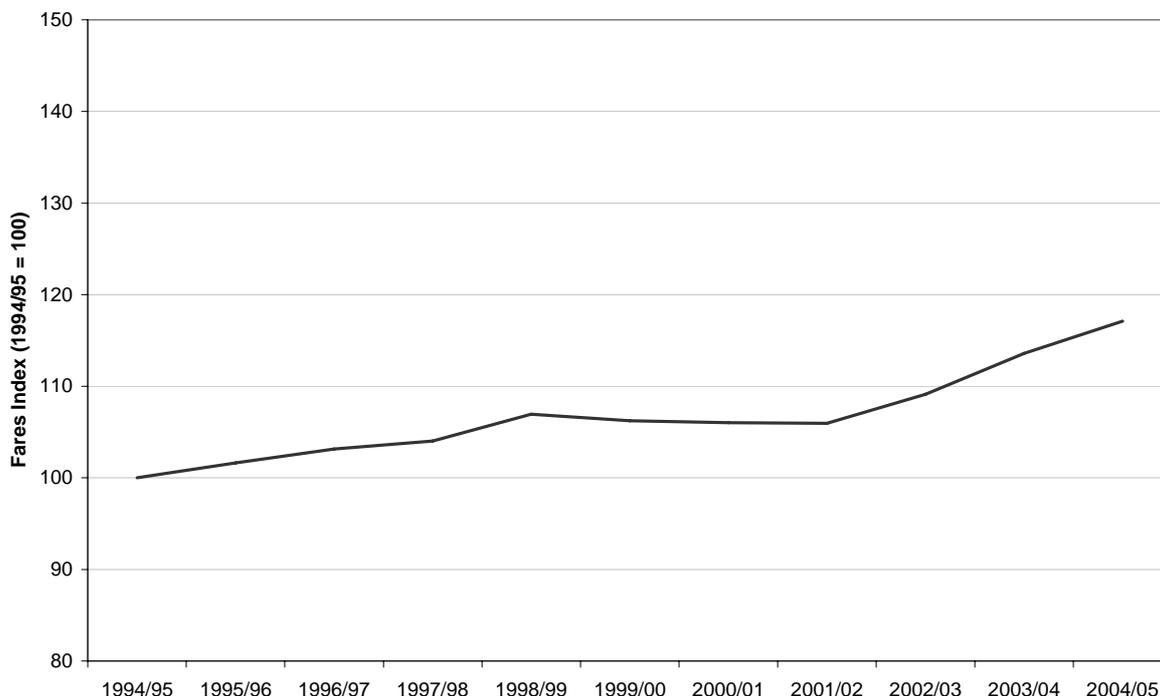
Figure B.26
Tyne and Wear Bus Fares Index – Real Terms, 1994/95 to 2002/03



Notes: Fares calculated from DfT data on bus passenger receipts (£m 2002/03 prices) and on passenger journeys (million). Indexed to 1994/95.
Source: DfT

The fares index in Figure B.26 shows a real terms decline in the index for the last two years of the period. We have discussed this trend with Nexus who felt that this was not the case. While they were unable to provide us with their own index of bus fares, they did provide us with an index of public transport fares in the county. We present this index in Figure B.27. It should be noted that, as an index of all public transport fares, it does include fare changes for the Metro system.

Figure B.27
Nexus Data on Tyne & Wear Bus Fares, 1994/95 to 2004/05



Note: Nexus provided absolute bus fares and RPI indices, which were used to construct the real fares index presented in the chart.

Source: Nexus data provided to NERA

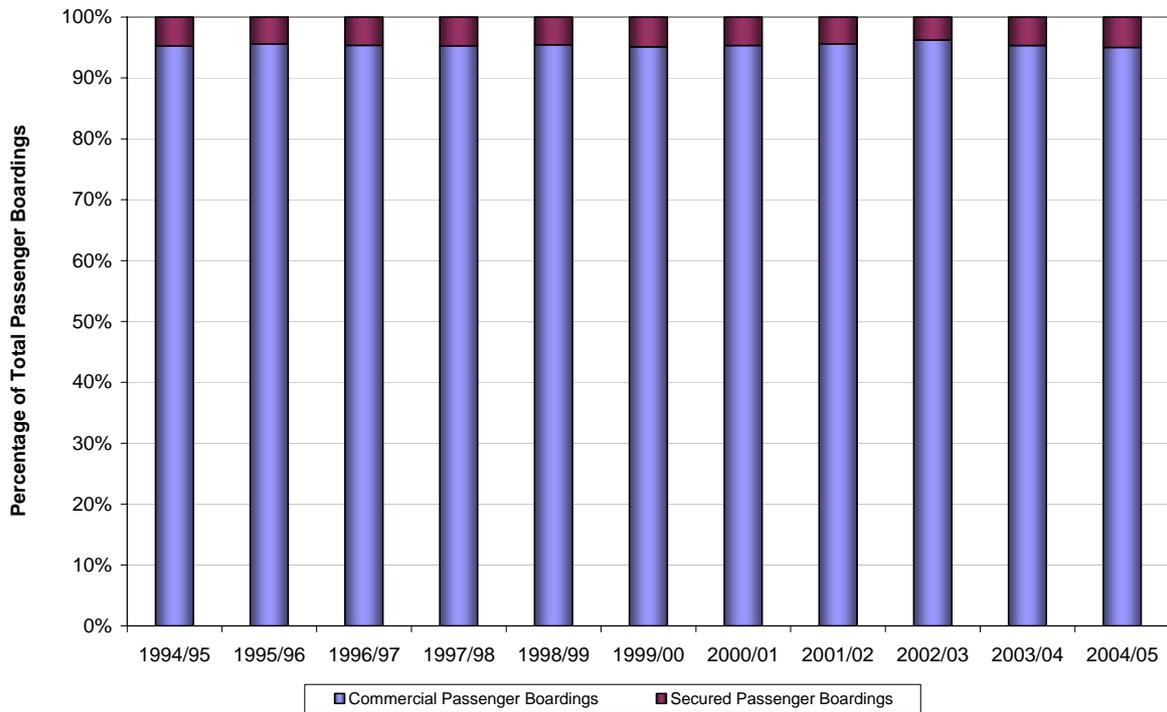
B.5.3. Bus travel by service type, passenger type and ticket type

When the Nexus patronage data are split by service type, commercial passengers form the majority of patronage, as shown in Figure B.28. Numbers of passengers on both commercial and on supported services have fallen at similar rates, though commercial passengers are the majority, accounting for around 95 per cent of bus passengers on Tyne and Wear.

Figure B.29 shows the patronage data split into three age groups from the period since 1999/00. The bus patronage decline in Tyne and Wear stems from a fall in patronage across all age groups. However, full fare adults are becoming an increasing proportion of total bus patronage – from 60 per cent in 1999/00 to 66 per cent in 2004/05 – while the proportion of children has been falling. The elderly have been a relatively stable proportion of passengers (though their proportion has declined slightly).

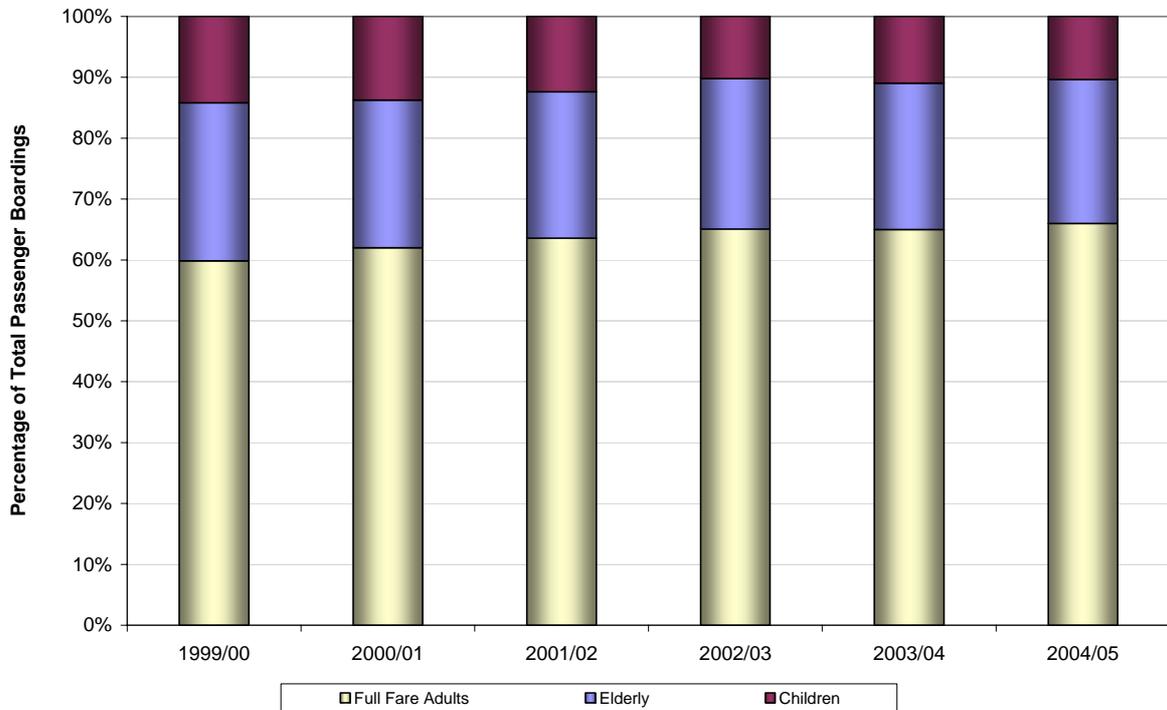
The patronage data are also split by ticket type, into concessionary and non-concessionary passengers. This is shown in Figure B.30. Non-concessionary tickets are increasing in their proportion of total bus patronage – from 60 per cent in 1999/00 to 70 per cent in 2003/04.

Figure B.28
Tyne and Wear Bus Patronage, by Service Type, 1994/95 to 2004/05



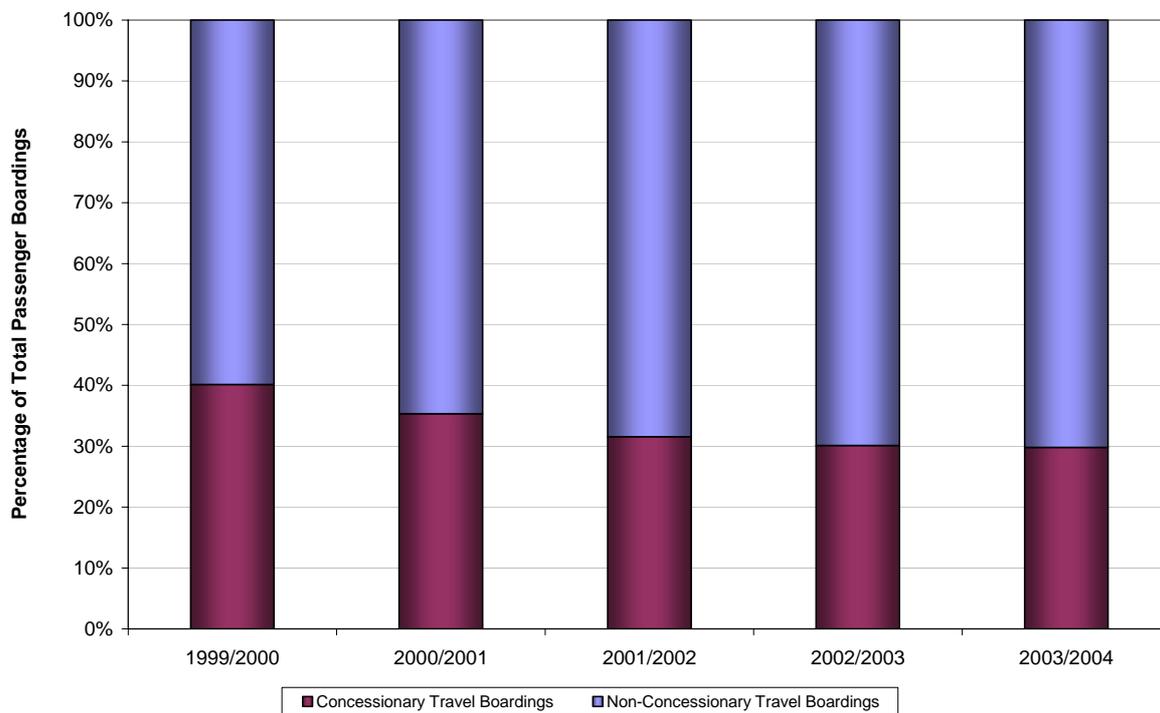
Source: Nexus

Figure B.29
Tyne and Wear Bus Patronage, by Passenger Type, 1999/00 to 2004/05



Source: Nexus

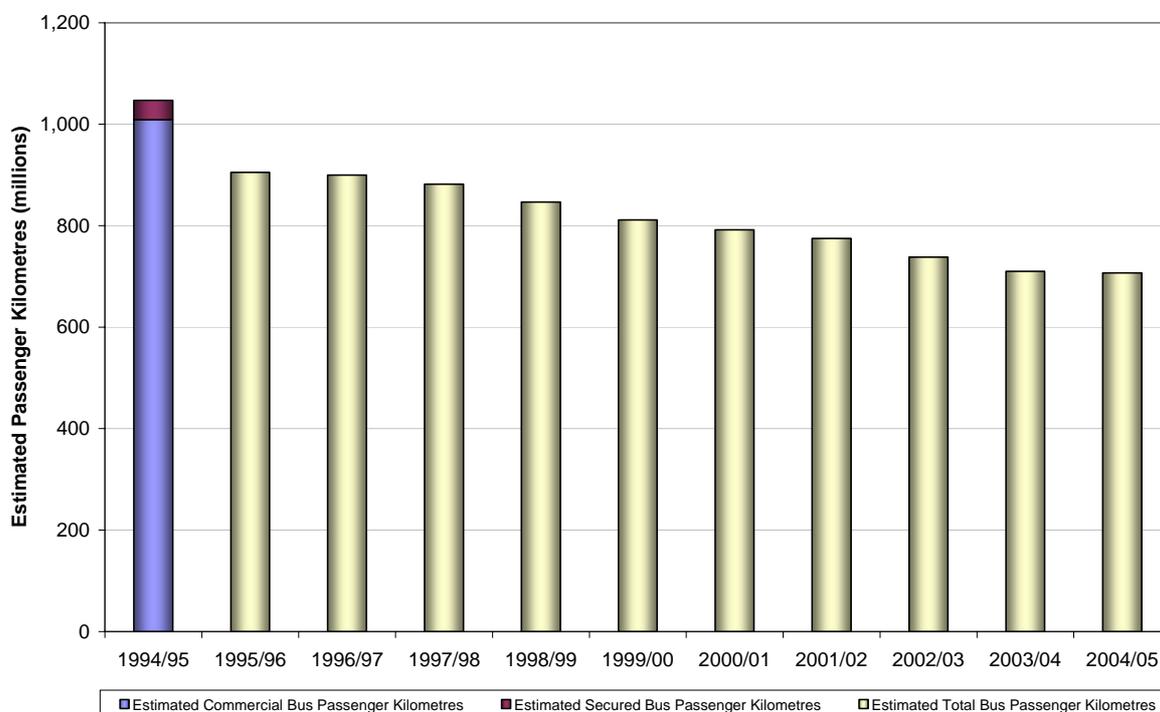
Figure B.30
Tyne and Wear Bus Patronage, by Ticket Type, 1999/00 to 2003/04



Source: Nexus

Figure B.31 shows that bus passenger kilometres have decreased by 339.9 million kilometres over the ten year time period from 1994/95 to 2004/05. This finding matches the trend of declining patronage shown by the DfT data.

Figure B.31
Tyne and Wear Estimated Bus Passenger Kilometres, by Service Type,
1994/95 to 2004/05



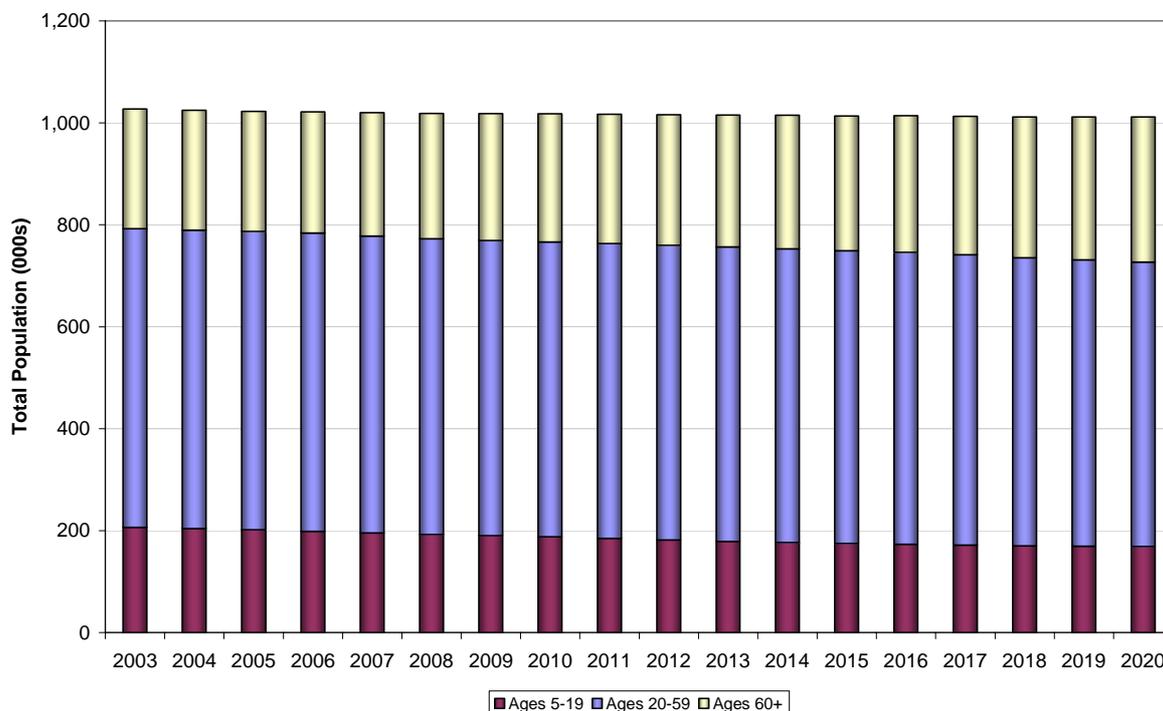
Source: Nexus

B.5.4. Demographic forecasts for Tyne and Wear

The population of Tyne and Wear is projected to shrink over the period from 2003 to 2020, as can be seen in Figure B.32. Like the other metropolitan areas, Tyne and Wear is projected to have an aging population, driven by growth in the over 60s age group (21 per cent or 50,000 people). The strong growth in this age group is, however, countered by a decline in the young person population (down 18 per cent or 37,000 people) and the adult population (down 5 per cent or 28,000). The overall impact is a 2 per cent decline in total population (or 16,000 people).

Despite the strong forecast growth in the numbers of older people, the significant declines elsewhere in the population make it difficult to assess the overall impact on demand for bus use. However, the particularly sharp fall in the population of young people would suggest a probable decline in demand, all things being equal.

Figure B.32
Tyne and Wear Population Forecasts, 2003 to 2020



Source: NERA analysis of Office of National Statistics data

B.6. West Midlands

Data on patronage and service levels were provided by the DfT. Centro provided data on vehicle kilometres split by service type from 1999/00 to 2004/05, and data on patronage.

In summary, the main conclusions from the West Midlands data are:

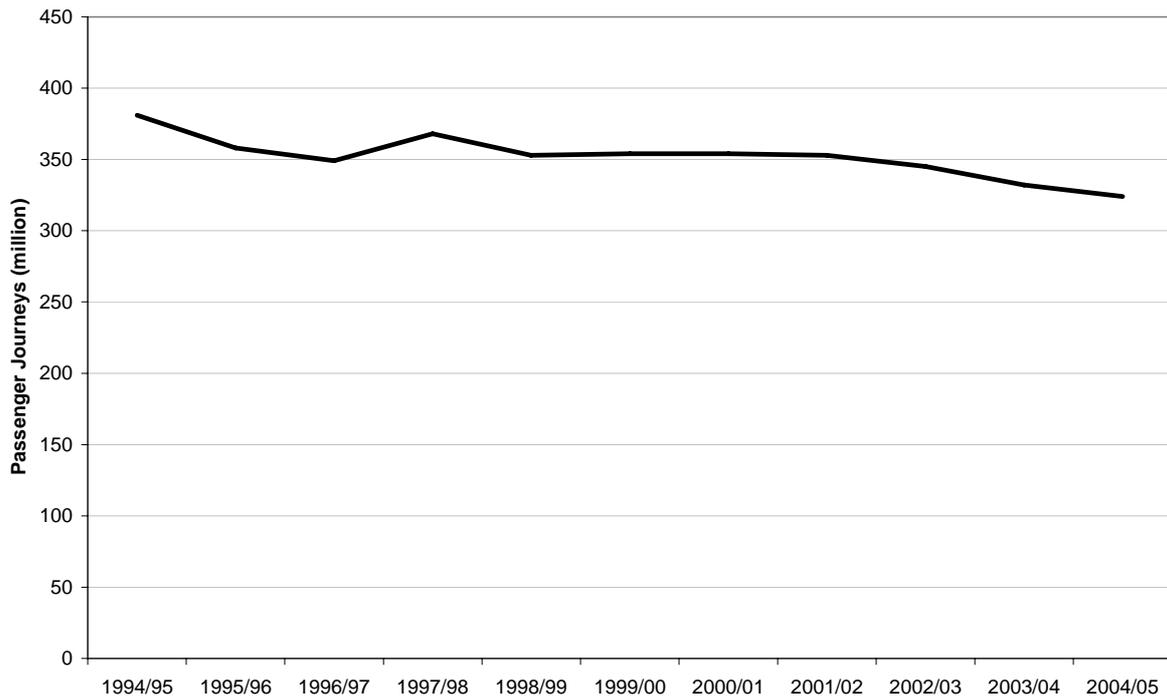
- The demand for bus services is fluctuating but generally trending downwards, with the supply of bus services doing the same after a small peak in 1997/98;
- A decline in commercial bus service is driving the overall decline in bus service, with subsidised service staying relatively constant;
- The real fare index level in West Midlands is below the average for all English PTEs for the entire period; typically remaining unchanged. However, since 2000/01 it has been increasing; and
- West Midlands is forecast to have a growing and ageing population between 2003 and 2020 – suggesting a growing bus market.

B.6.1. Patronage and service levels in the West Midlands

Figure 5.32 shows that the number of West Midland bus journeys has been steady over the period from 1994/95 to 2001/02, rather than declining as it has done in other metropolitan areas such as Tyne & Wear and South Yorkshire. However, since 2001/02 journeys have been declining. The Centro data on bus patronage follows a similar trend and has similar levels to the DfT data.

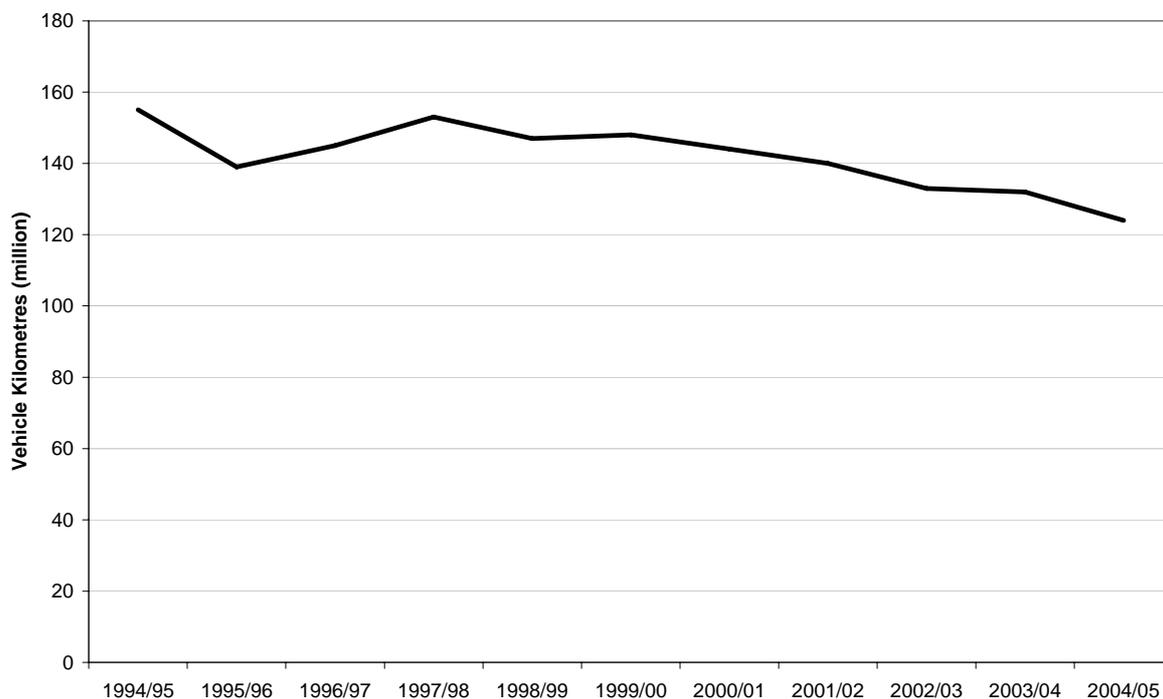
Bus vehicle kilometres in the West Midlands have followed similar trends to demand, with a peak in 1997/98 and falling bus vehicle kilometres since. This can be seen in Figure B.34. The data show a decline of 31 million bus vehicle kilometres over the time period. The Centro data on service levels indicates that commercial service has remained stable at 93 per cent of total vehicle kilometres between 1999/00 and 2004/05. The remaining 7 per cent is subsidised service.

Figure B.33
West Midlands Bus Journeys, 1994/95 to 2004/05



Source: DfT Public Transport Statistics Bulletin 2005

Figure B.34
West Midlands Bus Vehicle Kilometres, 1994/95 to 2004/05

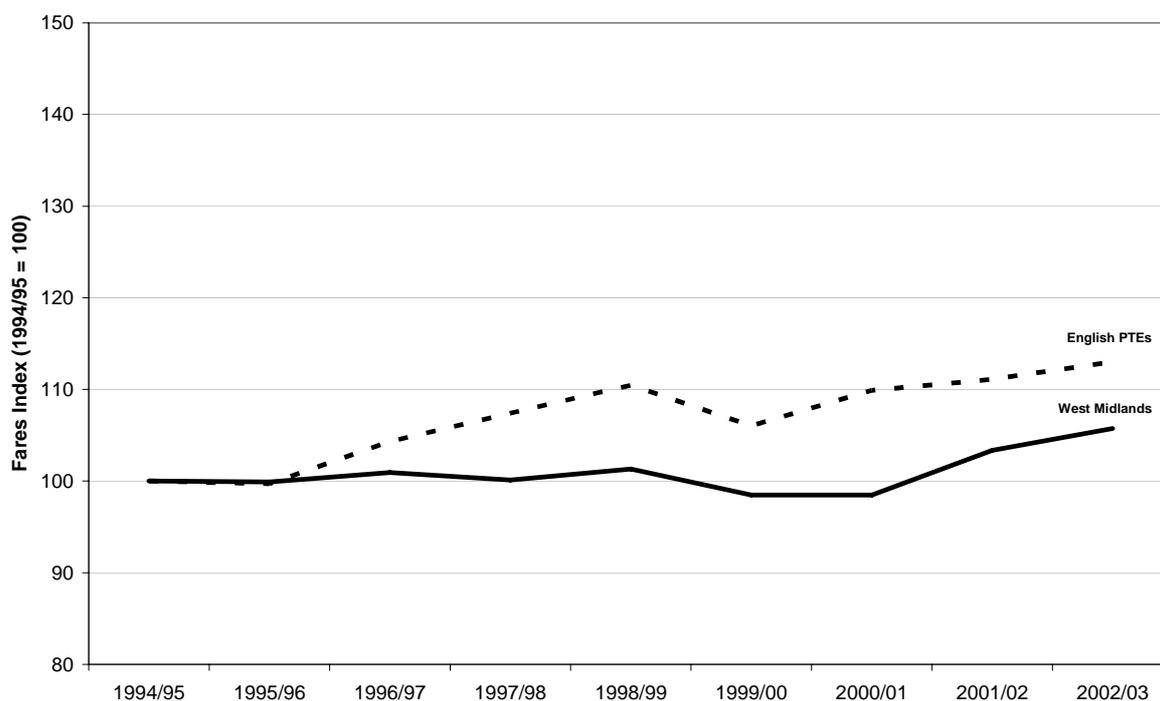


Source: DfT Bulletin of Public Transport Statistics: Great Britain 2003 and updated statistics supplied directly from DfT

B.6.2. Bus fares in the West Midlands

Figure B.35 shows the increases in the real fare index level in the West Midlands from 1994/95 to 2002/03. Interestingly, the real fare index level in the West Midlands is consistently below the average among English PTEs. This finding reflects real fares remaining relatively stable over the time period, in contrast to the rising real fare levels of other English PTEs – thus creating a growing disparity between the West Midlands and average English PTE real fare index level. However, significant rises in the real fare level beyond 2000/01 have meant the West Midlands index of changes in real fare levels are approaching those of the average English PTE.

Figure B.35
West Midlands Bus Fares Index – Real Terms, 1994/95 to 2002/03



Notes: Fares calculated from DfT data on bus passenger receipts (£m 2002/03 prices) and on passenger journeys (million). Indexed to 1994/95.

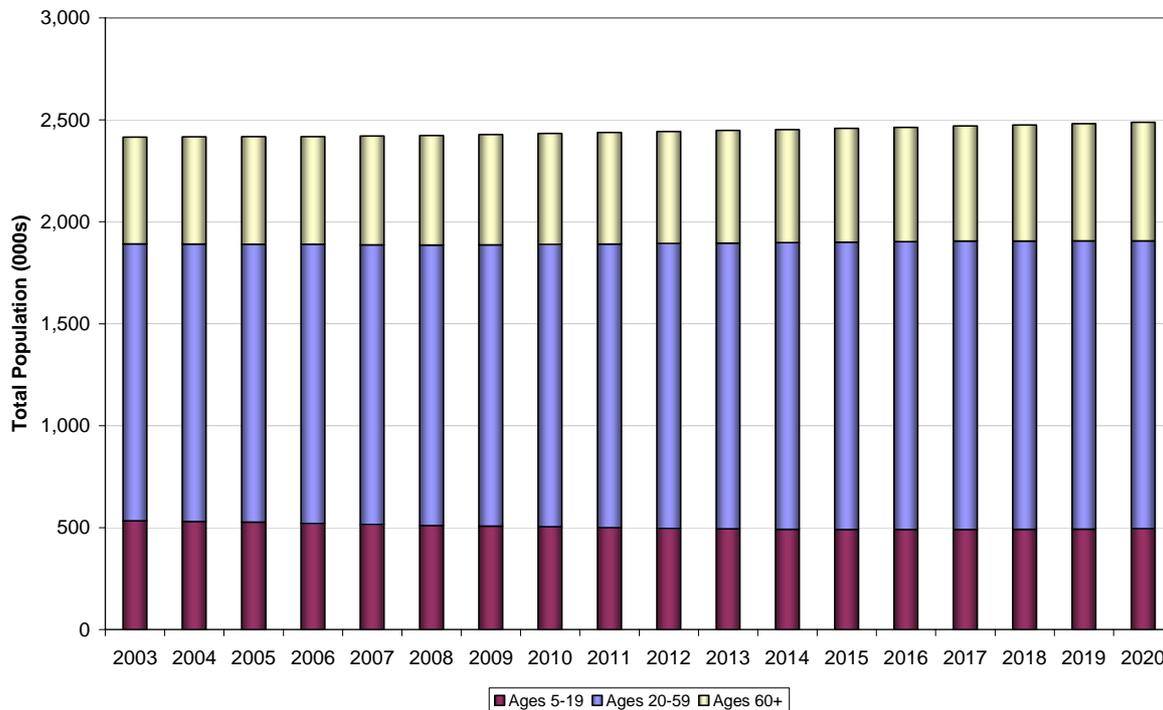
Source: DfT

B.6.3. Demographic forecasts for the West Midlands

Figure B.36 shows the projections for West Midland population from 2003 until 2020. Like many of the other PTE areas, the data show that the adult age groups are both expected to grow over time, leading to an overall rise in the population. However, as we have also seen for other PTE areas, this is partially offset by a projected fall in the number of 5-19 year olds, indicating that the West Midlands too should expect a growing but ageing population over time (up 3 per cent or 73,000 people).

As with other PTE areas facing an increasing but ageing population, these demographic changes should lead to an increase in demand for bus services, all else being equal.

Figure B.36
West Midlands Population Forecasts, 2003 to 2020



Source: NERA analysis of Office of National Statistics data

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