



Comprehensive Spending Review 2007: the case for transport in the city regions



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JMP CONSULTING

MINERVA HOUSE, EAST PARADE
LEEDS LS1 5PS

T 0113 2444347 F 0113 2423753 E leeds@jmp.co.uk W www.jmp.co.uk

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0 Executive summary

- 0.1 This report presents the case for increased investment in transport in England's main conurbations outside London within the Comprehensive Spending Review (CSR) 2007. The report demonstrates the benefits that investment in transport within these city regions brings to the UK, and contains evidence from around the UK and elsewhere to illustrate the arguments presented.

Our regional economies

- 0.2 England's regions are vital to the success of the UK economy. The economies of our city regions operate in a competitive global market. To compete, the city regions must do so on an equal footing with the rest of Europe, and be in a position to compete alongside and support the economy of the UK's world city, London. However, historically the regional cities of the UK have been performing at a level below that of Europe's top cities.
- 0.3 At the heart of England's regional economies are the Core Cities of Birmingham, Leeds, Liverpool, Manchester, Newcastle, and Sheffield, each of which drives their respective city region.
- 0.4 It is now generally accepted that these Core Cities are vital to the development of their city regions and to the growth in key economic sectors which are driving the regions' economies. Evidence from national and regional government and from independent sources supports this view that cities drive regional economies. Notably, the Treasury Budget paper published on 22 March 2006, and endorsed by HM Treasury, the Office of the Deputy Prime Minister (ODPM) and the Department for Trade and Industry (DTI) confirms the need for strong cities at the heart of the regions.
- 0.5 Whilst the Core Cities are driving forward the economies of their city regions, they are doing so at a different pace. There are a number of factors that influence this, particularly the economic histories of the cities and their regions, and their responses to the decline of traditional industries.
- 0.6 The economies of Leeds, Birmingham and Manchester have grown on the concentration of high value sectors like financial and legal services, which have in part driven the wider economic success within their city regions. However, within parts of those city regions and in other city regions such as in South Yorkshire, Merseyside and Tyne and Wear, there has been a different sort of economic change caused by the collapse of dominant industries and the need for these places to reinvent themselves. These industries included coal mining, steel and other heavy manufacturing, port related industries and ship building.
- 0.7 For example, in parts of South and West Yorkshire and Tyne and Wear the loss of the mining industry has been critical in shaping the current economic patterns. Similarly, the loss of employment in steel making in South Yorkshire and port related industries in Merseyside and Tyne and Wear have had a significant impact on the shape of these economies.

- 0.8 These transformational economies help to provide the context for the gap in economic performance between England's city regions and their counterparts in Europe, as well as the economic gap with London.

The importance of transport

- 0.9 This report shows that current public transport provision within the city regions already makes a significant contribution in providing access to labour markets for businesses located within the cities and to city centre-based employment for people living within the city regions. Rail, in particular has a significant role to play in serving the wider city regions' needs by providing good connectivity between the main urban centres.
- 0.10 But if the process of economic growth and regeneration is to continue, then transport constraints need to be tackled. Constraints in capacity, speed and service quality limit the contribution that public transport is currently able to make, whilst the road networks within the city regions are unable to support the increasing levels of commuter traffic. Public transport will also become ever more important in delivering the fast links between the main population centres within the regions.
- 0.11 For example, there has been a 12% increase in employment in Leeds over the last 10 years, equivalent to over 44,000 additional jobs. Forecasts from the regional econometric model indicate that over the next 10 years (2006-2016) there will be an additional 62,000 jobs created in the Leeds city region, many of which will be located in Leeds itself. However, the local labour market in Leeds will only grow at a fraction of that rate, and is estimated to be only able to supply 20% of the employees required, therefore employees will have to be drawn from the wider city region if the economy is to achieve its forecast growth.
- 0.12 This situation is not unique. Work on Greater Manchester's Integrated Transport Strategy (GMITS) has shown that the ongoing success and growth of the city region, and the Regional Centre in particular, means that future transport systems will need to be able to handle an increase in peak hour trips of around 25% by 2020. If we assume that car traffic is held at current levels then public transport would have to meet the challenge of catering for a 40% increase in patronage. Initial findings suggest that if this recent growth continues then congestion will start to undermine economic growth at the beginning of the next decade.
- 0.13 Evidence from businesses themselves reinforces these arguments. Emerging research undertaken by consultants GVA Grimley suggests that the weight of evidence from investors, developers and businesses in Birmingham, Leeds and Manchester supports the assertion that poor transport is a barrier to investment.

The economic benefits of public transport investment

- 0.14 To understand how investment in improved public transport actually impacts on the economy requires an understanding of how the economies of the Core Cities and the city regions function.
- 0.15 Transport impacts are influenced by, and indeed to a great degree are dependent upon, the sector and skills involved. The crucial issue for the manufacturing sector is proximity to the supply chain, hence the tendency for manufacturing to locate near key motorway junctions. Knowledge based businesses are more reliant on the availability of, and proximity to, the labour supply. These businesses therefore tend to cluster.

Consequently this gives rise to the potential for public transport, especially rail, to assist in meeting the transport needs of the labour supply and increasing its density.

- 0.16 Densely populated cities are generally matched with dense areas of employment and provide a large pool of skills for specialisation. Business development is often strongest when firms cluster together as it enables the sharing of ideas and research increasing the efficiency and productivity of the clusters. It also enables an infrastructure of supporting services to develop offering the potential for economies of scale within the cluster. Larger and more diverse cities, which are least dependent on a single sector, may be better placed than specialised cities to provide flexibility to respond to changes and take advantage of new opportunities.
- 0.17 'Agglomeration benefits' are identifiable as the productivity benefits that some firms derive from being close to others, sharing knowledge, access to more suppliers and larger labour markets. Transport improves the effective density of employment (the most relevant measure of agglomeration) by bringing jobs closer together in terms of time, if not in distance.
- 0.18 A transport improvement can also have another, different, agglomeration effect on the density of business, and one which can be either positive or negative. It is "...positive if it encourages increased employment in cities or clusters of economic activity, and negative if it encourages the dispersal of economic activity". Unlike a road scheme where the benefits can be positive or negative public transport schemes to improve journeys in cities are likely to have a positive impact on agglomeration.
- 0.19 After many years of debate it is now generally recognised that this phenomenon has not been adequately included in traditional appraisals of transport investment. When the DfT applied the new methodologies to the London Crossrail scheme it produced an additional £7.1 bn of welfare benefits, an increase of 55% over the conventional appraisal benefits of £12.8 bn.
- 0.20 There are also other direct economic and fiscal impacts of transport investment. The argument of agglomeration economies increasing productivity as a result of public transport investment will result in increased tax revenues as the economy grows.
- 0.21 Furthermore, as public transport systems improve and become more efficient through increased investment, the cost of using public transport will reduce, and more expenditure will be directed to taxable areas of the economy. Public transport investment can serve to shift consumer expenditures. In cities with high quality public transport systems residents spend less overall on transportation. A study of rail in US cities observed an average reduction in total household expenditure on public transport and personal vehicles from 14.9% to 12.0% between areas with high quality rail systems and those without, despite longer commuting distances.
- 0.22 Finally, the link between land and property values and transport infrastructure is well established. Probably the most rigorous study of this type in the UK is of the new Jubilee Line extension which recorded uplifts in property values of £2 bn at Canary Wharf and £800 m at Southwark.

Sustainability and wider benefits of public transport

- 0.23 But good public transport does more than just support economic growth. It enables economic growth to be achieved sustainably. This is vital if regional economies are to grow without damaging the quality of life of their residents or compromising the local

environment. It is also important if the city regions are to play their part in reducing CO₂ emissions.

- 0.24 The crucial element to this argument is that improvements to public transport can have positive impacts on local air quality and climate change through modal shift from private car and corresponding reduction in pollutants such as CO₂ and particulates.
- 0.25 In addition to the ability of public transport to sustain the growth of regional economies, there are a number of other good reasons to invest in public transport systems. Public transport provides additional benefits to other sectors, especially in health and education, and contributes to improved social inclusion across a range of groups.
- 0.26 Socially excluded communities face a number of barriers when accessing vital facilities including availability of transport, cost of transport and limited travel horizons. Improvements to public transport can address all these issues creating a more inclusive society. The benefits here are not simply increased accessibility. Initiatives which allow people to be more integrated into society generate cross sector benefits in areas such as welfare, education, economy and leisure.
- 0.27 Some healthcare and educational facilities have been amalgamated and relocated to new locations which are difficult to reach by existing public transport networks, particularly from socially excluded communities in inner cities and peripheral housing estates. The same relocation trends can be seen for shopping centres, business parks and leisure facilities. Better access to all these opportunities and facilities is essential if social exclusion in the city regions is to be reduced. More effective public transport networks have a key role to play in providing that access.
- 0.28 A priority for the city regions - if they are to develop their knowledge economies - is to tackle the 'skills gap', which is reflected in the relatively low levels of educational attainment compared with London and the South East and global competitors. Transport is a fundamental element in accessing education and the high cost and poor availability of public transport can deter people from taking up educational opportunities. This becomes even more important given the Government's emphasis on encouraging parental choice. Low income families are less likely to exercise that choice due to problems with the cost and availability of public transport.
- 0.29 Access to healthcare raises similar issues with inadequate transport provision resulting in delays in diagnosis and/or missed appointments (with their associated costs to the Health Service).
- 0.30 The promotion of active travel in combination with public transport (for example walking or cycling to and from rail stations and bus stops) can also help improve health through increasing routine physical activity. This aspect of the evaluation of urban public transport has been largely ignored to date or at best under-recognised. The economic effect of improved public health includes increased efficiency for businesses as healthy workers take less sick leave and they are also more productive while at work. Moreover, improved health leads to less NHS expenditure.

The funding gap

- 0.31 When all of the above is taken into account this report concludes that current and predicted levels of spend on transport investment in the city regions are inadequate and fall well below what is required. London has made a successful and justified case as part of the last spending round for more transport investment. In this report the case is made

that, as part of the CSR process, greater funding is needed for public transport in our other major cities, to ensure that they maintain and develop their roles that are so vital to the UK economy.

- 0.32 Funding of our regional transport systems is significantly lower than that invested in London. Whilst investment in other sectors such as health and education is broadly similar across the country, transport expenditure in London is substantially higher than in the regions. Levels of transport funding in European regional cities also support the case for increased transport expenditure in our Core Cities and their city regions.

The investment required

- 0.33 In developing and maintaining these successful economies, the cities of continental Europe have developed world class passenger transport systems through strong and sustained investment. London, through strong regional governance and innovation has similarly started to develop public transport provision to rival the best in the world. This has been achieved through increased investment from central government, supported by the development of additional funding streams through increasing transport revenues.
- 0.34 The gap between the investment and transport provision in London and in European cities compared to the English city regions is clear, as is the consequent affect that this has on the performance of our cities and their regions. To achieve the ideal of world class transport systems in our city regions does require an increase in investment levels. The benefits to the economy and to social inclusion in our city regions can then become a reality. Sustained investment in transport in London and elsewhere in Europe has delivered substantial benefits. A similar approach is needed in our city regions, with substantial and sustained investment in our transport infrastructure and services.
- 0.35 At present, annual transport expenditure in London is £631 per person. This represents expenditure of £4.717bn per annum across London. A similar total figure, £4.722bn, is spent on transport across the four English regions within which the PTE areas lie, namely the North East, the North West, Yorkshire and the Humber and the West Midlands. However, the total population of these four regions is 19.7 million, compared with 7.5 million in London. This represents a figure of only £239 per head spent on transport across the four regions.
- 0.36 This report does not suggest that within the context of this Comprehensive Spending Review that the gap could, or should, be closed completely. But, if, for example, the gap between transport expenditure in London and the North and West Midlands were reduced by a half, this would represent an additional £4bn per year with which to tackle the transport problems in the North East, the North West, Yorkshire and the Humber and the West Midlands.
- 0.37 A substantial increase in spending per head in the North and West Midlands, provided through a package of increased central government funding and the development of new funding streams across the city regions, would enable a range of vital infrastructure projects to be delivered, together with necessary additional revenue support of transport services. Although the cities, city regions, regions and pan-regional bodies (like the Northern Way) are currently negotiating and developing their transport strategies and priorities, it is clear from the evidence that transport networks are not keeping pace with demand, and that a number of bottlenecks and shortfalls in provision need tackling. These include large infrastructure projects such as Project Orpheus in Tyne and Wear, improvements to the Manchester, Birmingham and Sheffield heavy rail hubs, the expansion of Merseyrail and mass transit for Leeds.

- 0.38 In addition to these “big ticket” items, there is a need to invest now in deliverable projects in the short term, such as high quality bus systems and heavy rail capacity improvements through investment in rolling stock.

1 Introduction

The case for investment

- 1.1 This report presents the case for investment in transport in England's main conurbations outside London within the Comprehensive Spending Review 2007. This report will demonstrate the benefits that investment in public transport within these city regions brings to the UK.
- 1.2 It is widely accepted that the economies of England's city regions are vital to UK plc. The Passenger Transport Executive (PTE) areas in England outside London are home to over 10.8 million people. Our major regional cities play a crucial role in the economy of the UK and yet there has been a persistent and widening gap between the best and worst performing parts of the country as successive governments have sought to address the issues of a 'two-speed economy'.
- 1.3 England's eight Core Cities are the drivers of these regional economies. Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle, Nottingham and Sheffield are working in partnership with Government and other key stakeholders to promote and strengthen these Core Cities as drivers of regional and national competitiveness and prosperity with the aim of creating internationally competitive regions. Six of these eight cities form the heart of England's PTE areas.
- 1.4 These cities and their city regions have seen the decline of their traditional heavy industries. These industrial sectors remain important in the regions, such as some manufacturing processes, but nevertheless, the regions have been hit by these changes to their economies, some harder than others.
- 1.5 The Core Cities are now resurgent, and have been re-invigorated through becoming viable clusters for high value sectors. This change is happening at different speeds in different cities, and therefore there is still significant social and economic deprivation across the regions.
- 1.6 The relationship of these Core Cities with their city regions is two way. As well as driving regional economies forward and providing benefits that help polycentric growth in the regions, the cities rely on their city regions for labour force and other resources.
- 1.7 If this process is to continue, then transport constraints need to be tackled. Public transport connectivity is vital to the successful functioning of city regions, and the evidence shows that improved public transport into the Core City centres helps to promote the agglomeration economies required to reap the productivity benefits from these high value clusters.
- 1.8 Public transport also provides significant wider benefits, both in terms of enabling this economic growth to be achieved sustainably, and by helping to tackle the social exclusion issues and deprivation that is still widespread. Improved public transport provides access to new opportunities for employment, education and other vital services, and brings tangible benefits to other sectors, such as health and education.
- 1.9 Current and predicted levels of spend on transport investment in the city regions are inadequate and fall well below what is required. London, as the world city within the UK economy, has made a successful, and justified, case as part of the last spending round for more transport investment. In this report the case is made that, as part of the Comprehensive Spending Review (CSR) process, greater funding is needed for public transport in our other major cities to ensure that they maintain and develop their roles that are so vital to the UK economy.

The structure of this report

- 1.10 We begin in **Chapter 2** by examining the role of our Core Cities and their city regions, and highlight that alongside London the other major cities in the UK are the main economic drivers of the national economy. This examination of the role of our Core Cities includes a profile of the socio-economic trends in these areas and compares them with London and with equivalent international cities.
- 1.11 We then turn in **Chapter 3** to show how transport, and particularly improved public transport, can help facilitate the continuing and sustainable development of city region economies.
- 1.12 In **Chapter 4** we demonstrate the contribution that public transport makes to achieving social inclusion and a range of other cross-sectoral objectives in the health, education and environment sectors.
- 1.13 **Chapter 5** identifies the historic funding levels applied to transport in the UK's city regions compared to London, other parts of Europe, and to other service sectors in the UK. The chapter goes on to examine the scale of the funding gap between expenditure in transport in the city regions and London. The scale of this funding gap is important. In order to achieve the desired outcomes of the Northern Way and the Midlands Way, namely to close the productivity gap between London and the regions, it is imperative, and logical, that the funding gap for transport and therefore the route to improved connectivity, identified as one of the key determinants of the productivity gap, is closed.
- 1.14 Increased levels of investment in providing improved public transport in the PTE areas, and the consequent improved public transport connectivity this will provide in the city regions, is therefore vital. Having identified the scale of the funding gap, **Chapter 6** argues that the rate of spend per capita on transport in the city regions needs to increase. For example if the funding gap with London were to be halved then an additional £4bn per annum would be available for transport across the three northern regions and the West Midlands. Finally the report outlines the nature of the spending programmes required.

Transport and development research

- 1.15 The report incorporates emerging research carried out by GVA Grimley on transport and development¹. The study has provided valuable qualitative insights into how transport influences business decision making in three Core Cities: Birmingham, Leeds and Manchester.
- 1.16 The research has examined how transport influences business decision-making. The focus has been on decision-making by property investors, developers and major corporates, with particular emphasis on 'high value added' clusters of activity. The research was based a series of interviews with senior decision-makers from major companies.
- 1.17 Quotes taken from GVA Grimley's report are included throughout this report, identified in blue italic text.

¹ Transport Improvements and Private Sector Investment: Evidence of Linkages, GVA Grimley, currently unpublished

2 Core Cities and the city regions

2.1 England's regions are vital to the success of the UK economy. These regional economies are driven by the Core Cities of Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle, Nottingham and Sheffield.

2.2 It is now widely accepted that these Core Cities are crucial in the development of their city regions and to the growth in key economic sectors which are driving the regions' economies.

2.3 This is exemplified by:

- the role of cities as economic drivers for the regions' success stories and how strong regional cities could add more power to the UK's economy and actually assist London in furthering its unique global city role.
- how business development is often strongest when firms cluster together as it enables the sharing of ideas and research, increasing the efficiency and productivity of the clusters. It also enables an infrastructure of supporting services to develop offering the potential for economies of scale within the cluster.
- the cities which are prospering are those that are leading growth in knowledge intensive business and financial services. Knowledge intensive cities are being promoted by Ideopolis² whose vision is of a sustainable knowledge intensive city that drives growth in the wider region.
- the rapid growth and market saturation in core cities is promoting diffusion from the centre to the rest of the region, with a second round of growth in smaller regional centres, known as the ripple effect.
- city collaboration boosting the combined economic performance and improving the regional economy.

2.4 However, despite these successes, the history of these cities and the decline of their traditional historic industries still means:

- the gap in GDP between UK regional cities and European cities is significant.
- within the UK, the gap between London and the city regions is wide.

The role of cities as economic drivers for the regions

2.5 Recent evidence both from national and regional government, and from independent sources, supports the view that cities drive regional economies. The Treasury Budget paper published on 22 March 2006³, and endorsed by HM Treasury, the Office of the Deputy Prime Minister (ODPM), and the Department for Trade and Industry (DTI), notes for example that "*the long term success of the Leeds economy requires the capacity to capture the larger economic scale and the sharing of assets across the region*". This paper supports the need for strong cities at the heart of the regions.

2.6 Research commissioned by ODPM⁴ identifies that the enhancement of economic performance is one of the main arguments for taking city regions more seriously.

2.7 Measures to achieve stronger economic performance in the regions do not have to be at the expense of London and the South East. Far from it. Evidence from other countries

² Ideopolis: Knowledge City-Regions, The Work Foundation, March 2006

³ Devolving decision making: 3 - Meeting the regional economic challenge: The importance of cities to regional growth, HM Treasury, March 2006

⁴ Framework for City Regions, ODPM, February 2006

around the world demonstrates how strong regional cities can add more power to the UK's economy and actually assist London in furthering its unique global city role. For example, major investment in the railways of Paris and Madrid have formed part of the same policy strands that have brought about large increases in quality, capacity and integration for the French and Spanish regional city networks (e.g Nord-Pas-de-Calais and Lille, Catalonia and Barcelona).

2.8 The Cities, Regions and Competitiveness⁵ report on "The European Cities Study" carried out by Liverpool John Moores University examined the factors that underpin 'core cities' outside the UK and emphasises the role of cities as an economic driver for regions. No examples were found during the study of successful regions containing unsuccessful core cities. This fact is confirmed in Competitive European Cities: Where do the Core Cities Stand?⁶, which found that the most competitive regions also had the most competitive cities. Research into the reputations of city regions has shown that this is mostly influenced by peoples' perceptions of the core city of that region.

2.9 Work carried out by a working group of government departments on Cities, Regions and Competitiveness⁷ has identified the following key features of the 'city-region' relationship:

2.10 Cities boost regions by providing:

- Critical mass of private and public knowledge institutions.
- Vibrant environment for knowledge creation and transfer.
- Strategic business and financial services.
- 'Connectivity' that attracts higher value business functions.
- Higher paid jobs – which attract commuters.
- Concentration of culture, leisure and sport.
- Transport hubs.
- National and international profiles.

2.11 Cities rely on regions for:

- Space for major economic and infrastructure projects.
- A wide range of urban and rural housing options.
- Distinctive urban centres with niche retail experiences.
- A wide range of business sites and premises.
- A wide workforce and skills base.
- Opportunities for countryside leisure.
- 'Closest customer' feedback on reputation and performance.

Changing regional economies

2.12 Whilst the Core Cities are driving forward the economies of their city regions, they are doing so at different speeds. There are a number of factors that influence this, even putting aside the simplistic point that each city has a unique environment. High on the list of these factors is the historic nature of the cities and their economies, and their responses to the decline of some traditional industries.

2.13 The economies of Leeds, Birmingham and Manchester have grown on the concentration of financial and legal services, and other high value sectors, which have in part driven the wider economic success within their city regions. However, within parts of those city

⁵ Cities, Regions and Competitiveness Second Report from the Working Group of Government Departments, The Core Cities, The Regional Development Agencies, June 2003

⁶ Competitive European Cities: Where do the Core Cities Stand? ODPM, January 2004

⁷ Cities, Regions and Competitiveness Second Report from the Working Group of Government Departments, The Core Cities, The Regional Development Agencies, June 2003

regions and in other city regions such as South Yorkshire, Merseyside and Tyne & Wear, there has been a different sort of economic change caused by the collapse of dominant industries and the need for those places to reinvent themselves. These industries included coal mining, steel and other heavy manufacturing, port related industries and ship building.

- 2.14 For example in parts of South and West Yorkshire and Tyne & Wear the loss of the mining industry has been critical in shaping the current economic patterns. Similarly, the loss of employment in steel making in South Yorkshire, and in port related industries in Merseyside and Tyne & Wear have had a significant impact on the shape of these economies.
- 2.15 These transformational economies help to provide the context for the next section, which demonstrates the gap in economic performance between England's city regions and their counterparts in Europe, as well as the economic gap with London.

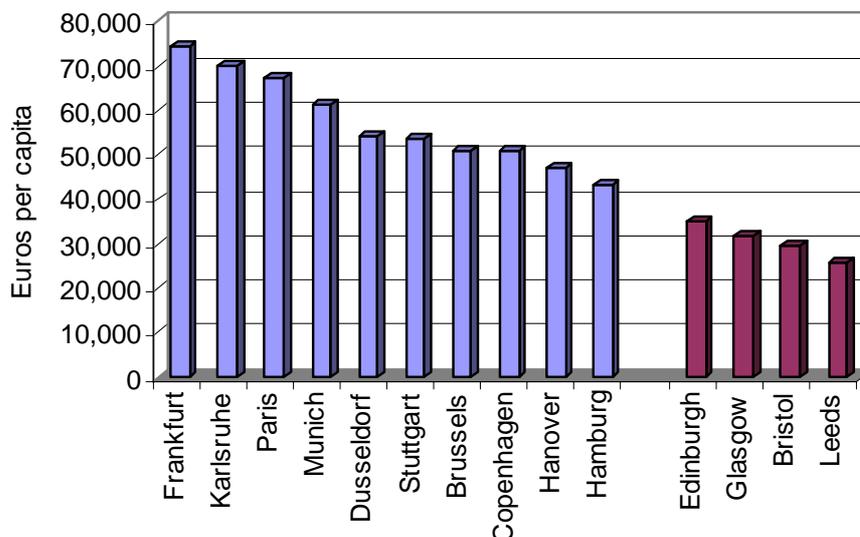
Economic performance of the UK regions

UK city regions compared with European counterparts

- 2.16 The UK has five cities in the ranking of the top fifty European cities for Gross Domestic Product (GDP) per capita. This provides a measure of individual wealth and gives an insight into the economic performance of a city. In addition to London, the regional cities in the top fifty from the UK are Edinburgh, Glasgow, Bristol and Leeds. None of these cities are in the top twenty. The best performing UK city is London in 23rd place.
- 2.17 Of the four regional cities in the poll, only one is in a PTE area: Leeds in 43rd place. Other non PTE British cities ranked as follows: Edinburgh (25th), Glasgow (29th) and Bristol (34th)⁸.
- 2.18 F2.1 overleaf shows the top ten European cities, of which seven are in Germany, one in France, one in Belgium and one in Denmark. The GDP of these cities has been compared against the regional UK cities which appear in the top fifty. It is clear from the chart that UK cities are considerably underperforming when compared with their European counterparts.

⁸ Our Cities Are Back - Competitive Cities make Prosperous Regions and Sustainable Communities - Third Report of the Core Cities Working Group, ODPM, 2004

F2.1 GDP per Capita 2001 ⁹



London and the South East compared with the North and Midlands

- 2.19 There is a considerable gap between not only UK cities and their European counterparts but between cities within the UK. Historically there has always been a large economic disparity between London and the South East and the rest of the UK, and it appears that there is no sign of this changing.
- 2.20 Gross Value Added (GVA) is a measure of productivity in an area and shows how much an area contributes to the UK economy. This data is calculated on a workplace basis, that is, people employed within the region.
- 2.21 In Britain, Gross Value Added (GVA) per head is markedly lower in the North and Midlands than in the South. In 2003 the GVA per head in London and the South East was nearly 40% higher than the northern and midland regions. Table T2.1 below shows the GVA per capita for each of England's regions.

T2.1 GVA per head in 2003 ¹⁰

London	£20,990
South East	£18,411
England	£16,339
Scotland	£15,409
West Midlands	£14,538
East Midlands	£14,505
North West	£14,346
Yorkshire & Humberside	£14,222
North East	£12,736

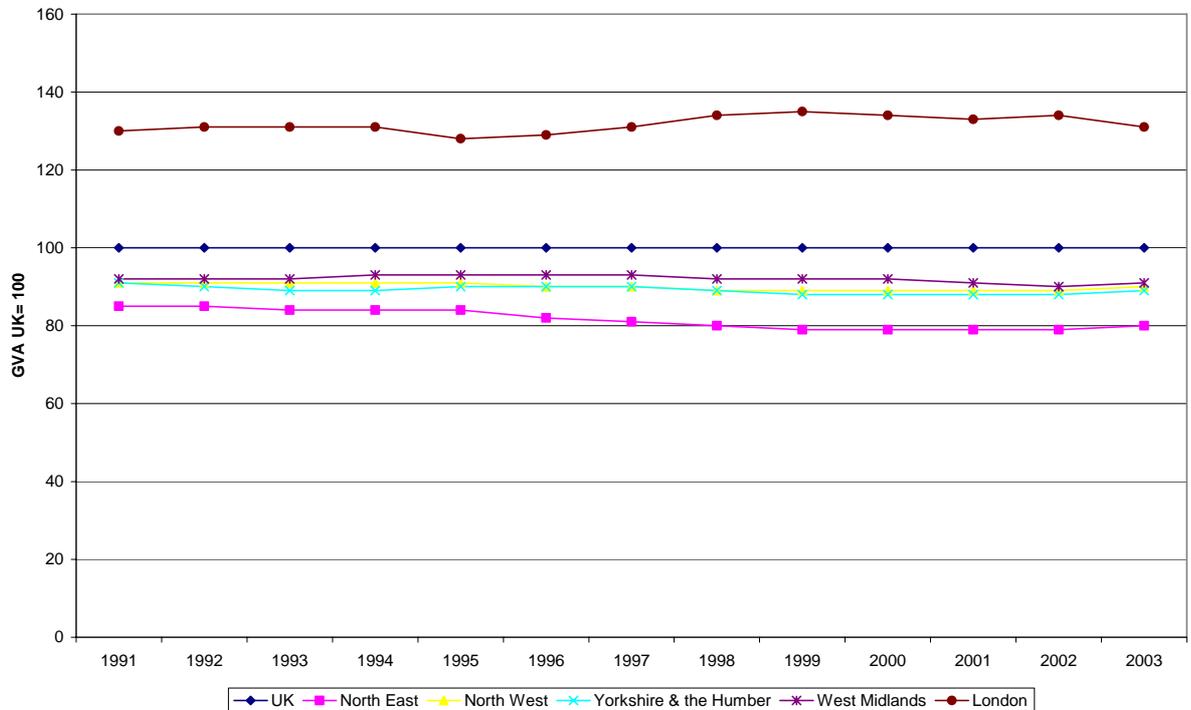
- 2.22 The growing disparity between regional GVA in the UK is further illustrated below in F2.2. This figure highlights the gap between London and the English regions. These northern

⁹ Our Cities Are Back - Competitive Cities make Prosperous Regions and Sustainable Communities - Third Report of the Core Cities Working Group, ODPM, 2004

¹⁰ Regional Gross Value Added, Office for National Statistics, <<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=7359>>

and midland regions all have GVA figures of around two-thirds of those achieved by London.

F2.2 Regional GVA ¹¹



2.23 Figure F2.2 shows that while London's GVA is well above the UK index figure of 100, the figures for the North East, North West, Yorkshire and the West Midlands are all below this. The Town and Country Planning Association notes that:

"In 2001, the Department for Trade and Industry and the Treasury published their report Productivity in the UK 3: The Regional Dimension. It showed that economic disparities in the UK are increasing. The gap between London and the North has grown by more than 30 per cent since 1997. But importantly the report points to the fact that this is not simply a North-South divide. The further one travels away from London, the greater the decline in prosperity."¹²

The skills gap

2.24 Emerging economies in China and India and other parts of the world are outperforming Britain in traditional manufacturing and also in routine services because of lower labour costs and communication technologies that shrink geographical space. As such this puts the UK in the position of having to move away from traditional manufacturing towards high value niche manufacturing and advanced services such as finance and business services,

¹¹Regional Gross Value Added, Office for National Statistics, <<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=7359>>

¹²Connecting England, Town and Country Planning Association, May 2006

design services, research and development, education and health services, and cultural services, collectively labelled the *knowledge economy*.¹³

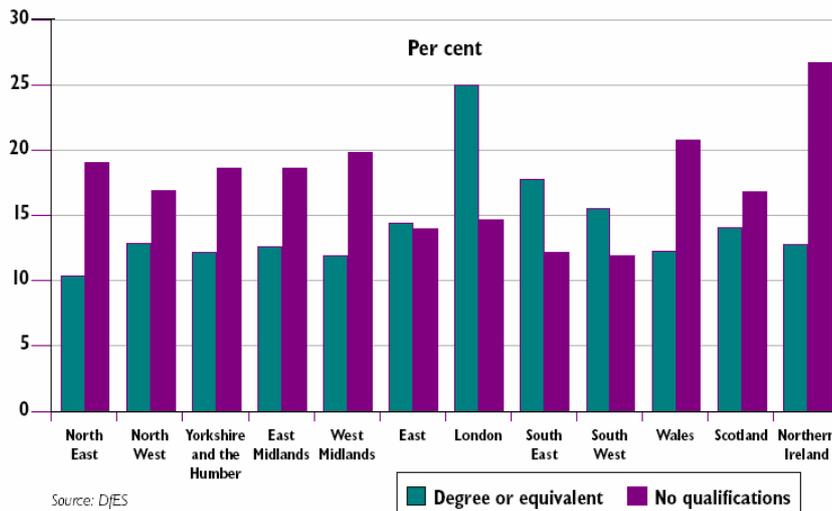
2.25 This notion of the future of the British economy is supported by the Chancellor of the Exchequer who told the Sustainable Communities Summit in Manchester in February 2005:

“production need no longer be based where raw materials or ports are but where there are skilled, adaptable, flexible labour markets. And that is where it is local attention to skills, enterprise, business creation, innovation and investment that will bring the most jobs, wealth and prosperity.”

2.26 With this in mind has Britain got the labour market to rise to this challenge? Human capital is a key determinant to economic growth. Higher skilled workers are essential to both introducing and operating advanced production techniques, required by UK’s change in production demands. They adapt faster to new innovations, play a key role in knowledge creation, and are more able and likely to receive training at work. As such an increasing proportion of jobs in the economy require a higher level of skills.¹⁴

2.27 F2.4 highlights, the large variations in the skills composition of the workforce across the UK’s countries and regions.

F2.4 Highest qualification of working-age population by region (2001)



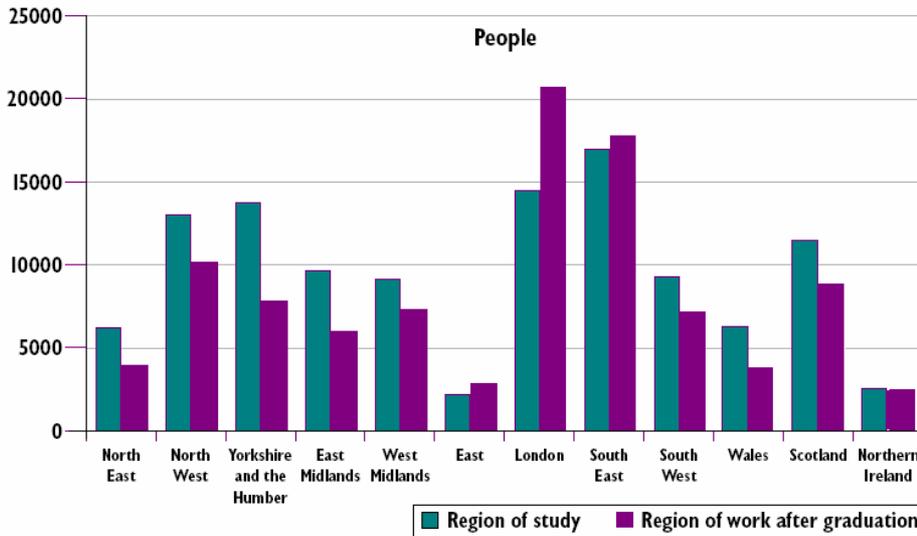
2.28 F2.4 illustrates that London’s working age population contains almost three times as many graduates as that of the North East. In Northern Ireland, meanwhile, over one quarter of the workforce is without any academic qualifications, compared to one in ten in the South East. Local variations in workforce qualifications are even greater. For example, the proportion of workforce that is “unqualified” is up to four times greater in some areas than others.¹⁵

¹³ TCPA, op cit

¹⁴ Productivity in the UK: 3 – The Regional Dimension, HM Treasury, November 2001

¹⁵ Productivity in the UK: 3 – The Regional Dimension, HM Treasury, November 2001

F2.5 Region of study and work after graduation (2000)



Source: DfES

* The regions used for this comparison are based on the old Standard Statistical Regions (SSRs).

2.29 F2.5 suggests that a large number of graduates move from the region they study in to work in other regions. This would suggest that graduates move from poorer regions to the wealthier regions, for example London, the East and the South East. In 2000, over 40% more graduates were employed in London than studied there. Conversely significantly less graduates work in Yorkshire and the Humber and the North East than studied there.

2.30 This evidence leads to two main conclusions, these being that:

- The skills of regions' workforces are essential to achieving high levels of productivity and employment. Therefore improving the human capital in a region is a key factor in improving its economic performance.
- Measures that increase educational attainment in an area, whilst important for the UK as a whole, will not necessarily lead to improvements in the skill levels of the local workforce. It is crucial that a region or locality can sustain high-wage jobs, which make it attractive for high skilled workers to locate there.

Leeds – servicing the predicted growth in the workforce

Over the last 10 years, there has been an 11.6% increase in employment in Leeds equivalent to 44,300 additional jobs. Forecasts from the regional econometric model indicate that over the next 10 years (2006-2016) there will be an additional 62,237 jobs created in the Leeds City Region, many of which will be located in Leeds itself. However, the local labour market in Leeds will only grow at a fraction of that rate, and is estimated to be only able to supply 20% of the employees required. Employees will therefore have to be drawn from the wider city region.

Business development - clustering

2.31 Densely populated cities are generally matched with dense areas of employment and provide a large pool of skills for specialisation.

- 2.32 Report 3 of the DTI's Devolving Decision Making¹⁶ series weighs up diversification against specialisation. It recognises that larger and more diverse cities, which are least dependent on a single sector, may be better placed than specialised cities to provide flexibility to respond to changes and take advantage of new opportunities. Although highly specialised economies can be vulnerable to shifts in trade and technology, the report recognises that specialised cities can also bring significant value to those industries that benefit from 'localisation economies' or clustering. The Government's 1998 Competitiveness White Paper "*Our Competitive Future: Building the Knowledge Driven Economy*" also highlighted the fact that business development is often strongest when firms cluster together.
- 2.33 Previous research on clusters is summarised in *Business Clusters in the UK – A First Assessment*¹⁷ which shows that clusters lead to higher growth in three main ways:
- They raise productivity by allowing access to specialised inputs and employees, by enhancing access to information, institutions and public goods and by facilitating complementary activity.
 - They increase firms' capacity for innovation by diffusing technological knowledge more rapidly.
 - Clusters stimulate higher rates of new business formation, as employees become entrepreneurs in spin-off ventures.
- 2.34 Also, the existence of business clusters enables an infrastructure of financial, legal and professional services to develop, acting as a support mechanism and offering the potential for economies of scale within the cluster.

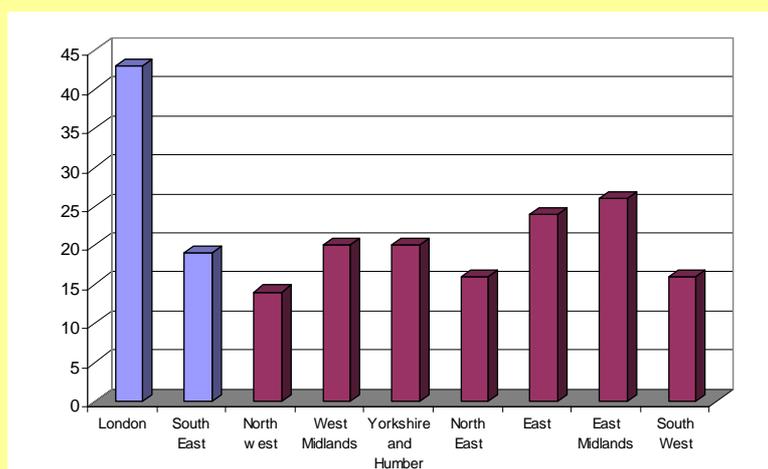
¹⁶ Devolving Decision Making : 3 – Meeting the regional economic challenge: The importance of cities to regional growth, DTI, March 2006

¹⁷ Business Clusters in the UK – A First Assessment, DTI, February 2001

The significance of clusters within regions

*Business Clusters in the UK – A First Assessment*¹⁸ showed that the proportion of a region's employment accounted for by clusters, ranges from 43% in London to 15% in the North West.

% of regional employment in clusters



Clusters that are established, deep, growing and international are concentrated in London and the South East. However, there are examples of similar clusters in other regions including ICT/electronics in the East, aerospace and perfume/toiletries in the East Midlands and automotive in the West Midlands.

2.35

In the North West in particular a number of sectors have been identified as either growing currently or having the potential for growth. These clusters will be encouraged to grow using the cluster concept. Businesses in clusters generally invest more in research and development, pay higher salaries and have a higher Gross Value Added per capita.

Liverpool

Between 1995 and 2003, GVA in Liverpool grew just slightly below the national average rate but significantly out performed the North West region. However, in more recent years (2003) GVA has grown by 6.2%, which surpasses both the national rate of growth (5.5%) and growth in the North West (5.4%). In terms of GVA Liverpool had one of the highest percentage rises of all the Core Cities between 2002 and 2003.

41% of all jobs in Merseyside are located within Liverpool, which emphasises the City's key role as the primary economic driver for the Merseyside sub-region.

The Liverpool Economic Briefing¹⁹ showed that over the period 2003-2004, most sectors saw an increase in jobs. The largest absolute increases in employment occurred in the banking, financial and insurance sectors, together with increases in other services

¹⁸ Business Clusters in the UK – A First Assessment, DTI, February 2001

¹⁹ Liverpool Economic Briefing: A Monitor of Employment and Wealth Generation (1995-2003/04)

sectors.

The largest sector is public administration, education and health. However these did not see any change in the numbers employed over the period 2003-2004. The percentage of people employed in this sector in Liverpool is 1.4 times the average for Great Britain which reflects Liverpool's success in attracting public sector investment, particularly from health, education and central government departments.

2.36 Clusters that include strong linkages between businesses can lead to the sharing of ideas, research and advice which can help businesses develop increased expertise. This can help to promote the efficiency and productivity of clusters as a whole.

2.37 The growth of the business services sector in Birmingham, Leeds and Manchester has provided a significant boost to the cities' growth and the economies of the city regions. The Financial and Business Services sector is becoming increasingly recognised as a key element of economic development, competitiveness and productivity. The sector acts as a cluster and the close relationships between companies helps them improve their services and look for more innovative approaches to their markets. Similarly, creative industries act as a cluster that promotes growth.

"There is a strong financial services sector in the city, with a growing media sector. Birmingham University is an important focus for clustering." Major regional developer with current developments in the region of approximately £200m.

2.38 The mass of expertise in this sector in Leeds has meant that companies in the region have local resources to draw upon. The Centre for Urban and Regional Development Studies at the University of Newcastle upon Tyne²⁰ states that '*there is little doubt that the growth and specialisation of business services in Leeds has been of considerable regional benefit due to the much enhanced range and quality of services available to the region's businesses.*'

Leeds

The Leeds City Region includes the West Yorkshire Districts of Leeds, Bradford, Kirklees, Calderdale and Wakefield along with Barnsley, Selby, York, Harrogate and Craven.

Although in terms of employment structure Leeds is the second most diverse of any major city in Great Britain, research undertaken by the University of Newcastle upon Tyne's Centre for Urban and Regional Development Studies concluded that the business service cluster is the key to Leeds' competitive advantage.

The economy of Leeds has been transformed in recent years with declines in the traditional industries of coal, engineering and textiles being offset by job creation in service industries. The largest growth of all has been seen in the business services and finance sector which has seen an increase in employment of 39% between 1995 and 2005 and is predicted to grow by a further 14% during the period 2005 to 2015. The largest growth is expected in the transport and communications sector with a 25% increase expected between 2005 and 2015.

Data from the Leeds Economy Handbook 2005²¹ also shows that the service sector (of which the strongest concentrations are in business services, public services, transport,

²⁰ The Economic Links between Leeds and the Yorkshire and Humber Region, Centre for Urban and Regional Development Studies, University of Newcastle upon Tyne, 1999

²¹ Leeds Economy Handbook 2005, Leeds City Council

communications and distribution) employed 356,700 people, around 81% of total employees.

Leeds is the fourth largest business service and financial centre in Great Britain (outside London) with the sector being a major employer in both the local and regional economy. Leeds accounts for around 31% of the region's employment in this sector. The Leeds business sector services the local market both within the region and the North of England. Without Leeds fulfilling this role, many of the region's businesses would be looking to London, not only exacerbating problems faced in London but having a serious impact on the competitiveness and sustainability of the region's companies.

Further growth in the business services sector in Leeds would significantly help boost the competitiveness of other companies based in both the city and the city region. The location of business services within Leeds helps to attract other companies in other sectors such as manufacturing, further enhancing the region's economy.

Leeds is one of the UK's principal manufacturing centres. Manufacturing accounts for 11% of total employment in Leeds, employing 44,500 people, a figure exceeded only by London and Birmingham. Bradford and Kirklees which are also in the city region are the third and fourth largest manufacturing centres outside London. For the ten largest manufacturing centres outside London, Leeds has the lowest percentage fall between 1998 and 2003.

Inward investment into the city region is being attracted by the reputation Leeds holds as a business services centre, a university city and world class medical centre. The ability of Leeds to build on this reputation and strengthen the economy of the city will inevitably help improve the GDP of the region and in turn that of the nation.

However, congestion has been identified as a key constraint to the further growth of Leeds' economy.

2.39 The State of the English Cities Report²² showed that English cities that are leading the growth in knowledge intensive business and financial services are those that are prospering. In Manchester the traditional industries such as manufacturing have given way to an emerging knowledge based economy. The vision for Manchester is to create a Knowledge Capital which will secure success from a competitive combination of assets based on high growth businesses and knowledge intensive industries, world class universities and a major international airport.

2.40 Manchester's aim is to create 100,000 new jobs by developing strategies for creative, professional and financial, creative, bio, education, health and nanotechnology sectors. Manchester has already started to grow in the areas of research, laboratory and incubation services to support business growth within the region.

Manchester

The Manchester Performance Plan Summary 2005/06 shows that Manchester's economy has continued to grow over the last year. Employment in the city has increased to 313,000, averaging 9,000 new jobs per year since 1998. Since 1998 the number of small/medium businesses in the city has increased by 13%, a rate three times that of the region. Unemployment is falling too with the number of registered job seekers reducing by 14% over the last year.

The Greater Manchester Economic Assessment 2004²³ shows that Greater Manchester is the economic centre of the North West, generating 40% of its Gross Value Added (GVA). Apart from London, Greater Manchester South saw the highest growth in GVA

²² The State of the English Cities Report, ODPM, March 2006

²³ Greater Manchester Economic Assessment Executive Report 2004, Manchester Enterprises

between 2000 and 2001 and is the largest absolute contributor to national output of all comparable UK benchmark areas.

Greater Manchester's employment has risen over the last decade, with a higher proportion of the workforce in employment than both London and the West Midlands conurbation. Although some areas have employment rates in excess of the national average, other parts of the conurbation still suffer from disproportionately low employment rates despite strong employment growth. Often core urban areas experience problems connecting workless residents to the newly created jobs.

Forecasts for employment growth across Greater Manchester are extremely positive with a predicted increase in employment of over 100,000 jobs by 2015. With the strategic aspirations of the sub-regional partners, this growth could exceed 160,000 jobs.

Greater Manchester's economic growth has been driven by the rapid expansion of the service sector which has made Greater Manchester a national as well as a regional centre. Greater Manchester's economy however encompasses a number of key sectors which contain strategic local employers, high value activities, high growth potential firms and/or local specialisms. Manchester has undergone a cultural renaissance in recent years and now has a major concentration of media and creative industries as part of a culture economy worth around £1 bn. Private investment in recent years has reached unprecedented levels of around £2 bn and 25,000 new jobs have been created in key growth sectors.

Engineering & Manufacturing and Financial & Professional services have the largest number of employees. However Engineering & Manufacturing has seen a large decline in jobs of nearly 18% between 1998 and 2002. There has also been a significant decline in the textile industry which has seen a 38% fall over the same period. The fastest growing sectors are ICT/Digital and Energy which have both seen an increase in employees of over 40% between 1998 and 2002.

Whilst Greater Manchester has an extensive public transport and road network, there is still a need for significant investment, particularly in public transport, to fully enable the business and labour market flexibility that underpins economic competitiveness.

Knowledge based development

- 2.41 The increasing significance of knowledge as the key to competitiveness in advanced economies such as those of the UK has thrust cities to the centre of the economic stage. It is the set of economic assets within these cities that is the critical factor by which regions achieve comparative advantage over their competitors. These assets are in practice a critical mass of knowledge institutions²⁴.
- 2.42 The Ideopolis: Knowledge City-Regions report²⁵ recognises that cities with more knowledge intensive industries and occupations are more economically successful and can improve the quality of life for many local people. The Ideopolis vision is of a sustainable knowledge intensive city that drives growth in the wider city region. Key to the success of an Ideopolis is "*knowledge intensity*" – the number of knowledge industries and knowledge workers within a city and its surrounding region. There is a huge boost to both economic growth and prosperity if 25% of organisations in a city are "*knowledge businesses*".

²⁴ Transport connectivity and place competitiveness, Core Cities Working Group, July 2004

²⁵ The Work Foundation, op cit

- 2.43 The report identifies Newcastle as being among the cities that are adapting to the demands of the knowledge economy. Following the decline of traditional industry, Newcastle has had successes in building other assets, including the public sector and higher education. Newcastle is being transformed with creative and cultural industries at the heart of the regeneration.

Newcastle

The North East is the smallest of England's nine administrative regions in terms of population and, with the exception of London, is the smallest geographically. Economic growth in the region currently exceeds that of London and the South East and is higher than the national average.

The North East has seen relative decline, particularly during the later decades of the 20th Century, caused by a variety of complex factors including the decline of heavy industry. This is demonstrated by the growing 'productivity gap' between the North East and the national average in terms of economic prosperity.

However, in recent years, there have been more positive signs. Significant progress has been made in absolute terms over the past decade.

The Regional Economic Strategy²⁶ identifies key strategic sectors on the basis of their contribution to GVA and employment, the future growth opportunities they present and/or their ability to increase levels of participation. Key manufacturing sectors are chemical and pharmaceutical, automotive, defence and marine, food and drink and energy. Within the service sector knowledge intensive business services, tourism and hospitality, commercial creative businesses, health and social care are all important.

Science and technology have been at the heart of the region's economic strategy with creative industries such as content-based businesses, including computer games and video production, growing rapidly.

- 2.44 'Clustering' of knowledge-based sectors in our regional cities is having major impacts across the wider city regions and on the national economy as a whole. Examples of the consolidation of smaller regional businesses into larger operations within the Core Cities include the legal sector in Birmingham.

Birmingham

Analysis of the Annual Business Inquiry Employment Figures for Birmingham²⁷ shows that the fastest growing sector is the Financial & Business services sector which has seen a 43% growth in employees between 1991 and 2004 and is now the second largest sector in Birmingham. The bulk of employment in the Financial & Business services sector is in professional services, which includes legal, accountancy, consultancy, architectural, recruitment and other similar services. The fastest employment growth was in professional services, computer services and property business.

²⁶ Regional Economic Strategy Consultation Draft, One North East, April 2006

²⁷ Analysis of the Annual Business Inquiry Employment Figures for Birmingham, Birmingham City Council Economic Strategy and Information Group, March 2006, www.birminghameconomy.org.uk

- 2.45 Work undertaken by Coventry Business School²⁸ highlights the important role that can still be played by ‘mature’ sectors in the process of regional economic development. Mature sectors are those which are long established within the regions and have traditionally evolved from a basis of mass production serving low-value added markets such as motor vehicles and textiles. It is only worth pursuing these sectors when there is clear potential for firms to diversify away from low value markets to niche markets driven by quality and high value.

Birmingham

Although manufacturing employment in Birmingham has seen a major decline, the West Midlands is a nationally important manufacturing centre accounting for over a quarter of total UK manufacturing exports and the largest manufacturing output and concentration of employment of any urban area in the UK. Manufacturing produces 30% of the region's GDP while 27% of employees rely on the sector for their livelihood. Despite this decline in manufacturing in Birmingham over the last decade the West Midlands has seen real economic growth in GDP of around 29%. This has resulted in an additional 240,000 people in employment and a falling unemployment rate, down from 12% to below 5%.

The Birmingham Economic Review and Prospects 2005²⁹ identifies prospects for employment and output for key sectors. It recognises that manufacturing does have an important role in the city's growth over the next 25 to 30 years only if there is greater diversification into science based manufacturing and a greater emphasis on its wider role in the “technology economy”. It is forecast that manufacturing output as measured by GVA will grow by 10.5% over the next 10 years although employment will continue the long-term downward trend of the last 25 to 30 years.

Despite this economic growth, the West Midlands GDP remains at only around 92% of the overall UK and European average with manufacturing productivity levels the second lowest of the English regions. Congested road and rail systems are factors in this poor performance, which is due in part to the dispersed origins of industrial, employment and residential patterns leading to high car dependency. High traffic volumes are further exacerbated by large traffic generators like Birmingham International Airport and the NEC.

The ‘ripple’ effect

- 2.46 The ‘ripple’ or ‘spill-over’ effect³⁰ is identified when the critical mass of activity in core cities spills over into the wider regions. Rapid growth and market saturation in core cities can promote diffusion from the centre to the rest of the region, with a second round of growth in smaller regional centres.
- 2.47 Mechanisms and initiatives which underpin growth in core cities can be transferred elsewhere in the region. The city could confer its expertise, knowledge base and resources upon the region. This could include reputation as well as knowledge and skills needs and support for capturing funding opportunities.

²⁸ The Role of Mature Sectors in Promoting Regional Economic Development: The Case of High Value Added Consumer Products Cluster in the West Midlands Region, Centre for Local Economic Development, Coventry Business School, May 2005.

²⁹ Birmingham Economic Review and Prospects 2005, Birmingham City Council, 2005

³⁰ Core Cities: Key Centres for Regeneration, Centre for Urban and Regional Development Studies, University of Newcastle upon Tyne, 1999

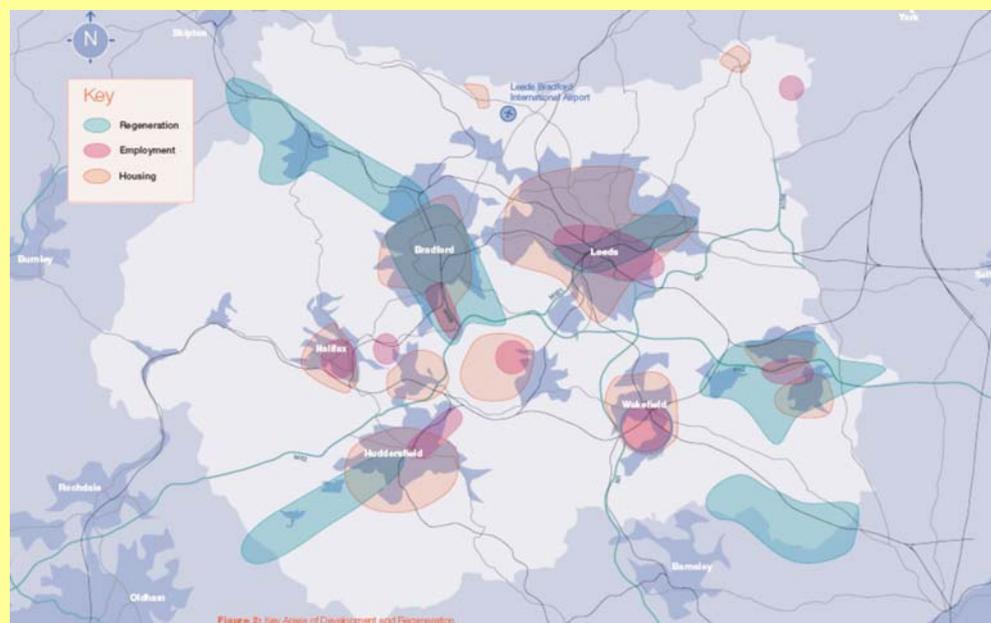
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Re-branding Core Cities as places of knowledge, learning and culture can present unfavourable comparisons with the image and reputation of other areas which are still heavily associated with their declining industrial heritage. However, this “shadow” effect can become a ripple effect in the long term as trickle down benefits spread to the rest of the region.

Leeds City Region

Leeds has developed, both through physical developments and image building, a metropolitan ambience which has become a unique regional asset. This has not only put Leeds on the map it has also put the wider region on the map. In this sense, the critical mass of cultural activity in Leeds also creates a ‘ripple’ or ‘spillover’ effect into the wider region³¹.

The ripple effect in Leeds



Leeds is growing as a tourist destination in its own right by expanding and diversifying the range of attractions on offer. This generates a significant amount of direct spending and employment which in turn generates further indirect and induced spending and employment. As visitors stay in the city longer, these impacts are no longer confined to Leeds but are conferred to other parts of Yorkshire and the Humber. Moreover, visitors to other parts of the region may now regard Leeds as part of a tourist itinerary. This synergy between all the component parts of Yorkshire is reinforced by the concept of ‘Gateway Yorkshire’.

Because of falling capacity in Leeds in terms of availability of sites and increasing prices, there is evidence of a second round of growth occurring in regional centres. The main two drivers to this second round of growth are the model for development which Leeds has provided entrepreneurs and the receptivity to new consumer environments which has been generated by people from throughout the region visiting the city-centre.

³¹ Economic Links between Leeds and the Yorkshire and Humber Region, Centre for Urban and Regional Development Studies, University of Newcastle upon Tyne, 1999

It is likely that in the short term, the development of a cosmopolitan atmosphere in Leeds and the enhancement in its reputation has had a negative impact on Yorkshire by drawing trade from other towns and cities. But in the longer term there is evidence of a 'ripple' effect upon the Leeds hinterland. Moreover, the success of Leeds has encouraged people outside the region, especially in the south-east, to take a fresh look at the city, and more significantly, its wider region.

City collaboration

- 2.49 City collaboration is about creating a critical mass of population, services and infrastructure between two or more cities so that they can compete more effectively against larger, more prosperous locations. The core goal of city collaboration is improving regional economic performance. Collaboration is a powerful explanation of why some places cope with the challenge of the new "knowledge economy" better than others.
- 2.50 Yorkshire's Key Cities: Collaborating for a Competitive Future³² identifies a number of collaborating structures which are emerging across Europe. For example, Amsterdam and Copenhagen, which were amongst the first to develop collaborative links with their neighbour, have moved to the top of the European GDP table over recent years. Within the UK, Edinburgh and Glasgow are developing a collaborative action plan to boost their combined economic performance, which already exceeds that of any of the English Core Cities.

Collaborating to compete

Leeds to Manchester is the key Northern Way corridor. In central Scotland the distance between Edinburgh and Glasgow is similar to the Leeds–Manchester gap. Glasgow and Edinburgh also face the issue of the heavily congested M8 in the same way as Leeds and Manchester are constrained by the M62. However Edinburgh and Glasgow are looking at the joint benefits of working as one economy, maximizing the benefit of having two world class cities in such close proximity.

*"Collaboration,... will enhance what both cities can offer. It will make them better equipped to compete against their European and World rival cities, generate increased wealth and create a better quality of life for citizens. It will, also, in turn support the growth and prosperity of all of Scotland."*³³

The collaboration programme in Scotland has highlighted that inter-city connectivity is the area where there is most scope for collaboration. A portfolio of actions is proposed to address this over the short to long terms including:

- Potential for significant and continuing reduction in journey times.
- Service quality and reliability.

³² Yorkshire's Key Cities: Collaborating for a Competitive Future, AMION Consulting for the Yorkshire & Humber Key Cities Group, May 2004.

³³ Glasgow city council news, 27th October 2005

Amsterdam, Rotterdam, The Hague and Utrecht – The Delta Metropole

The Dutch urban system is the first example of city collaboration which is now known as the 'Delta Metropole'³⁴. This planning concept seeks to project an image of the region as a world city, in which competitive advantage is derived by combining economies of scale across the whole urban area, capitalising on the specialisation of its constituent cities but also their combined economic output.

Following the industrial restructuring of the 1980's, a new distinctive economic rationale for the Randstad concept emerged in addition to the earlier aspiration to limit physical development and protect the sensitive natural environment. This sought to engineer increased overall regional competitive advantage by adopting distinctive economic planning goals for each city based on their own particular individual specialisations (government and administration in the Hague; tourism and culture in Amsterdam; port related industries in Rotterdam; logistics and distribution in Utrecht).

The concept of the Delta Metropole revolves around two main attributes. Firstly raw critical mass of the four cities in terms of local GDP/population and the centrality of Schipol as the region's main international terminal. Secondly Delta Metropole's competitive advantage.

The region's transport and communications network is highlighted as "*the first transformation component required*" to stimulate improved economic performance. The Delta Metropole is polycentric therefore a dense network of connections between each of the four cities is envisaged.

The importance of connectivity

2.51 Successful city regions attract businesses and organisations which can compete in open markets nationally and internationally. These modern, open and competitive economies rely on transport to exploit their competitive advantage. City region competitiveness is therefore based on the extent to which high productivity businesses see comparative advantages from locating there. The advantages are identified in the report Competitive European Cities: where do the Core Cities Stand?³⁵ and include:

- A diverse economy.
- A skilled workforce.
- Innovation in firms and organizations.
- Strategic decision making capability.
- Transport connectivity (internal and external).

2.52 The relative importance of these advantages is not clear but research shows that:

*"As global players survey the economic landscape, they are attracted to particular regions and urban centres by a combination of local attributes... Transportation services and infrastructure have become a more not less, important component of firms' (and regions') competitiveness."*³⁶

³⁴ AMION Consulting, op cit

³⁵ Competitive European Cities: Where do the Core Cities Stand? Prof. Michael Parkinson et al, commissioned for ODPM, 2004

³⁶ Gertler, (1996) quoted in Economic Competitiveness and Quality of Life in City Regions: a review of the Literature, Donald, 2001

2.53 This is reinforced in Britain's best cities for business survey³⁷ which identifies that transport and congestion issues are likely to be the most influential determinant of where companies choose to locate in future.

2.54 There are five key elements linking transport connectivity to economic competitiveness. These were identified by the Core Cities Working Group³⁸ in 2004. These are:

- The link between transport policy and regional economic performance.
- International connectivity.
- Inter-regional connectivity.
- Intra-regional connectivity.
- Decision making on transport investment.

2.55 These key issues are readily demonstrated by the views of business:

"If (you) can't move people around efficiently, (the) private sector will not invest." **Managing Director, major regional developer and fund. Currently schemes valued at over £1.5 billion in Manchester.**

"Our product is done on the back of location, so (transport) is pretty central to our success". **Joint Managing Director, Regional investment and development company. Current schemes valued at over £500 million in Leeds.**

"We wouldn't consider a site if did not link in with decent transport network" **Development Manager, major national quoted developer. Current schemes valued at over £2 billion.**

"The West Coast mainline and airport connections provide a good level of connectivity for Manchester." **Managing Director, major regional developer and fund. Currently schemes valued at over £1.5 billion in Manchester.**

"A good train service between Leeds and London, as well as the M1, has been important to the success of the city, but it takes a longer time to take effect." **Regional Director, national developer with strong regional focus. Current schemes valued at over £250 million in Leeds**

2.56 The City Region Business Cases highlight a number of key messages for connectivity including the need for greater strategic control over transport systems, a need for a more regional overview in terms of thinking about transport arrangements and the importance of specific priority projects in promoting national and international market connections required for improved economic performance.

2.57 In terms of the Core Cities and their city regions, improved inter-regional connectivity is vital for collaboration benefits to be realised, and the links between transport policy and economic performance, intra-regional connectivity and the decision making process are all fundamental to developing these regional economies.

³⁷ Britain's Best Cities for Business, 7th UK Survey, OMIS, 2003

³⁸ Transport connectivity and place competitiveness, Core Cities Working Group Connectivity Themed Group, July 2004

Issues of congestion

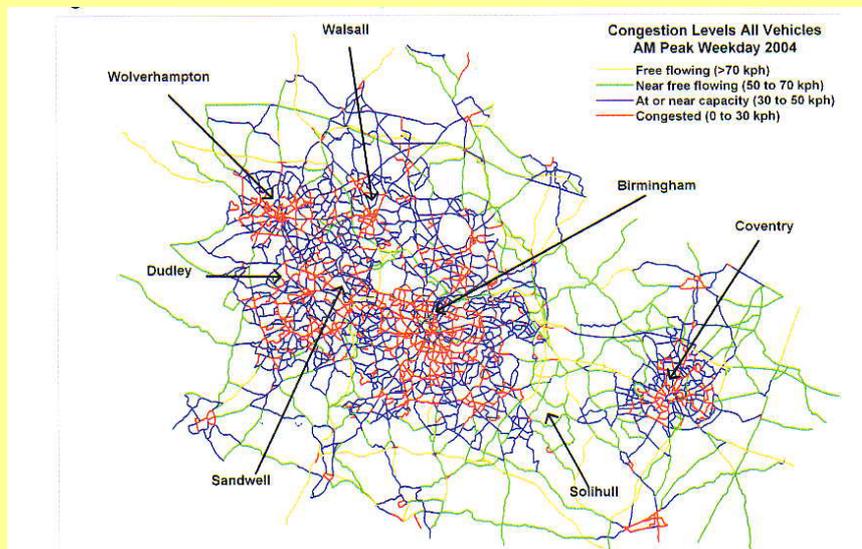
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As the economies of our city regions grow, problems of congestion also become more significant. It is vital for the development of our city region economies that such congestion does not affect the functioning of the economy.

Future demand for travel in the West Midlands

The West Midlands is at the heart of the national road and rail network. An effective West Midlands transport network is therefore crucial to the wider region and the country as a whole. Current DfT statistics show that the West Midlands has the highest traffic levels on minor urban roads and the second highest traffic levels on urban A roads.

Congestion levels for the West Midlands (2004)



The West Midlands Local Transport Plan (LTP) (March 2006) identifies future demand for travel across the conurbation. Even in the short term to 2011, travel demand resulting from the growth and development of the region is forecast to be in the order of an additional 242 million trips each year, compared with 2001. Congestion and peak period journey times are predicted to increase by 25 to 35%.

This growth results both from employment growth and the economic development of the area, with a substantial shift from manufacturing to the service sector, and from increasing residential densities within the conurbation. Employment forecasts make it *“apparent that the service sector will continue to be the main source of new jobs, directed towards city and town centres”*.

The LTP goes on to say that *“unless more workers use public transport there will be adverse affects on air quality, congestion and the local economy”*.

In the longer term the implications of the City Region Development Plan, the Black Country study and the Coventry, Solihull and Warwickshire study all serve to highlight the need for action to be taken to provide for more transport needs through public transport.

Leeds City Region transport vision³⁹

A number of high and low future growth scenarios were outlined as part of the analysis for the Leeds City Region Transport Vision. These were devised using TEMPRO employment forecasts, as well as housing forecasts and National Road Traffic Forecasts (NRTF).

TEMPRO is a Trip End Model providing projections of growth in travel demand, and the underlying car ownership and planning data projections nationally. The data sets used in the model can break down into regions, towns and cities and districts.

When these forecasts were applied to highway demand, connectivity was affected on an inter and intra-region level with the M62 west of Huddersfield approaching capacity. By 2021 the congestion problems are forecast to spread beyond the radial corridors into Leeds.

The forecasts suggest that, unchecked, West Yorkshire will be severely affected by congestion and delays. Negative economic impacts could arise from congestion affecting the M62 corridor. This is of particular concern as it forms part of the Trans-European Network and is the key Trans-Pennine road connection from the Humber ports to the North West. The adverse traffic conditions will affect the attractiveness and reliability of vital journeys in West Yorkshire.

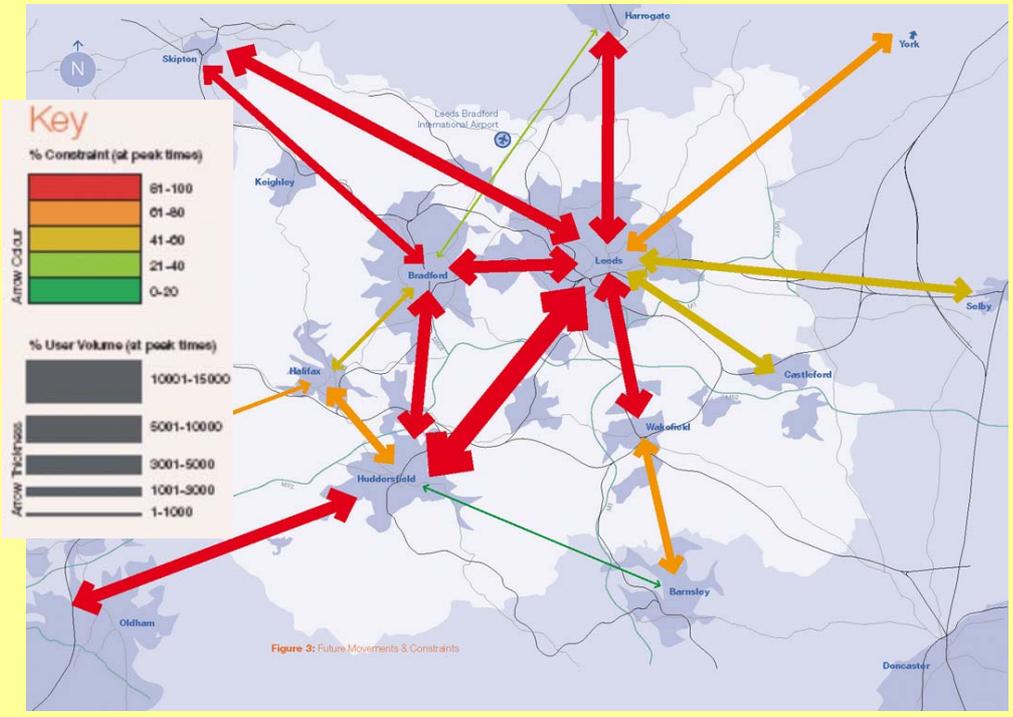
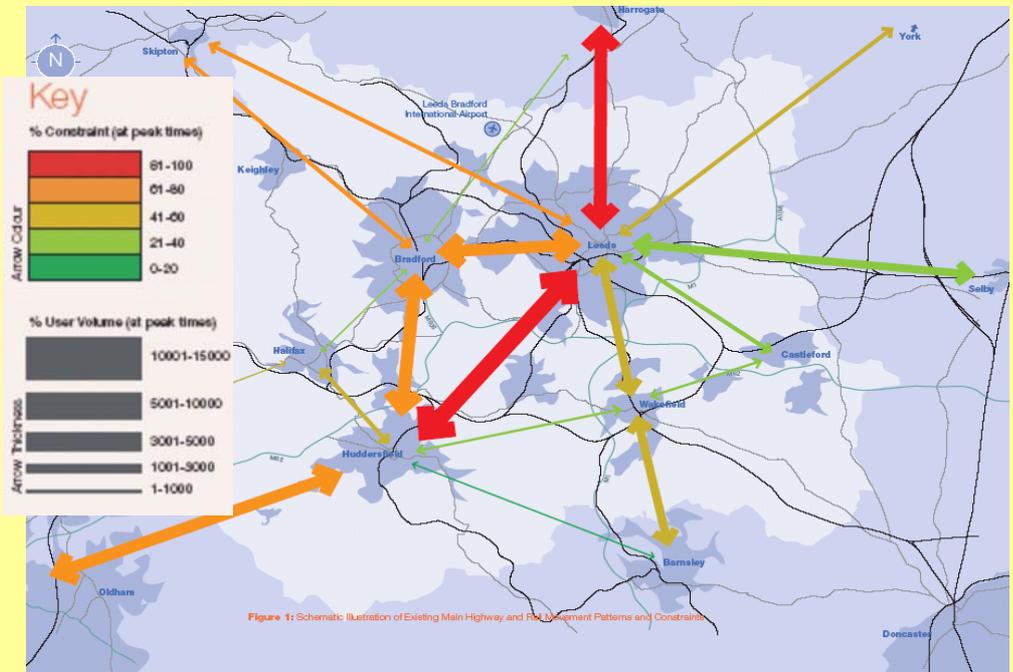
There has also been significant growth in rail use. Most services arriving into Leeds in the peak carry more passengers than the number of seats provided. Year on year patronage statistics collated by West Yorkshire PTE (Metro) indicate that patronage growth on the West Yorkshire rail network has grown by more than 80% during the last 10 years from 11.5 million journeys per year in 1994/5 to 21.1 million in 2004/5. Predicted growth in rail travel suggests that worsening levels of overcrowding will affect several routes, notably along the Harrogate, Bradford and Castleford corridors. This level of passenger usage will affect service quality and attractiveness of rail for commuters with some passengers being crowded off services. The overall effect will be to reduce the attractiveness of new employment sites in the centre of Leeds.

“Trains are an important element for the city, but they are being used more and more, and are cattle wagons. If we’re going to get people out of the cars then trains are the alternative, but they need to be more appealing”. **Director, specialist regional developer. Current schemes valued at over £250 million in Leeds.**

The data presented in the Leeds City Region Transport Vision indicates that most corridors in the region will face significant congestion and overcrowding by 2021, with problems arising on some corridors by 2011 and 2016.

³⁹ A Transport Vision for West Yorkshire, Arup, March 2006

Forecast combined rail and highway congestion on key corridors for base year (2001) and a high growth scenario (2021)



Source: Arup analysis using 2001 Journey to Work data, NRTF forecasts, GDP forecasts and TEMPRO outputs

- 2.59 So far growth in demand has been accommodated by existing transport networks. To date, this has not had a significant negative impact on further economic growth within the city regions. However there is a growing body of evidence that suggests this will not be the case with future growth. Local Transport Plans, to an extent, have underplayed the problem with the implicit suggestion that the toolkit of measures proposed within them will accommodate or mitigate the issues of growing congestion and increasing reliance upon the private car.
- 2.60 The second LTP for Greater Manchester suggests that the Greater Manchester Integrated Transport Strategy (ITS) which outlines the 15 year programme for transport will require significantly more funding than is currently available from the Local Transport Plan process and the Regional Funding Allocations. The consequence of insufficient funding is that congestion will reach a point in the future, termed the “*tipping point*”, where it will start to significantly harm economic growth. The proposed solutions in the ITS will promote modal shift to ensure that this point is not reached. These solutions include improvements to capacity, efficiency, affordability and accessibility of sustainable modes, such as public transport, cycling and walking, combined with harder edged demand management measures. It is essential to ensure that the necessary public transport improvements are in place before reaching the tipping point so that capacity will be available to accommodate this modal shift.

Greater Manchester’s tipping point⁴⁰

The work on Greater Manchester’s Integrated Transport Strategy (GMITS) estimates that due to the ongoing success and growth of the city region, and the regional centre in particular, future transport systems will need to be able to handle an increase in peak hour trips of around 25% by 2020. If we assume that car traffic is held at current levels then public transport would have to meet the challenge of catering for a 40% increase in patronage.

Work has concentrated on the following two tests (known as the ‘Tipping Point’), around transport and the economy, and at what point congestion undermines economic growth:

1. When is the impact of congestion on growth serious?
2. Does a full package of integrated transport measures produce positive net impacts on employment and GVA?

The initial findings suggest that if the recent growth continues then the first test could be passed at the beginning of the next decade, but that a combined package of interventions has the potential for Greater Manchester to meet its economic growth aspirations through to 2020.

The GMITS has identified a significant package of transport measures through to 2020 in order to ensure the vital connection between economic growth and infrastructure is made.

The transport interventions envisaged include further extensions to the successful Metrolink system, longer trains, new tram-train services and guided busways, as well as substantial improvements to the extent and quality of bus networks.

Recognising that any major investment funding will be through TIF, hard edged demand management will need to play a major part, as will behavioural change measures, but

⁴⁰Conference paper, Transport Innovation Fund: Next Steps conference, Geoff Inskip, Acting Director General GMPTE 25th May 2006

public transport must be at the heart of the strategy, and must come first.

It is proposed that the entire package of measures will be delivered through a new innovative 'Transport for Greater Manchester' which would be a strategic board for transport, equivalent to Transport for London, which will have responsibility for the specification, funding, procuring and delivering services through a series of Corridor Partnerships.

'All three cities (Birmingham, Leeds, Manchester) have very significant capacity to expand economic activity...I think probably that when those capacity constraints do start to bite you will find it will be around local congestion, I suspect. It will be around the fact that the places people live and the places people work are a distance apart and that the preferred mode of transport is the car for a variety of reasons and the radial routes into the city centres simply stop working...already in a number of those cities rush hour is extremely congested for much of the year and I think that that is probably one of the things that will constrain growth. It may well be one of the first things that will constrain growth.' **Managing Director, National Regeneration Company with current schemes in Birmingham, Leeds and Manchester valued at over £200 million.**

- 2.61 Just as the economies of our city regions are growing at different speeds, congestion is affecting, or predicted to affect our Core Cities to different degrees and over different timescales.
- 2.62 The South Yorkshire Transport Vision sees the development of high quality, car competitive public transport as a cornerstone of a modern, successful sub-regional economy. Congestion in South Yorkshire is essentially caused by high levels of private car traffic, predominantly on the journey to/from work.⁴¹

Future congestion in South Yorkshire

Over the last decade (1994-2004) car traffic in Sheffield has grown by 13.7%, the highest growth in mileage of all England's Core Cities except Leeds. Traffic in the free-standing market towns of Doncaster and Rotherham has increased by 25% and 22% respectively over the same period, exceeding the national average of approximately 20%. The majority of future development outlined by the South Yorkshire Spatial Strategy Vision will be in the region's urban centres, hence further growth in trips into the main centres is expected.

Over the period 1994-2004 passenger bus journeys into central areas within South Yorkshire have reduced by 13.8% with a combined fall of 25.8% in Barnsley, Rotherham and Doncaster. In contrast, car trips have increased by approximately 0.5% per annum over the period 1999-2005.

This pattern of increasing car use and falling bus patronage is expected to continue as regeneration of the local economy takes place from a comparatively low base, with the region currently having European Union Objective One funding status. Car ownership and usage will grow as employment and wealth increase, presenting further problems for the transport network. Analysis of future conditions based on a continuation of current

⁴¹ Tackling Congestion in South Yorkshire, Appendix A, South Yorkshire LTP2, March 2006

economic growth rates forecasts an increase in traffic of 12.5% between 2004 and 2010 along with a further fall in bus patronage of 14%.

Addressing this level of congestion and providing sustainable access to the thousands of jobs created under the Objective One programme will be vital in order to sustain economic growth and to allow South Yorkshire to compete with other regions.

- 2.63 The Merseyside LTP2⁴² recognises, as one of its objectives, the need to “*provide the appropriate infrastructure to support social and economic growth and regeneration*”. Strong employment growth in the region is forecast with an annual 2% per annum increase in jobs forecast within Liverpool City Centre over the period 2006-2011. This gives a total increase of 9,000 jobs and represents over half of all new jobs to be created in the region.

Traffic growth in Merseyside

Across the Merseyside region between 2006 and 2011, an increase in car journeys to work of 5% is predicted, with a 12% increase in car trips into the City Centre. Overall a 4.9% increase in vehicle kilometres is forecast. In addition 11 million visitors to the region are expected in 2008 when Liverpool becomes European Capital of Culture, putting further pressure on the transport system.

Whilst congestion is growing in Merseyside, it is not yet regarded as a major problem across the region. However, in key locations such as the City Centre and around the John Lennon Airport and the Mersey Ports, it is becoming recognised as an issue which will impact on the future ‘competitive edge’ of the region.

- 2.64 The Tyne and Wear LTP2 highlights the need for economic regeneration whilst managing the impacts of traffic growth across the region.⁴³ Car ownership in Tyne and Wear is currently only 70% of the national average⁴⁴, giving scope for large increases in car traffic as employment levels and prosperity increase in the region.

Travel demand in Tyne & Wear

Between 1994 and 2004 the total distance travelled on roads in Tyne and Wear increased by 15% from 6,853 to 7,894km. A 6% increase in car traffic on principal roads was recorded from 1996/97 to 2002/03, compared to a 2% national average.

In contrast, the region has experienced a 26% fall in public transport patronage over the period 1992-93 to 2002-03, despite an 18% increase in Metro patronage over the last three years.

Forecasts for 2021 indicate that under a high growth scenario, car trips within the region will increase by 20% on current levels, against a fall in public transport trips of 3%. This will lead to a considerable decrease in journey speeds on some radial corridors.

⁴² The Local Transport Plan for Merseyside 2006-2011, March 2006

⁴³ Local Transport Plan ,Tyne & Wear, 2006-2011, March 2006

⁴⁴ UK Census, 2001

The importance of connectivity to business

- 2.65 The emerging research by GVA Grimley examines evidence for the linkages between transport improvements and private sector investment⁴⁵. The report focuses on how transport influences the investment decisions made by property investors, developers and major corporations in three Core Cities (Manchester, Leeds and Birmingham).
- 2.66 There are various factors that influence decisions made by property investors, which can be categorized as strategic or local. Disentangling transport from these factors is difficult. However the research often highlights transport as an explicit evaluation criterion in the decision making process. Accessibility was felt to be a key ingredient in the overall assessment made by developers although it was not always a “primary criterion”. Accessibility was viewed more in terms of requiring a necessary threshold, below which a site would fall outside the risk strategy of the developers.
- 2.67 Transport’s specific role in a development can be highly variable ranging from a key ingredient of the scheme success, a barrier to overcome, or not even a consideration as existing provision is adequate.
- 2.68 The role of transport on the image of a city can be negative as can be illustrated in Birmingham:
- “The big problem is New Street (Station) – It’s the gateway entrance and it is not a good image to give of the city”.* **Development Manager, major national quoted developer. Current schemes valued at over £2 billion.**
- 2.69 Increasing confidence in cities like Birmingham is attracting staff, including people coming out of London. The issue here is how to retain these staff. Transport was highlighted as an important part of staff retention and therefore part of the continued economic success of the city.
- “Staff retention is crucial, especially for local professional companies... so accommodation needs to be conducive to this, which includes the transport links”* **Joint Managing Director, regional investment and development company. Current schemes valued at over £500 million in Leeds.**
- 2.70 Leeds’ good motorway and inter-city rail links are seen as a positive for the city. However, for intra-city connectivity the picture is not so bright with particular issues in the peak hours. There is a concern that future development and redevelopment opportunities could be constrained by the inadequacies of the local transport network.
- “We can provide the right product for occupiers but require public sector support to deliver the necessary transport support. Without this our scheme becomes less sustainable.”* **Regional Director, national developer with strong regional focus. Current schemes valued at over £250 million in Leeds**
- 2.71 In Manchester there is also concern that the city’s transport infrastructure may slow down the city’s regeneration.
- “Transport may act as an impediment to securing more “new blood” occupiers (in future) into the Manchester market”* **Director, regional investment fund. Current schemes valued at over £50 million in Manchester.**

⁴⁵ GVA Grimley, op cit

The need to improve public transport provision

- 2.72 This chapter has shown the importance of the city regions to the economy of the UK. It has also shown the way in which the economies of the city regions are changing. Although manufacturing and industry still has an important role to play, the new knowledge economy is gathering momentum in the city regions and there is growing evidence of clustering of high value sectors in the Core Cities. At the same time the pace and direction of economic change is happening in different ways, and at different speeds both across and within the city regions. However, a clear trend is the importance of the Core Cities in driving forward regional economies.
- 2.73 This chapter has also demonstrated the importance of improving public transport if the revitalisation of the economies of the Core Cities and their city regions is to accelerate. Improved public transport is vital because congestion threatens to slow, or choke off, the clustering of high value sectors in city centres.
- 2.74 Public transport is also important to the wider revitalisation of the city regions. Britain's major conurbations are not only about their Core City, and some conurbations are more polycentric than others. Public transport can provide rapid, high capacity, high quality connectivity linking the city region's sub-centres with its Core City, and with other regional and national centres. In doing so it opens up opportunities for the conurbation's sub-centres to attract inward investment and helps in facilitating the development of niche economic roles.
- 2.75 Public transport has further advantages. It allows for the economic development of the city regions to take place in a more sustainable way. It can also help ensure that the benefits of economic growth are more widely shared as public transport can provide good access to new opportunities from areas blighted by worklessness and deprivation. We explore these benefits further in Chapter Four.

3 Public transport and city region economies

3.1 The chapter discusses the role played by public transport in underpinning the economies of the city regions and the extent of current constraints on commuting and movement within the regions hindering the further development of the regional economies. The degree to which the full economic benefits of transport investment are recognised in assessment is also considered.

3.2 The chapter illustrates:

- how public transport plays a vital role in the development of our regional economies. Current public transport provision within the city regions is already making a significant contribution in providing access to labour markets for knowledge-based business sectors developing within the key cities and to city centre-based employment for people living within the city regions.
- that constraints in capacity, speed and service quality limit the contribution that public transport is currently able to make, whilst the road networks within the city regions are unable to support the increasing levels of commuter traffic. Public transport will become ever more important in delivering the fast links between the main population centres within the regions, providing the commuter workforce required by businesses and providing the connectivity required to attract and retain investment across the conurbations.
- that traditional valuation of public transport schemes is largely reliant on travel time savings which act as a proxy for improvements in accessibility and impacts on the economy. This assumes a perfectly competitive market. In the presence of market distortions this understates the benefits of transport investment.
- that transport investment can deliver wider economic benefits not considered by traditional appraisal methods. Foremost amongst these benefits are the 'agglomeration' effects observed within the key cities, as businesses form clusters and benefit from increased productivity through access to shared knowledge, labour markets and suppliers. These impacts have recently been recognised by the DfT whilst UK and overseas evidence demonstrates that the additional benefits and impacts on GDP can be considerable.

The role of public transport in underpinning city region economies

3.3 The links between transport provision and economic performance are complex. With the growth of knowledge based economies the emphasis has swung towards the movement of people as city centres have become the locations that provide the necessary interaction of people, goods, services, skills and knowledge. Public transport is well placed to provide for these access needs. Without public transport it would be difficult for city centres to function. For example more than half of peak hour commuter trips into both Birmingham⁴⁶ and Glasgow are made by public transport. In Birmingham's morning rush hour passengers on buses, trains and trams now outnumber commuters in their cars.⁴⁷ In Glasgow 59% of morning peak trips⁴⁸ are made to the city centre by public transport - 31% by rail and underground, 28% by bus.

⁴⁶ Centro annual statistical report 2004/5

⁴⁷ "Rail in the City Regions – Final Report to the Passenger Transport Executive Group" March 2004, JMP Consulting

⁴⁸ "Rail in the City Regions – Final Report to the Passenger Transport Executive Group" March 2004, JMP Consulting

'As more of our clients will be in the city centre then public transport is a must, an absolute must, especially as congestion is only going to get worse.' **Major international corporate with UK turnover of £1.8 billion**

- 3.4 As well as enabling city centres to function and supporting the clustering of high value sectors in those city centres, public transport also provides improved connectivity for the wider city region. This includes both links between regions, and within regions. For example the emerging economic strategy for the wider Sheffield City Region envisages the Sheffield City Region as the southern part of the Leeds-Manchester-Sheffield triangle. With a population in excess of seven million this triangle is seen as the lynchpin of the whole of the northern economy, with an influence extending into both the East and West Midlands as well as to the west and the Liverpool City Region and east to Hull and Teesside. Improved rail connectivity between the centres of the Leeds-Manchester-Sheffield triangle is seen as a key priority if this strategy is to be realised.
- 3.5 Public transport is also important in providing the connectivity within a city region – especially for those with a more polycentric structure (such as South Yorkshire). Rail is ideally suited to providing the rapid, high capacity, high quality links between the main urban centres within the city regions. If that can be achieved then this may help the sub-centres to take on back-office functions for the core cities, become more attractive locations in their own right for inward investment (such as the relocation of Government functions out of London) and develop their own specialised economic niches within the wider city region and regional economy.
- 3.6 In a typical regional city, areas of deprivation are concentrated in the inner city ring as well as on peripheral housing estates. Often new employment sites are either focused on the city centre or at the urban fringes. Liverpool is a good example of this pattern – with new employment springing up around Liverpool airport on the southern fringe of the city. These new employment opportunities can be difficult to access by socially excluded communities in Liverpool's inner city or from peripheral estates. Public transport is well suited to providing access to these new employment opportunities – either through general improvements to transport networks or via services specifically targeted at linking the jobless with the jobs. In Merseyside this includes initiatives like the new Liverpool South Parkway which provides a bus/rail interchange for Liverpool Airport and the many new developments around it. Bespoke services are also playing a role, like Merseytravel's family of Joblink services, which provide targeted, low cost bus services (including fixed and 'door-to-door') to enable the unemployed to take up the new jobs that are being created.

The role of rail

- 3.7 Rail is vital to the successful functioning of our major city economies. Over 30% of the trips in the morning peak into central Glasgow are by rail and underground. In Birmingham the figure for heavy rail is 20%⁴⁹. Rail commuting is growing fast across PTE rail networks. For example since 1999 growth in central Birmingham rail journeys have been rising by 3.9% a year. Rail's market share of peak hour trips to Birmingham is up from 12% in 1991 to 20% today. Between 1995 and 2004 use of Birmingham New Street has increased by 53%, Moor Street by 253%, Walsall by 180% and Wolverhampton by 98%⁵⁰.
- 3.8 Strong growth and record passenger numbers are also being recorded on other PTE rail networks. For example use of the West Yorkshire rail network has grown by more than

⁴⁹ Centro annual statistical report 2004/5

⁵⁰ West Midlands Route Utilisation Strategy Consultation, February 2005

80% during the last 10 years from 11.5 million journeys per year in 1994/5 to 21.1 million in 2004/5.⁵¹

3.9 There are over 155 million rail trips per year on PTE rail services alone (including Strathclyde PT), roughly double the number carried by InterCity operators. This represents one in every seven of all rail journeys made nationally.

3.10 The Railway Forum identifies five areas in which rail contributes to the UK economy⁵²:

- Matching commuters' homes and workplaces.
- Making towns and cities work – in larger towns, rail in its various forms provides an essential component of an integrated transport system.
- 'Shrinking' the country and stimulating economic growth and regeneration.
- Freight – providing sufficient capacity to match national economic activity.
- Meeting wider sustainable development objectives.

3.11 Transport 2000 calculate that doubling journey times for rail commuting in London, the South East and urban centres would cost the UK economy £15 billion per annum. A number of pinch-points on the national rail network are identified including⁵³:

- Coventry to Wolverhampton corridor: "*chronically under-resourced and includes the hugely choked Birmingham New Street.*"
- Manchester Hub: "*This is chronically short of capacity. Unlocking this pinch point would better link main centres right across the North-west and beyond. Among what's needed is an extension of the Merseyrail electrified network*".
- North Trans-Pennine link between Leeds and Manchester. "*Freight and passenger routes are filled to capacity across the Pennines. New signalling, extra capacity and platform extensions on the West Yorkshire network would relieve peak-time overcrowding*".

The role of light rail

3.12 Light rail has a number of features that make it important in serving the needs of our Core Cities⁵⁴. First is its ability to carry significantly more passengers than conventional bus networks or higher quality bus-based alternatives. In busy corridors, not only does light rail have the potential to carry flows of up to 20,000 passengers per hour per direction (around four times more than conventional buses and twice that of the largest, tram-like bus alternatives), but it can also provide more attractive journey times.

3.13 Additionally, there is real evidence that UK light rail schemes have provided business with better access for customers. Light rail gives business better access to labour markets, supports business expansion and provides the confidence to make investment decisions based on a clear commitment to improved public transport provision.

"The (Midland) Metro was worth doing, as it has helped the competitiveness of the city." **Development Manager, Major National Quoted Developer. Current schemes valued at over £2 billion**

3.14 Light rail has become a key element of the public transport networks within many of the PTE areas, offering high capacity, frequent, high quality services penetrating directly into the city centres and in some cases offering cross-city centre links. Light rail schemes demonstrate a wider commitment to urban regeneration, improve a city's image and can serve to attract inward investment.

⁵¹ WYPTE APR 1999/2000 and 2004/5

⁵² Eddington Transport Study, Railway Forum Submission, The Railway Forum, January 2006

⁵³ Growing the Railways: A Manifesto to Move us Forward, Transport 2000, October 2005

⁵⁴ What light rail can do for cities: A review of the evidence, *pteg*, February 2005

- 3.15 Light rail schemes in the UK have proved successful in attracting car users, with around 20% of peak hour passengers and 50% of weekend passengers switching from the car.⁵⁵ For example, Greater Manchester's Metrolink already carries 19 million passengers per year having experienced steady patronage growth in a declining public transport market and suffers from overcrowding, especially in the peak periods. But for Metrolink some 3.5 million of these journeys would have been made by car, with the roads running parallel to Metrolink having seen traffic reductions of up to 10%. Within an area of two kilometres of the line between 14% and 50% of car trips to destinations served by Metrolink have switched to Metrolink.⁵⁶
- 3.16 UK light rail schemes are attracting more passengers year-on-year. For example, use of Sheffield Supertram has more than doubled since 1996.⁵⁷
- 3.17 All of the UK schemes currently operate at capacity at peak times with some, such as the Manchester Metrolink, now experiencing sustained overcrowding. For example, both the Altrincham and Bury corridors are averaging 95% of capacity in the peak AM period with individual trams over 100%⁵⁸. The popularity of light rail on these corridors has now reached a point where capacity constraints are limiting the further contribution that light rail is able to make to delivering the city centre workforce and reducing road congestion.

The role of bus

- 3.18 For most travellers in the city regions the bus is public transport. 85% of all public transport trips in PTE areas are made by bus.⁵⁹ Across the English PTEs more than one billion journeys a year are made by bus, accounting for around half of all the bus trips made nationally every year outside London. The relatively low cost and flexibility of bus services makes the bus a key contributor in tackling traffic congestion and improving access to vital goods and services, especially for those on the lowest incomes.
- 3.19 Better bus services in our towns and cities contribute to their regeneration and revitalisation. Investments in bus priority schemes have improved journey reliability, making bus travel more attractive to potential passengers⁶⁰.

West Midlands Bus Showcase

The West Midlands Bus Showcase was developed to provide a radical improvement in bus services, attracting new users and retaining existing users, with the aim of improving journey times and reliability. The concept is to develop high frequency 'turn up and go' services on strategic routes with high bus demand, complementing local rail and metro services.

Each Showcase corridor includes accessible and safe routes to/from stops, low-floor buses, attractive waiting environments, frequent services with a maximum interval of 6 minutes from 0700 to 2000, bus priority measures and capability to provide real-time information. Peak journey times are to be no longer than off-peak and a long-term target of 95% of car journey times has been set.

Line 33 from Birmingham to Pheasey was the first showcase route, opening in 1997, with investments of £2.9m from Centro and Birmingham City Council and £1.2m in new buses from local operator Travel West Midlands. Three more routes have since been completed

⁵⁵ What Light Rail Can Do For Cities: A Review of the Evidence, *pteg*, February 2005

⁵⁶ GMPTE evidence to House of Commons Transport Committee inquiry into future of light rail, March 2005

⁵⁷ Travel Statistics Great Britain, Department for Transport, 2003

⁵⁸ GMPTE – Count Survey, 29th January 2003

⁵⁹ Better Buses, *pteg*, December 2005

⁶⁰ Bus Priority The Way Ahead, Department for Transport, www.buspriority.org

(Coventry to Bedworth, Walsall to Moseley and Wolverhampton to Bloxworth) whilst a further five routes are close to completion. Overall, Showcase routes have seen an increase in patronage of between 10% and 30% and a mode shift of around 5% from private car.

The South Bradford Quality Bus Initiative

In February 2002, Bradford Metropolitan District Council, West Yorkshire PTE (Metro) and First opened a scheme comprising a mix of guided busway, with-flow bus lanes and traffic signal priority along the A641 Manchester Road, the main route to the M62 motorway to the south of the city and the neighbouring towns of Huddersfield and Brighouse.

Following introduction of the priority measures, car traffic along Manchester Road fell by:

- 17% in the morning peak.
- 7% in the evening peak.
- 11% over a full weekday.

Total inbound traffic on six radial routes from the south towards Bradford fell by 6% in the morning peak.

In comparison with patronage in August 2001 prior to the introduction of the scheme, the number of passengers boarding buses on the length of the corridor directly affected by the scheme between Odsal and the city centre grew by between 7 and 10 per cent, a higher rate than on other corridors into Bradford.

Tyne and Wear Superoutes

The Superoutes network of quality bus corridors has been created across Tyne and Wear to deliver a high quality, stable and reliable network which provides a credible alternative to car use and encourages modal shift.

The network comprises 40 routes with guaranteed accessible buses, frequent services and accompanying bus stop improvements and priority measures. Superoutes aid accessibility because they bring a level of stability to the network, and provide a very high quality service to key urban centres and other destinations. The ultimate aim of Superoutes is to provide a level of service complementary to that of the Metro light rail system, and to increase patronage along these corridors to justify further future investment.

Supplying the workforce

3.20

As the city regions increasingly focus on knowledge based employment the trend is expected to be towards more long distance commuting. This has been seen in Leeds where investment in the rail lines stretching out of the conurbation to Ilkley and Skipton has been rewarded with patronage growth as high as 19% per year. Peak period modal

shares to Leeds city centre from stations north of Shipley on the modernised Skipton line are as high as 75%. Looking to the future, economic predictions for Leeds show that the labour force residing within the city will only be able to fill 20% of the extra jobs that the economy will generate over the next ten years. If the Leeds economy is to fulfil its economic ambitions rail will be essential in providing the access to this wider market of employees. Similar trends are present or are emerging, in all of the city regions.

A transport vision for Leeds City Region⁶¹

The economy of the Leeds City Region is growing as it takes on the role of the wider region's major driver of economic growth. Between 1991 and 2001, employment in Leeds grew by 22% and the net increase in jobs was greater than any other major British city. Forecasts from Cambridge Econometrics indicate that over the next 10 years:

- there will be a further 7.4% increase in employment in Leeds;
- an additional 31,300 jobs will be created;
- the local labour market will only grow by 6,100.

More recent data from the regional econometric model suggests in excess of 62,000 jobs will be created in the wider Leeds City Region in that time.

The maps in Chapter 2 on page 29 show the transport implications of this growth. Overcrowding problems already affect most rail services into Leeds during the peak periods and strategic highway links, including several sections of the M1, M62 and M621, are operating close to capacity. Speeds on the M621 between junctions 5 and 6 close to Leeds during the am peak hour are as low as 20mph.

Longer distance movements through, into and out of the West Yorkshire region are being addressed through nationally and regionally promoted schemes. However, poor connections between the region's five major centres, other local centres and areas of development within the region will limit performance and economic growth aspirations.

3.21 The alternatives to providing these services are stark:

- we will have to attempt to accommodate the growth through car commuting.
- or accommodate growth through dispersal of jobs away from the centre.

3.22 The latter would be wholly contrary to the cluster/agglomeration concept, but neither option is a viable or sustainable way forward.

The costs of congestion to business

3.23 The Confederation of British Industry (CBI) has estimated that congestion is costing the businesses of the West Midlands somewhere between £2bn and £2.3bn per year. Results of a CBI survey of senior business people⁶² show that over 85% believe that investment decisions are influenced by the quality of transport and 70% believe the UK transport system to be poor. 64% of companies regard staff access to public transport as important.⁶³

3.24 The CBI goes on to recognise that *"...without a clear vision, business can have no confidence that transport policy will meet the needs of regional areas for future economic*

⁶¹ Arup. op cit

⁶² Is Transport Holding the UK Back? Confederation of British Industry, 2003

⁶³ The Business of Transport, Confederation of British Industry, 2005

growth.” The CBI argues that a government vision should include “...improved and sustainable urban transport integrating private and public, road and rail systems.”⁶⁴

3.25 The British Chambers of Commerce’ (BCC) Director General, David Frost, also notes that “Regional economic development is being held back by the Government’s failure to address regional transport problems. Business investment, expansion and development is crucial to securing more jobs and prosperity throughout the country.”⁶⁵ The BCC highlight the impact of failing transport infrastructure in holding back economic development in the regions:

- 46% of businesses attribute a lack of investment in their region to the transport infrastructure.
- 56% of businesses report that the transport infrastructure has a major influence on where they decide to locate.
- 76% of businesses report increased operating costs as a result of transport failings.

Revitalising the retail core

“Pressure on the transport system is a factor in the (declining) appeal of my retail units in the city centre.” Director, regional investment fund. Current schemes valued at over £50 million in Manchester.

3.26 All of the major cities in Britain are actively pursuing programmes to revitalise and strengthen their traditional retail core in the city centres. Greater Manchester PTE surveys have indicated that a very high proportion of shopping in Manchester is undertaken by people who are already in the city for work purposes rather than people making separate trips into the city. With public transport providing an increasing proportion of the commuting traffic into the centre of Manchester (rail up 71% between 1997 and 2002⁶⁶) the retail sector is therefore highly reliant on rail.

3.27 What emerges from this is that improvements (or deterioration) in commuting services will have an impact not just on the performance of those businesses that are reliant on a commuter workforce but also on the city centre retail sector.

3.28 In the West Midlands the economic strategy for revitalising the centre of Birmingham has been highly successful with the rail network playing a key role. Indeed the strategy has been so successful there are now real fears that without further investment in capacity, Birmingham New Street will be unable to cope with the growth in the number of passengers.

3.29 Research carried out by the German Institute⁶⁷ for Urban Research indicates that a sustainable transport approach benefits retailers. It says: “Retail trade in central city districts increases with policies that encourage environmentally friendly transport modes. Of the 38 cities studied, 14 had above average retail growth. Of these 14, ten had below average provision of infrastructure for the car.”

3.30 Retail turnover has been shown to increase by an average of 25% following pedestrianisation of shopping areas, with 49% of pedestrianised areas experiencing an

⁶⁴ Transport Policy and the Needs of the UK Economy, Confederation of British Industry, 2005

⁶⁵ Chambers calls for improved transport links to spread economic development and prosperity, British Chambers of Commerce, 2004

⁶⁶ Greater Manchester Transportation Unit (GMTU) Annual Report, 2003

⁶⁷ <http://www.transport2000.org.uk/activistbriefings/transportEconomy.htm>

improvement in trade. Since York closed its city centre to traffic, the rateable value of business premises has risen faster than any other UK city.⁶⁸

Grenoble impact of pedestrianisation

In the late 1980s, proposed pedestrianisation of the centre of the French city of Grenoble was fiercely opposed by local shop owners, but the scheme was pushed through by the city authorities. A year after the pedestrianisation was complete, a survey found that shops had reported an average increase of 20 per cent in trade. Since then a number of studies have produced similar findings.⁶⁹

Traditional approach to valuing the benefits of public transport investment

- 3.31 As we have shown public transport plays a key role in the development of regional economies. However, the current framework for assessing the benefits of new public transport schemes does not fully capture their full economic impacts and benefits.
- 3.32 Traditional economic appraisal of public transport schemes looks at the question of value in terms primarily of user benefits. This almost certainly understates the full contribution that public transport makes to our regional economies.
- 3.33 Conventional appraisal explicitly presumes that travel time savings provide the 'correct' measure of the impact on the economy. This only holds true if there are no market distortions⁷⁰ but clearly there are many distortions in the economies of urban areas.
- 3.34 However, even this partial analysis indicates that for one of the smaller PTE rail networks, South Yorkshire, rail services are delivering around £1.75 of benefit for every pound of subsidy⁷¹.

Valuing the South Yorkshire rail network

A model developed in the South and West Yorkshire Multi Modal Study (SWYMMS) has been used to test the impact of closing the local rail services. In the scenario tested it is assumed that local rail services are terminated at stations immediately before they enter the supported rail network. Travellers have the opportunity to change destination, mode of travel and route.

The test results showed that 28% of existing local rail users continue to use the local rail service (outside of the South Yorkshire boundary), whilst 20% switch to other and long distance rail services. Of those changing mode, 42% switch to bus and 10% to car.

The test results for a single year (2006) have been assessed using the Government's Transport User Benefits Assessment (TUBA) model. Removing support for the South Yorkshire local rail network will save £20 m per year in net franchise costs and indirect tax revenue but will increase generalised travel costs for consumers and businesses by

⁶⁸ <http://www.walktoschool.org.uk/info/facts.htm>

⁶⁹ <http://www.transport2000.org.uk/activistbriefings/transportEconomy.htm>

⁷⁰ Transport and The Economy, SACTRA, DETR, 1999

⁷¹ Rail in the City Regions, JMP Consulting, March 2004

£35 m per year - a net cost to society of £15 m per year.

In summary, the South Yorkshire rail network provides a substantial benefit to its users and to businesses. Despite reliability and comfort problems for many journeys it is either faster than the alternative, or is the only available option. Far from removing support, SYPTE wish to see further investment, on a large scale, to improve the service and capitalise on its advantage over road-based modes.

The SYPTE network is a small network and one of the apparently more highly supported ones but it achieves a benefit of around £35m (excluding any environmental or health benefits) against a revenue support of £20m. This indicates a benefit of around £1.75 per £1 of subsidy.

Thus, although the subsidy level of £4.37 per passenger journey appears high, the benefits are in the region of £8 per journey.

Wider economic benefits – agglomeration and impacts on GDP

- 3.35 Investment in transport infrastructure can provide economic development benefits in a number of different forms over and above those measured by traditional analysis of consumer surplus. There is a growing recognition of the need to include these additional wider economic benefits in the assessment of public transport schemes.
- 3.36 SACTRA recognised that market imperfections in transport-using sectors, rather than in transport itself, could lead to impacts beyond user time savings. These impacts are not recognised in conventional appraisal⁷².
- 3.37 Foremost amongst the wider economic development benefits of transport investment are agglomeration effects, or the productivity benefits that some firms derive from being located close to other firms. There are two principal issues for transport, namely that:
- Transport improves the *effective density* of employment as firms are brought closer together as travel costs fall.
 - Relocation effects are positive if a change in transport encourages *clustering* in cities (through public transport improvements).
- 3.38 Professor Tony Venables⁷³ of the London School of Economics (LSE) looks at the positive relationship between city size and productivity, and draws out the implications of this relationship for evaluations of urban transport improvements. He argues that “*productivity effects are quantitatively important, substantially increasing the gains that are created by urban transport improvements*”.
- 3.39 Research by Daniel Graham of Imperial College, London⁷⁴ adopts a two stage approach in measuring the agglomeration benefits from transport investment. His work to date looks at the first stage, namely the impact of agglomeration on productivity. An average elasticity of productivity with respect to effective density of 0.12 is observed for service industries and of 0.04 for manufacturing. Graham concludes that “*Overall transport investment can foster the conditions for city size to make an impact on the efficiency of firms.*” Further work is ongoing into the second stage of research, the impact of transport upon agglomeration.

⁷² Transport and The Economy, SACTRA, DETR, 1999

⁷³ Productivity Effects of Urban Transport Improvements, Prof. A .Venables, DfT, 2004

⁷⁴ Wider economic benefits of transport improvements: link between agglomeration and productivity: Stage 1 report, Dr DJ Graham, DfT2005

DfT guidance 2005

- 3.40 Leading on from these areas of research, recent DfT guidance⁷⁵ on the appraisal of major transport schemes recognises that there may be situations where valuation of a scheme purely through standard cost benefit analysis, with the assumption of a perfectly competitive market, may not necessarily provide an accurate social valuation of the scheme or of its effect on GDP.
- 3.41 DfT have given endorsement to this area of study through the publication, in July 2005, of a technical paper setting out a methodology and evidence to estimate, amongst other factors:
- the wider economic benefits missing from current appraisals.
 - the impact of transport schemes on GDP.
- 3.42 The paper accompanied the initial guidance on Transport Innovation Funding⁷⁶, also published in July 2005.
- 3.43 The DfT paper, entitled “Transport, Wider Economic Benefits, and Impacts on GDP” sets out methods for incorporating in transport scheme appraisal the wider economic benefits that are missing from current appraisal.
- The paper identifies the main influences on the scale of these benefits and sets out methods for calculating scheme values.
 - The paper also includes a method for calculating the impact of transport schemes on GDP, allowing for impacts on both productivity and employment.

Transport Innovation Fund (TIF)

The DfT published guidance on the Transport Innovation Fund (TIF) in July 2005, updated in January 2006⁷⁷. There is a close link between the TIF guidance and that from the DfT on the inclusion of wider economic impacts in appraisal.

The DfT has indicated that TIF will be available for schemes that benefit national productivity, and that the new guidance on wider economic impacts can be applied in such cases. The wider economic impacts are not yet to be formally included within other appraisal.

Chapter 3 of the updated TIF guidance recognises that transport has a key role to play in making the economy more productive, by improving access to markets and customers, higher mobility and flexibility of the labour market and more reliable supply of goods and services.

Schemes which are expected to make a major contribution to national (and potentially international) productivity proposals can apply for TIF.

This approach acknowledges that not all of the productivity benefits are captured by traditional appraisal. Traditional methods include such impacts as business journey time savings but do not include further national productivity effects such as firms being accessible to a larger pool of workers which increases productivity.

⁷⁵ Transport, Wider Economic Benefits and Impacts on GDP, DfT, 2005

⁷⁶ Transport Innovation Fund, DfT, July 2005

⁷⁷ Transport Innovation Fund: Guidance January 2006, DfT, 2006

TIF will also test a new approach to measuring the contribution of schemes to GDP and to capture in full those benefits missing from current appraisal methodology. In assessing potential productivity schemes, the DfT will take account of the extent to which proposals could potentially, for the economy as a whole:

- increase the mobility of people or goods in a way that reduces business costs.
- support agglomeration of business activity.
- support the mobility and flexibility of the labour market.
- increase international competitiveness and trade through improving ease of movement of goods and services.
- increase network resilience and choice for business users.

Therefore, TIF is to be used as a test bed for the new guidance on capturing such benefits within the appraisal, and if successful, the application of the new appraisal will be extended to a wider range of projects.

Effective density benefits of agglomeration

3.44 The DfT identify a number of wider economic benefits that are currently absent from appraisal. The first of these is the agglomeration benefits that are identifiable as the productivity benefits that some firms derive from being close to others, such as sharing knowledge, access to more suppliers and larger labour markets.

3.45 Effective density of employment is a measure of the economic size of a location. This is a more effective measure of the level of agglomeration in an area than a simple expression of the level of employment because the measure accounts for not only those jobs in a specific location, but also those in neighbouring areas. Transport improves the effective density of employment by bringing jobs closer together in terms of time, if not in distance.

Clustering benefits of agglomeration

3.46 A transport improvement can also have another, different, agglomeration effect on the density of business, and one which can be either positive or negative. It is “...positive if it encourages increased employment in cities or clusters of economic activity, and negative if it encourages the dispersal of economic activity”.

3.47 Public transport schemes to improve journeys in cities are likely to have a positive agglomeration benefit. The exception to this would be if the transport improvement were to strongly shift activity from an even larger centre. As a consequence, improved inter-urban roads may have either a positive or negative agglomeration affect.

Increased output

3.48 The benefits of increased production are passed on to buyers of a firm’s products. The DfT guidance advises that 10% uplift is applied to business travel time savings to capture this impact.

Benefits of improved labour supply

3.49 Transport improvements can have an impact on improving labour supply, leading to increased tax income that should be accounted for in appraisal. This results from reduced commuting times encouraging more people to work, and to work longer hours. Some jobs

will also relocate to more productive locations because transport improvements make the area more attractive and accessible to firms and workers.

Agglomeration and business sectors

- 3.50 Transport impacts are influenced by, and indeed to a great degree dependent upon, the sector and skills involved.
- 3.51 The key issue for the manufacturing sector is proximity to the supply chain, hence the tendency for manufacturing to locate near key motorway junctions.
- 3.52 Knowledge based businesses are more reliant on the availability of, and proximity to the labour supply. This is one reason why these businesses tend to cluster. Given public transport's ability to move high volumes of people, rapidly and comfortably (particularly heavy rail) public transport investment can bring additional benefits by supporting the clustering of knowledge based businesses.

Other wider economic benefits

- 3.53 A number of other wider economic impacts brought about by transport investment have been recognised in the literature:
- 3.54 The link between land and property values and transport infrastructure is well established. Probably the most rigorous study of this type in the UK is of the new Jubilee Line extension which recorded uplifts in property values of £2 bn at Canary Wharf and £800 m at Southwark⁷⁸. Research into light rail systems undertaken by the Royal Institution of Chartered Surveyors (RICS) for the Office of the Deputy Prime Minister (ODPM) in 2000⁷⁹, noted that, using hedonic pricing (calculating the value of different characteristics of a good), residential properties in America with access to light rail systems had gained significantly in value. The same report concluded also that light rail systems had a general positive impact on house prices in the UK.
- 3.55 Public transport investment can also serve to shift consumer expenditures⁸⁰. In cities with high quality public transport systems residents spend less overall on transportation. A study of rail in US cities⁸¹ observed an average reduction in total household expenditure on public transport and personal vehicles from 14.9% to 12% between areas with high quality rail systems and those without, despite longer commuting distances. A study in San Antonio, Texas noted that each 1% of travel shifted from car to public transport provided an additional 226 regional jobs or 5¢ per mile of regional income.⁸²

Examples of wider economic benefits – light rail

- 3.56 The light rail schemes currently operating in the Greater Manchester, South Yorkshire, West Midlands and Tyne and Wear PTE areas have each demonstrated a contribution to broader economic development.
- 3.57 In Tyne and Wear the local Chamber of Commerce believes improvements in transport infrastructure have been important in maintaining and enhancing 'connectivity' between homes and jobs in the area and have improved competitiveness⁸³. Residential property values increased by 1.7% two months after the opening of the system compared to two

⁷⁸ Land & Property Value Study - Assessing the Change in Land & Property Values Attributable to the Jubilee Line Extension, Transport for London, 2004

⁷⁹ Land Value and Public Transport, RICS Policy Unit, October 2002.

⁸⁰ Evaluating Public Transport Benefits and Costs, T. Litman, Victoria Transport Policy Institute, 2004

⁸¹ Rail Transit In America, Comprehensive Evaluation of Benefits, T. Litman, Victoria Transport Policy Institute, 2004

⁸² Estimating Important Regional Transportation-Related Regional Economic Relationships in Bexar County, Texas, Miller et al, VIA Transit, 1999

⁸³ Economic Impact of Light Rail: The Results of 15 Urban Areas in France, Germany, UK and North America, C. Hass-Klau and G. Crampton, 2004

months previously⁸⁴ whilst improvements in access brought competitive advantages to some shopping locations and a boost to office employment in central Newcastle⁸⁵.

3.58 In Manchester, developments at GMEX and around Victoria Station and the relocation of Barclays Bank back office activities to Salford Quays have been influenced by the Metrolink⁸⁶. The Eccles extension carries large numbers of employees and visitors to the Salford Quays area which, over the past 15 years, has seen major office, housing and retail developments along with cultural and entertainment facilities such as the Lowry Centre and Imperial War Museum North⁸⁷.

“The major tenant would not have gone there if the Metrolink was not delivered. (The tenant) tried to get a clause in the contract to allow a pull-out if no Metrolink (was delivered). Fortunately, the public sector said no, but would commit to pump-priming the scheme. There have been no lettings since (the cancellation of the proposed Metrolink extension)”. **Managing Director, major regional developer and fund. Currently schemes valued at over £1.5 billion in Manchester.**

“We invested in Ashton-under-Lyne because we examined why occupiers might go there if we provided a product. The opening of the M60 half a mile from the town centre and the proposed Metrolink extension were the justification. Pulling the rug from under Metrolink extension has severely limited the opportunities”. **Managing Director, major regional developer and fund. Currently schemes valued at over £1.5 billion in Manchester.**

3.59 The LiRa report⁸⁸ noted that the City Centre to Meadowhall corridor has seen economic benefits from the Sheffield Supertram, particularly in the form of foreign investment. A large scale call centre built in the Lower Don Valley was partly attributable to the ability to attract workforce via the Supertram whilst real estate values close to the tram line were reported to be 10% above similar locations elsewhere. A monitoring study of economic impacts⁸⁹ concluded that, overall, Supertram had a positive impact on the city's image.

3.60 On the Midland Metro a key current initiative is Regenco Sandwell, the first Urban Regeneration Company in the West Midlands. Its aims include regeneration of a corridor of land shadowing Midland Metro from Hill Top in Wednesbury, through West Bromwich to Smethwick. An estimated £1.6 bn of public and private sector investment will go into the area over the next 10 to 15 years. Midland Metro is specifically identified as the spine of the Regeneration Area and is viewed by the company as vitally important in the implementation of its vision for the area. Key developments served by Metro, within Regenco's area of interest include:

- A new Headquarters for the Northern Division of the West Midlands Police located between West Bromwich Central and Town Hall tram stops.
- A new 65,000ft² GP Clinic providing GP practices, Community Nursing, PCT offices and Social Services adjacent to West Bromwich Metro stop.

⁸⁴ The Effect of the Tyne and Wear Metro on Residential Property Values – Supplementary Report, M. Pickett and K.E. Perrett, 1984

⁸⁵ The Metro Report: The impact of the Tyne and Wear Metro and Public Transport Integration in Tyne and Wear, Transport and Road Research Laboratory, 1986

⁸⁶ Metrolink Impact Study: Final Report to GMPTE, C.M. Law et al, 1994)

⁸⁷ What Light Rail Can Do For Cities, pteg, 2005

⁸⁸ LiRa: International Network of Light Rail Cities – State of the Art, Buck Consultants International, 2000

⁸⁹ Monitoring the Economic and Development Impacts of South Yorkshire Supertram 1992-1996, S. Crocker et al, 1999

- The Lyng, a £50m edge of town centre residential redevelopment, also adjacent to the West Bromwich Metro stop, as part of the Housing Market Renewal Area for Sandwell and Birmingham.
- A new campus for Sandwell College, in the centre of West Bromwich, located close to the Trinity Way tram stop.

3.61 All of these developments, and others, will benefit from the wider connections the Metro provides, offering opportunities for Black Country firms to expand and for residents to reach a wider range of employment and service opportunities.

Examples of wider economic benefits – rail

3.62 The North West region currently achieves relatively low productivity, with GDP per head 90% of the national average. However, the region is growing and could add 214,000 new jobs by 2020⁹⁰. These growth prospects hinge on the region's ability to generate and maintain clusters of high productivity. Policy and planning must support these if the region is to fulfil its potential. Increased city centre activity and the development of business clusters that need to draw on skills from outside of the major cities will result in the need for high-capacity, attractive, medium-distance public transport to city centre locations. Therefore, rail has been identified as the mode which is best placed to support the delivery of this economic agenda.

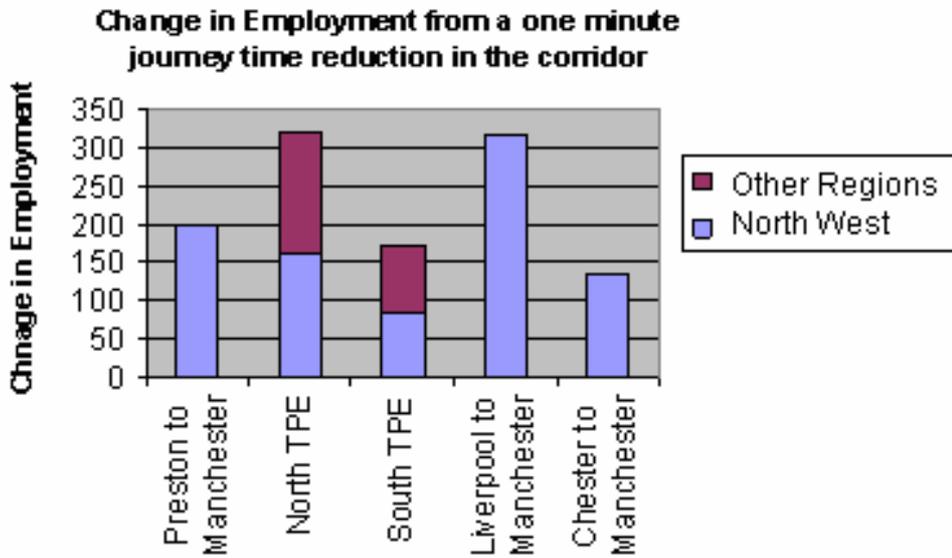
3.63 The North West's rail infrastructure capacity is severely constrained, and the road network is congested and has seen average speeds on the trunk road network decrease to the lowest of any region outside London. It has been recognised that lack of rail infrastructure may hold back regional economic growth. For example, it has been estimated that if the numbers of rail passengers accessing the airport cannot grow, 1,550 fewer jobs will be created at the airport with a further 450 fewer jobs created in the wider region.

3.64 A report by the Centre for Economics and Business Research (CEBR) concluded that there is a strong relationship between rail and the economy; and in the future Manchester and Liverpool's economies would rely more on rail. Rail supports longer distance commuting to higher value jobs and supports the labour market for specialist skills. It is also a key mode for business trips, allowing firms access to a wider range of contacts and business opportunities.

3.65 The strategic conclusions of the study are that improving cross-Manchester journey opportunities are critical, enabling the creation of over 1,700 jobs in the North West and a further 120 jobs elsewhere.

⁹⁰ CEBR forecast for the Northwest Regional Intelligence Unit

F3.1 CEBR assessment of employment change on North West rail network



3.66 A number of specific schemes were tested including hub schemes, Merseyside electrification schemes and Manchester Airport Station third platform. Individual schemes were put into packages and the 'South Manchester' Package which includes Piccadilly Platforms 15 & 16, Ardwick flyover, and Ordsall flyover at a total cost of £397 million offered the best value. The employment impact of this package is 13,600 jobs which gives a cost per job of £28,000.

Evidence from Crossrail

Wider economic benefits

The DfT has used the London Crossrail scheme as a testbed for new appraisal methods which are designed to give a full assessment of the economic benefits that can result from new public transport infrastructure. Traditional cost benefit analysis focuses on the economic benefits that accrue from reduced journey times. Under this methodology Crossrail generates benefits of £12,828m a year.

The new appraisal framework takes into account agglomeration benefits, increased GDP effects and the shifts to more productive jobs that Crossrail would enable. This provides additional benefits of £7,159m, an increase of 55%.

Benefits (£m)	Welfare (£m)	GDP (£m)
Business Time savings	4,847	4,847
Commuting Time savings	4,152	
Leisure Time savings	3,833	
Total Transport User Benefits – conventional appraisal	12,822	
Increase in labour force participation		872
People working longer		0
Move to more productive jobs		10,772
Agglomeration benefits	3,094	3,094
Increased competition	0	0
Imperfect competition	485	485
Exchequer consequences of increased GDP	3,580	
Additional to conventional appraisal	7,159	
Total (excluding financing, social and environmental costs and benefits)	19,991	20,069

Job growth

Further research by Buchanan⁹¹ into the agglomeration effects of Crossrail demonstrates the impact that overcrowding on public transport can have on future job growth. The London Plan forecasts that 636,000 jobs will be created between 2001 and 2016 with the strongest growth occurring in Financial and Business Services. Agglomeration effects mean these new jobs will largely be created within the central area (travel zone one), the City and the Isle of Dogs. However, this means that forecast job growth will concentrate in areas in which there is already a strong dependence on public transport and where levels of overcrowding are already high.

⁹¹ Crossrail: Socio-Economic Technical Report, Colin Buchanan, 2006

Without Crossrail, transport constraints will reduce the number of jobs created in 2027 by between 25,000 and 50,000. By removing these transport constraints this job growth, along with further productivity benefits to existing central London jobs, is valued at £12bn. This alone increases the Benefit Cost Ratio (BCR) for the Crossrail project from 1.8 to 4.

International evidence

- 3.67 A study in the Netherlands by J. Paul Elhorst, Jan Oosterhaven and Ward E. Romp examined the wider economic benefits generated from the implementation of a new MAGLEV system⁹².
- 3.68 As in the Crossrail study the Dutch MAGLEV appraisal looked not just at the time-saving benefits but also at the wider economic benefits that the scheme was likely to generate. The costs, time-saving benefits and additional economic impact of four scheme options were modelled. This appraisal suggested that based on moderate economic assumptions additional economic benefits of between 6 and 34% were generated, above and beyond the time-saving benefits.
- 3.69 The key message emerging from this study is that the wider economic benefits derived from these schemes to deliver new high quality public transport systems are significant in magnitude, and cannot be ignored. This, taken alongside the Crossrail evidence, supports the use of a similar approach in appraising new public transport infrastructure across the UK.
- 3.70 A review of the effects of Strasbourg's light rail scheme on economic development showed that light rail increased the number of shoppers in the city centre⁹³. In February 1992 there were 88,000 people shopping in the city which increased to 146,000 in October 1995 following the opening of Line 1. This further increased to 163,000 by 1997 when Line 2 opened. It was claimed this increase in shoppers led to an increase in retailing turnover which in turn led to higher rental values and property prices. Strasbourg City Council also claim that prices of homes along the tram route have increased, with cost of homes close to stations costing about 10% more than comparable properties elsewhere in the city.
- 3.71 The Centre for Economic Development and Research at the University of North Texas undertook a study of the Dallas Area Rapid Transit (DART) system's economic impact⁹⁴. One part of the study looked at changes on property values. This showed that property values had increased in 11 out of 15 rail station neighbourhoods with prices increasing 25% more than in the control neighbourhoods.
- 3.72 The study also examined changes in occupancy and rental rates surrounding rail stations. This showed that average occupancy rates for Class A offices near stations increased from 80.2% to 88.5%, significantly greater than the 1% increase citywide. Also there was a threefold increase in rental values. On the retail side, the study showed that rental rates rose 29%. However, occupancy rates declined in community retail centres.

⁹² Integral Cost-Benefit Analysis of Maglev Technology Under Market Imperfections, J.P.Elhorst, J. Oosterhaven, W.E. Romp, SOM, University of Groningen, 2004

⁹³ Crampton G.R.(2003) "Economic Development Impacts of Urban Rail Transport", ERSA Conference

⁹⁴ Reported in All Aboard! Dallas Blazes Light Rail, J.S. Cowley, 2001

4 Role of public transport in delivering social inclusion and sustainability benefits

4.1 Not only is public transport important in under-pinning and developing the economies of the conurbations, it allows this economic development to take place more sustainably. This is vital if regional economies are to grow without damaging the quality of life of their residents or compromising the local environment. It is also important if city regions are to play their full part in reducing CO₂ emissions.

4.2 In addition to the ability of public transport to sustain the growth of regional economies, there are a number of other good reasons to invest in public transport systems. Public transport provides additional benefits to other sectors and to social inclusion, in particular by providing good access for deprived communities to the new opportunities offered by economic renewal.

Key issues

4.3 In this section we show that:

- Investing in public transport can have positive impacts on local air quality and climate change through modal shift from private car and corresponding reduction in pollutants such as CO₂ and particulates.
- Socially excluded communities face a number of barriers when accessing key facilities including availability of transport, cost of transport and limited travel horizons. Improvements to public transport can address all these issues creating a more inclusive society. The city regions are host to some of the country's largest concentrations of deprivation. Better public transport allows access to new employment and in doing so helps provide the workforce that economic growth requires.
- Some healthcare and educational facilities have been amalgamated and relocated to new sites which are difficult to reach by existing public transport networks, particularly from socially excluded communities in inner cities and peripheral housing estates. The same relocation trends can also be seen for shopping centres, business parks and leisure facilities. Better access to all these opportunities and facilities is essential if social exclusion in the city regions is to be reduced. More effective public transport networks have a key role to play in providing that access.
- A key priority for the city regions, if they are to develop their knowledge economy is to tackle the 'skills gap', which is reflected in the relatively low levels of educational attainment compared with London and the South East and global competitors. Transport is a key element in accessing education, particularly given the Government's emphasis on encouraging parental choice. The high cost and poor availability of public transport can also deter people from taking up educational opportunities.
- Access to healthcare raises similar issues with inadequate transport provision resulting in delays in diagnosis and/or missed appointments (with their associated costs to the Health Service).
- The promotion of active travel in combination with public transport (for example walking or cycling to and from rail stations and bus stops) can also help improve health through increasing routine physical activity. This aspect of the evaluation of urban public transport has been largely ignored to date or at best under-recognised. The economic effect of improved public health includes increased efficiency for businesses as healthy workers take less sick leave and they are also more productive while at work. Moreover, improved health leads to less NHS expenditure.

Environment

- 4.4 The key element to this argument is that improvements to public transport can have positive impacts on local air quality and climate change, though modal shift from private car and corresponding reduction in pollutants such as CO₂ and particulates. This is illustrated in the table T4.1 below which compares the amount of pollution for each mode.

T4.1 Mass of pollutants in grammes emitted per passenger mile of travel

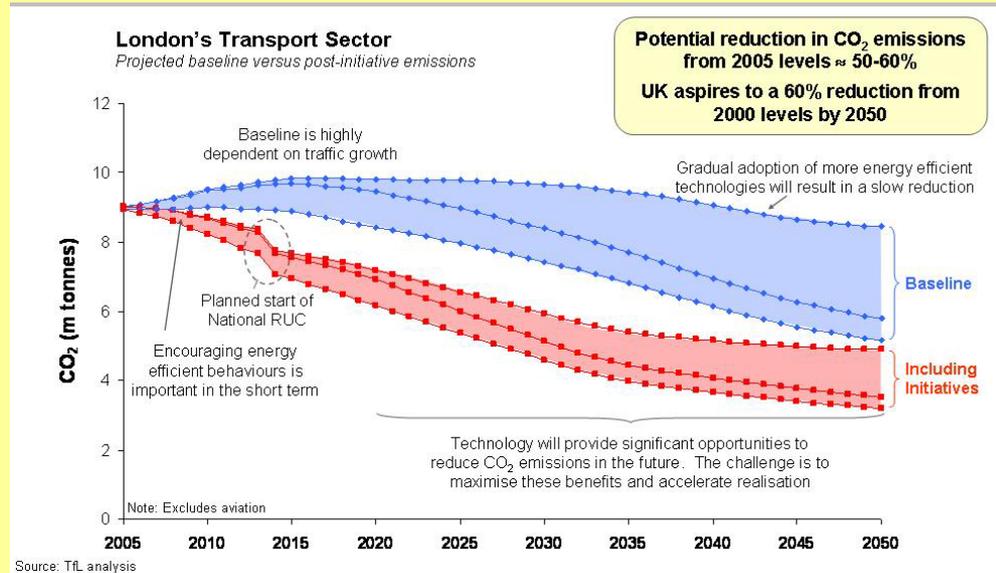
Transport Mode		CO ₂	C, Carbon	NO _x	Particulates
Car	Petrol	298	81	0.95	0.10
	Diesel	225	61	2.22	0.30
	Hybrid	200	55	0.3	n/a
Rail		116	32	n/a	n/a
Air		340	93	0.70	n/a
Taxi		357	97	2.43	0.66
Coach/Bus		90	25	0.3	0.03
Tube		171	47	0.12	n/a

Source: Tyndall Centre for Climate Research

Carbon Dioxide emission from the transport sector in London

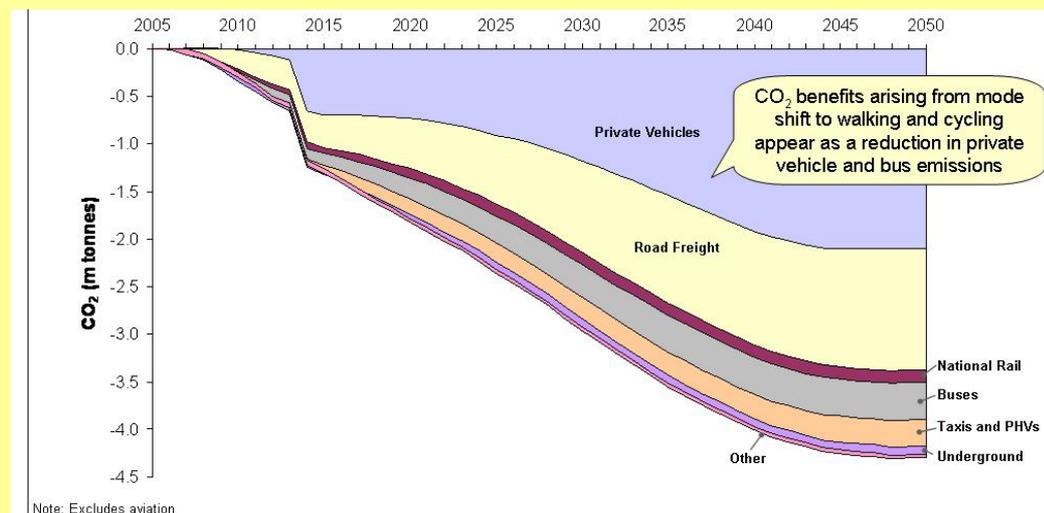
Since 1990 the UK's overall CO₂ emissions have reduced, however emissions from transport have increased as travel demand has grown. Research has suggested that there is the potential to halve the transport related CO₂ emissions in London by promoting energy efficiency and investing aggressively in new technology.

Potential reduction in transport CO₂ emissions



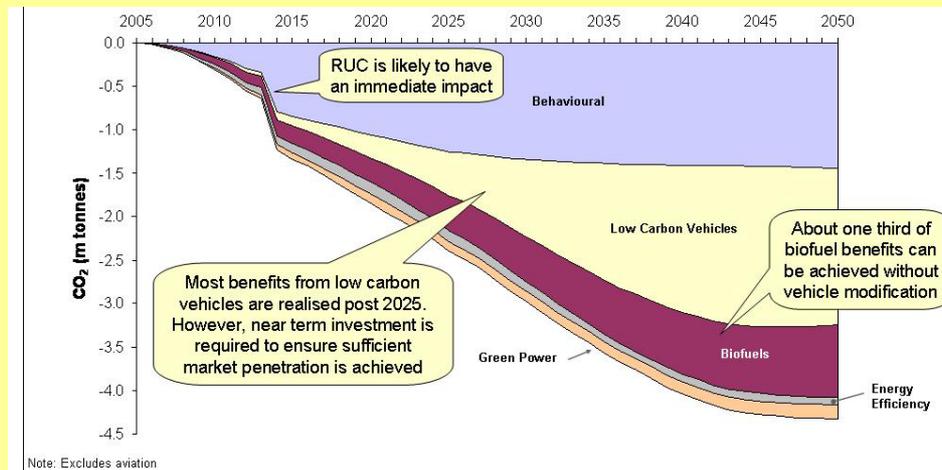
Although the largest opportunity for CO₂ emission reduction exists in terms of private vehicles and road freight, public transport does offer significant reductions as illustrated in the diagram below.

Potential reduction in CO₂ emissions from London's transport sector by mode



A combination of technologies and behavioural changes are required to bring about this reduction. The potential change from each of these is illustrated below:

Potential reduction in CO₂ emissions from London's transport sector by initiative



4.5 Statistics from the Department for Transport (2001) quoted in the National Express Group Corporate Responsibility report⁹⁵ reveal that people with company cars, and free fuel, travel 6,000 miles more a year than private motorists who own their own cars and pay for their fuel. The average business miles for someone with a company car are 10,600 a year. To demonstrate the benefits of public transport National Express have made the following calculations.

- If 850,000 company car drivers did not receive free fuel and therefore did not travel 6,000 miles a year then CO₂ comparable to the total emissions of the city of Newcastle would be saved each year.
- If one million company car drivers used the train for 50% of their business mileage instead of a single occupancy car then CO₂ comparable to half the annual total from a power station would be saved.

4.6 Similarly research has shown that taking the equivalent journey by train rather than by car reduces emissions by around a factor of five. Using a coach for a similar journey reduces emissions by around a factor of ten⁹⁶.

Additional rail capacity – impacts on CO₂

In January 2006, West Yorkshire PTE (Metro), in partnership with Northern Rail and Yorkshire Forward (the Regional Development Agency for Yorkshire and the Humber), announced the introduction of an additional 12 carriages to help tackle overcrowding on the local rail network. The investment of £8.7 million from Yorkshire Forward provides an increase of 6% in peak rail capacity on two of the region's busiest routes, the Leeds-Harrogate and Leeds-Bradford-Halifax lines, for the remainder of the current Northern Rail franchise.

⁹⁵ National Express Group, Corporate Responsibility Report 2002.

⁹⁶ National Express Group Environmental Report, 2001

At present a number of peak morning services into Leeds are operating above or close to capacity. By 2013, increased demand for rail commuting into Leeds will see further overcrowding and more services exceeding crush limits. This presents a serious constraint on future patronage growth on the local rail network and in many cases the only alternative option is to commute by car.

Forecasts for the successful 12 carriage scheme predicted an additional 700 peak passenger arrivals per day in Leeds by 2013. This gives a saving of over 19 million road vehicle kilometres over the life of the scheme, equating to a total net saving of 3,200 tonnes CO₂.

In order to fully tackle overcrowding on all peak morning services into Leeds, in the order of 60 additional vehicles would be required across the network. Significant additional capacity of this scale would also release suppressed demand of around 2,000 additional peak passenger arrivals per day in Leeds by 2013. This gives a total reduction in road vehicle usage of 71 million kilometres and a total net saving of over 11,000 tonnes of CO₂.

- 4.7 Pollution from buses and coaches is falling as a result of high levels of investment in new vehicles and tighter emission standards. The average age of the British bus and coach fleet was 8.4 years at the end of 2001, down from 9.9 years at the end of 1994. Current EU regulations are twice as strict on emissions of carbon monoxide, hydrocarbons, nitrogen oxides and particles as in 1993.⁹⁷

CENTRO park and ride

Centro has been investing steadily in extending park and ride provision at key rail stations. There are now 6,400 places available. These are estimated to remove over 53,000 car trips a week from the region's congested road network – resulting in an estimated annual saving in carbon dioxide emissions of 6,200 tones.

CATCH (Clean Accessible Transport for Community Health)

CATCH is a demonstration project supported by the European Commission through the LIFE Environment Programme. One of the overall aims of the project was to introduce enhanced methods of assessing environmental and health impacts of transport and land use measures.

A number of measures were implemented in and around Liverpool city centre, focusing on technological innovation, improved facilities, awareness raising and better information provision regarding transport choices with beneficial environmental impacts.

As part of this programme Merseytravel introduced a city centre shuttle bus service operating on routes which previously had poor public transport connections. Residential areas and new businesses are now connected to the main bus and rail stations in the city

⁹⁷ Confederation of Passenger Transport, 2003

centre as well as the main business district of the city. The buses use state of the art hybrid electric technology and are able to operate in zero emissions mode for a large part of the route.

The demonstration project only operated in a limited area. However the measures are estimated to reduce pollutants in Liverpool city centre by :

- 91.7 tonnes of CO each year.
- 107.4 tonnes of NOx each year.
- 13.2 tonnes of VOC each year.
- 4.9 tonnes of particulates each year.
- 3580 tonnes of CO₂ each year.

Social inclusion

4.8 Transport issues are often a fundamental, if not causal factor in the exclusion of many disadvantaged groups and communities. The Social Exclusion Unit (SEU) report *Making the Connections*⁹⁸ outlines the role of transport in social exclusion highlighting three key issues:

- People may not be able to access services **as a result** of social exclusion.
- Problems with transport provision and the location of services can **reinforce** social exclusion.
- The effects of road traffic **disproportionately** impact on socially excluded areas and individuals.

Deprivation within the city regions

4.9 The Office of the Deputy Prime Minister (ODPM) calculates Indices of Multiple Deprivation by combining deprivation results in the following areas: income; employment; health and disability; education; skills and training; housing and services; living environment and crime.⁹⁹

4.10 The ODPM published the Indices of Deprivation in 2004, using Super Output Areas (SOAs), in place of wards, for analysis and comparison. These SOAs are geographical areas with an average of 1,500 people in each, roughly equivalent to a neighbourhood, to provide a better indication of localised deprivation. Larger areas, such as wards, may have their results affected by pockets of deprivation or affluence. Lower level SOAs give a clearer picture of where poverty is endemic.

4.11 In 2004:

- 84 of the 100 most deprived SOAs in England fall within PTE boundaries. The most deprived is within the ward of Breckfield, which is within the Merseytravel PTE area.
- The ten most deprived SOAs are all located within PTE areas.
- 18 of the 20 most deprived SOAs are in PTE areas.
- 44 of the 50 most deprived SOAs are in PTE areas.

4.12 The three Northern and West Midlands regions are the location of many of the most deprived neighbourhoods in the UK. This is reflected in car ownership which is lower in

⁹⁸ Making the Connections: Final Report on Transport and Social Exclusion, Social Exclusion Unit, 2003

⁹⁹ Detailed deprivation indices are available at www.odpm.gov.uk

the PTE areas than in England as a whole. Car ownership in PTE areas is also lower than in the regions within which they fall.

T4.2 Households without access to a car¹⁰⁰

Yorkshire and Humber	23.30%
South Yorkshire	32.80%
West Yorkshire	32.80%
West Midlands	26.80%
West Midlands (MC)	33.70%
North West	30.20%
Greater Manchester	32.80%
Merseyside	37.60%
North East	35.90%
Tyne and Wear	41.80%
England	26.80%

The problem

“A lack of transport means that individuals can become cut off from employment and education and training opportunities, perpetuating their low skills base and inability to secure a living wage. Poor access to healthy affordable food, primary and secondary health care and social services exacerbates the health inequalities that are already evident amongst low income groups, further reducing their life chances. People can become housebound, isolated and cut off from friends and family and other social networks. This can seriously undermine their quality of life and, in extreme circumstances, may lead to social alienation, disengagement and, thus, undermine social cohesion.”¹⁰¹

The cost of using public transport

- 4.13 Most local bus trips (55%) are made by people living in households without a car. As the previous figures show PTE areas are both home to significant clusters of deprivation and to relatively low levels of car ownership.
- 4.14 However, the cost of bus fares has risen far faster than motoring costs, and whilst bus fares in PTE areas have risen, in London they have fallen. Research into this area of concern has concluded that *“local UK bus fares have increased by 80% in real terms over the last 25 years, while motoring costs have remained broadly constant”*¹⁰². F4.1¹⁰³ shows that since 1994, the rate of increase in the cost of travelling by bus has outstripped that of motoring.

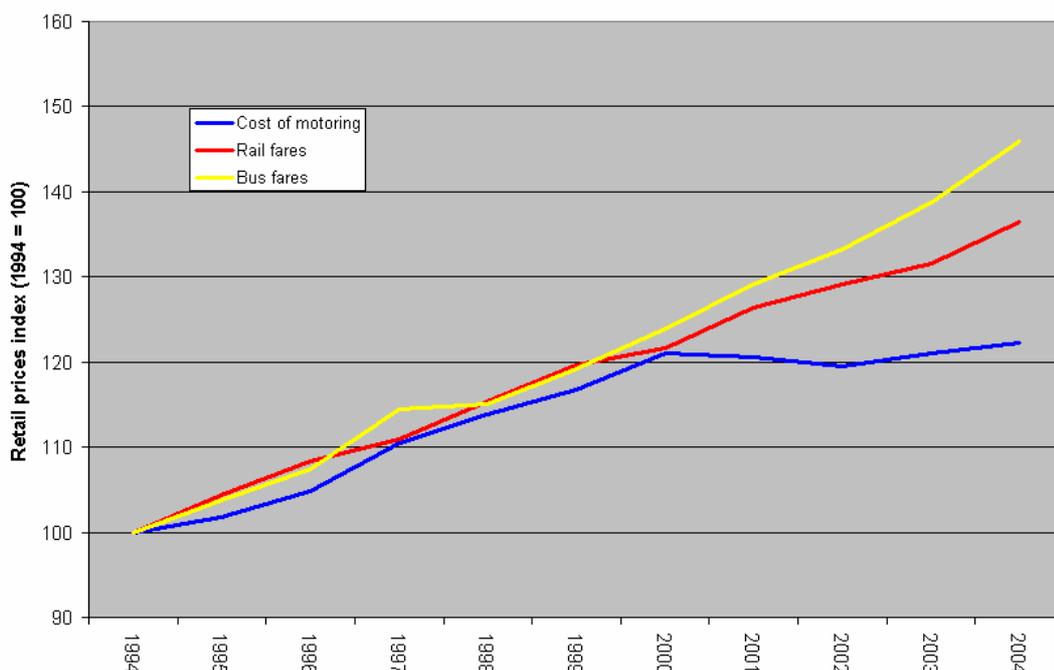
F4.1 Cost of travel 1994 -2006

¹⁰⁰ Census 2001, Office of National Statistics, <<http://www.statistics.gov.uk/census/>>

¹⁰¹ Transport and Social Exclusion – A survey of the group of seven nations, Dr K. Lucas, Transport Studies Group, University of Westminster, FIA Foundation

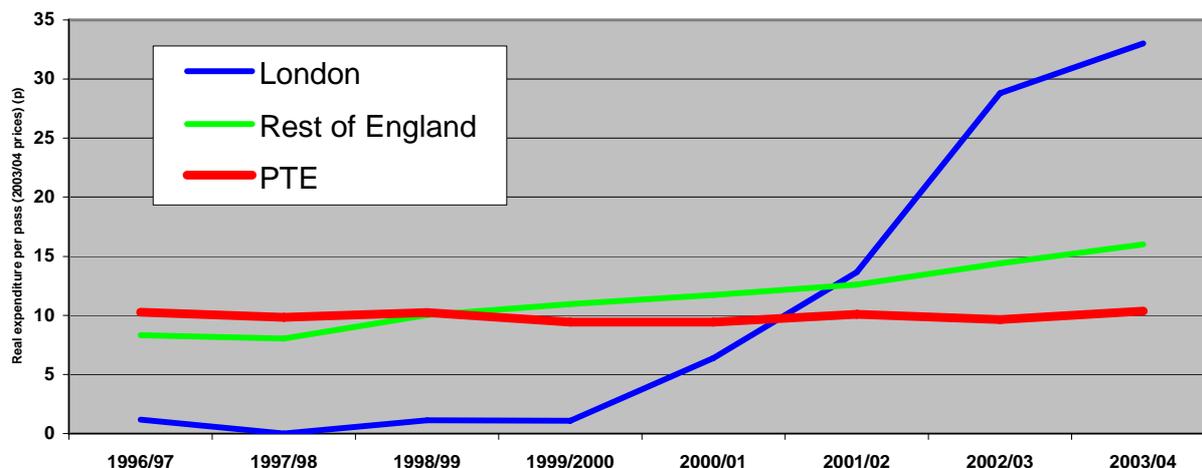
¹⁰² Transport and Social Exclusion – A survey of the group of seven nations, Dr K. Lucas, Transport Studies Group, University of Westminster, FIA Foundation

¹⁰³ Consumer Prices & Inflation Division, Office of National Statistics, “Retail prices index: transport components 1994 – 2004”, cited in Department for Transport, Scottish Executive & Welsh Assembly *Transport Statistics Great Britain 2005*, 31st edition, London, TSO, October 2005



- 4.15 The reduced commercial services offered by bus companies and significant increases in bus fares have also had another impact. The need for PTEs to step in and support bus services by taking on previously commercial services has grown. However budget constraints have limited the degree to which they can intervene in this way. Special funding has been available in London to assist with a significant upgrade of the bus network and to ready the bus network for the impact of congestion charging. Rural areas have also received dedicated grants, but PTEs have been very constrained in their expenditure on bus services.
- 4.16 F4.2 shows the degree to which bus support costs have been controlled over the past eight years in PTE areas, in marked contrast to the expansion in bus spending across the rest of the country, so that real support per PTE passenger has remained virtually unchanged since 1997/98, in contrast with the major growth in funding throughout the rest of the country. From being the areas with the highest bus subsidy in 1997/98, PTE passengers are now amongst those enjoying the lowest level of support. And yet, as we have demonstrated above, it is in the non-car owning households in metropolitan areas that some of the most socially excluded people are to be found. There is a need for PTEs to be freed from some of the financial constraints and limitations on their role on bus provision in order to address the access needs of the poorer members of our communities.

F4.2 Public expenditure on bus services per passenger 1996/97 to 2003/04



Source: Hansard, Written Answers: Buses 11 May 2006.

The provision of public transport

4.17 Public transport can promote social inclusion in a number of ways primarily through improved accessibility to key services, employment and training opportunities. "Social exclusion and the provision of public transport"¹⁰⁴ discusses the other potentially socially inclusive functions of public transport including:

- Practical – buses can serve a variety of functions e.g. delivering parcels.
- Social – as a way of meeting people, buses can be a social experience.
- Health – evidence shows that those who find it easy to get out and about more are likely to maintain their health than those who find it more difficult to escape their isolation.
- Symbolic – neighbourhoods can have low self esteem, few services and pessimistic views about the possibility that those in authority really want matters to improve. In this situation public transport can have a positive symbolic role representing an acknowledgement from authorities that the neighbourhood is in need of assistance. Conversely if buses are in the habit of driving past potential passengers at the stops, this can make people feel further excluded from society.
- Longer term economic – public transport may have an effect on the price of property and therefore on offices and housing.

4.18 The SEU report *Making the Connections*¹⁰⁵ outlines a number of ways of addressing social exclusion including a continuation of national policy changes (set out in 1998 White Paper) to improve public transport, better land use planning, safer streets and improved specialist support. Another solution outlined is the establishment of the new framework of accessibility planning.

4.19 *Making the Connections* identifies five key accessibility barriers. Public transport can positively influence social exclusion through overcoming these barriers. This is examined

¹⁰⁴ Social exclusion and the provision of public transport, DETR, October 2000

¹⁰⁵ SEU, op cit

in more detail below, with examples of solutions drawn from *pteg's* good practice guide "*Transport and Social Inclusion*"¹⁰⁶.

pteg Good Practice Guide

Availability and physical accessibility of transport – as mentioned previously the increase in car ownership has increasingly led to society being organised around the car. For those without a car access to employment and key services can be difficult. Even if there is a nearby bus stop it may not necessarily have buses going to where people need them. Public transport tends to be dominated by radial routes, but services and employment are increasingly locating in peripheral areas requiring more orbital routes. Design of vehicles can also be a barrier to use. PTEs are looking at ways of overcoming the lack of available transport through better links with non transport agencies and looking at alternatives to traditional bus services.

Case study: Cross Link – SYPTE - A fully accessible mini bus provides a number of communities within Sheffield with enhanced access to Parsons Cross College and Northern General Hospital for a flat fare of 50p. The service has made a contribution towards regeneration of the area and has promoted journeys to work and training, with 35% of all journeys on the service being to training or job opportunities.

56% of journeys on Cross Link are being made to attend appointments or visit hospital. This has helped deliver an improvement in attendance rates for appointments at the Northern General Hospital.

Cost of transport – As outlined above fares have risen faster than motoring costs. This increase in cost of travel has led to some people being unable to afford to access employment or key services. This is particularly relevant where services have relocated in peripheral areas and may require users to interchange in order to reach their destination, thereby incurring two fares. One in four job seekers say that the cost of transport is a problem getting to interviews.

Case study: Workwise has been developed by Centro to provide personalised journey information and free public transport tickets to unemployed people. Users are entitled to a free day ticket to get to job interviews and are then entitled to a free travel pass for the first two months of the new job if the interview is successful. In its first 14 months of operation Workwise helped 1,245 people get to interviews and 734 people to access new employment. 80% of Workwise users still in employment after 4 weeks and 94% of clients go on to purchase travel tickets after the initial two month free trial has expired.

Services and activities located in inaccessible places – Changes in land use patterns have led to the location of more services and employment sites on the periphery of urban areas. Key facilities which were traditionally located centrally have now located out of town, including colleges, hospitals and shopping centres. In many cases the demand for travel is changing to become orbital rather than radial.

Case study: Merseytravel developed the Joblink service to provide improved public transport for those seeking new employment, training and work-based learning opportunities. Joblink uses timetabled bus services to link deprived residential areas of high unemployment to key employment sites, offering transport in areas without conventional rail or bus services. The service operates across Merseyside, Halton and Deeside, and where no fixed route service is in operation offers a demand responsive door-to-door service. The fleet consists of 20 dedicated low-floor buses, operating a 19-hour day, coinciding with key employers' shift patterns. 12% of Joblink passengers stated

¹⁰⁶ Public Transport and Social Inclusion: a good practice guide, *pteg*, January 2005

that the service helped them take up a new job or training opportunity.

Safety and security – Fear of crime is a significant deterrent to the use of public transport. If people are too afraid to use a service it has the same excluding effect as if the service were not provided at all. Security concerns are often more prevalent in more deprived and excluded areas. Women and old people are particularly concerned about their security.

Case study: PTEs play a major role in bringing together all the interested parties – police, operators, local authorities, schools – in order to draw up coordinated strategies for targeting and tackling crime and anti-social behaviour. For example TravelSafe in Merseyside brings together more than fifteen organisations including Merseytravel, Merseyside and British Transport Police, bus and rail companies through to local crime and disorder partnerships. TravelSafe initiatives include establishing five youth work outreach teams – who travel on public transport networks to engage with young people hanging around on public transport with the aim of diverting them towards fun and productive activities. TravelSafe has also set up a team of Community Support Officers to patrol the network. Since TravelSafe was set up the cost of repairing shelter damage has halved.

Travel horizons – It is increasingly acknowledged that people on low incomes have more limited travel horizons. The average travel to work distance of people on low income is three miles compared with eight miles for the general population. This can be due to lack of knowledge and lack of trust and confidence.

Case study: UCall is a network of demand responsive services operated by Nexus providing good levels of accessibility to highly deprived communities. UCall operates across Tyne and Wear, providing a mixture of semi-fixed route and door-to-door operations, tailored to local circumstances and the needs of individual users.

- In west Newcastle UCall provides links between areas not served well by conventional services, linking areas with low car use and a high proportion of elderly residents with local services and providing onward connections via Metro and regular bus routes. The west Newcastle services are now carrying over 5,000 passenger trips per month. UCall also operates as a flexible feeder service from rural areas of western Gateshead to the Ryton transport hub.
- Funded by Jobcentre Plus, UCall has provided personalised trips for residents in South Tyneside taking up jobs across the river in North Tyneside, a notable perceptual barrier to movement. In rural Sunderland UCall has provided door to door trips on request and on demand to employment centres. In each case UCall addresses transport-related social exclusion and provides additional safety and security for vulnerable users.

4.20

Improvements to public transport can accrue substantial non-transport benefits across a range of different sectors. This has been investigated in a report for the Rural Transport Partnership¹⁰⁷ which examined 20 transport projects that generated benefits to employment, education, social care, welfare, culture, and leisure sectors. Although the examples here were primarily in a rural setting, the benefits delivered would be equally applicable, if not magnified in an urban environment. A summary of key findings is included in T4.3.

¹⁰⁷ Transport Solutions – The benefits of providing transport to address social exclusion in rural areas, Paul Beecham and Associates in conjunction with Sheffield Hallam University, 2005

T4.3 Benefits to non transport sectors

Sector	Benefit	Value	Initiative
Employment	Saving in unemployment benefit	£237,600 pa	North Lincolnshire travel to work and learning, Wheels 4U
Employment	Potential saving in unemployment benefit and costs of supporting someone back to work	£5,600 pa	Malvern Hills Parish Cluster Group, Herefordshire and Worcestershire
Employment	Saving in unemployment benefit	£7,200 pa	Wymondham Flexibus, Norfolk
Education	Savings in the cost of transport provision	£87,000 pa	Interconnect Feeder Services, Lincolnshire
Education	The number of additional attendances at after school activities	3692 pa	Links for Life, Bridgnorth, Shropshire
Social care	Savings in domiciliary care services	£111,540 pa	Interconnect Feeder Services, Lincolnshire
Social care	Savings in domiciliary care visits	£1,065 pa	Muncaster Microbus, Cumbria
Social care	Savings in domiciliary care services	£324 pa	Muncaster Microbus, Cumbria
Tourism and Leisure	Leisure access (of which 55% would not have been made previously)	3494 trips pa	Malvern Hills Parish Cluster Group, Herefordshire and Worcestershire
Economic	Increasing spend at local facilities	£55,000	Mobile Shopmobility, Lancashire

Health

4.21 According to the Department of Health, 5.2 million hospital outpatient appointments are missed in one year resulting in a cost of £250 million a year^{108 109}. The Social Exclusion Unit states that over a 12-month period, 1.4 million people miss, turn down or choose not to seek medical help because of transport problems.¹¹⁰

Access to healthcare

4.22 A critical factor in the location of health care facilities, particularly specialist centre of excellence hospitals, is finding a sufficiently large site. This situation has led to the location of facilities at sites which are inaccessible by public transport and closure of facilities which are accessible by public transport.¹¹¹

4.23 A lack of adequate transport can also reduce opportunity to take up medical services. This barrier leads to an increased cost to healthcare providers due to failed appointments and delayed interventions. This lack of access is illustrated in the Social Exclusion Unit *Making the Connections* report¹¹²:

- Around 20% of people find it difficult to travel to hospital. 31% of people without access to a car have this difficulty.

¹⁰⁸ MORI 2002

¹⁰⁹ BBC1999

¹¹⁰ Transport and access to health care: The potential of new information technology. F. Rajé, C. Brand and J. Preston, University of Oxford and M. Grieco, Napier University, 2003

¹¹¹ Improving patient access to health services: a national review and case studies of current approaches, Lucy Hamer, Health Development Agency, 2004

¹¹² SEU, op cit

- 3% of people have missed, turned down or not sought medical help because of transport problems experienced in the past year. This rises to 5% of people without access to a car

Better access to healthcare in Sunderland

Under the banner of Tackling Social Exclusion Through Transport (TSETT), Nexus and Sunderland City Council are working together to deliver innovative, community-based transport services. Renal patients at Sunderland Royal Hospital are catered for by the Nexus Care Services scheme, dramatically reducing journey times for individual patients. Community transport providers are being integrated into the demand responsive transport operation UCall, achieving scale economies and the provision of a flexible, localised operation.

Active travel and healthy lifestyles

- 4.24 The wider health impacts of public transport interventions have largely been ignored or at best underplayed. Public transport can contribute to significant improvements in public health in addition to the often cited improved air quality, notably through increased physical activity of public transport users. Moreover, the typical way to report data on multi-modal journeys is to focus on the 'main transport mode'. This leads to an underestimate of the other parts of the trip, such as the walk to the public transport station or stop.
- 4.25 Public transport journeys will almost always involve walking for at least one trip end. The health benefits derived from walking are, however, generally not acknowledged. Yet the health benefits may be significant and substantially contribute to the recommended weekly minimum of 150 minutes of moderate physical activity. For example, research recently conducted in the United States¹¹³ has found that Americans who walk to and from public transport obtain an appreciable amount of their weekly 'requirement'. The study suggests that 29% of public transport 'walkers' achieve at least 30 minutes of daily physical activity solely by walking to and from public transport stops.
- 4.26 Accounting for these associated walking or cycling trips increases the economic value of public transport. There are significant economic benefits associated with physical activity due to its health protective function. Physical activity reduces all-cause mortality and morbidity. This is particularly important given the low levels of physical activity in the UK population.

Cost to the economy of sickness leave

The CBI has calculated that 192 million working days were lost to the British economy last year, equivalent to the working population of two counties taking a year off work. Sickness and absenteeism now cost Britain over £11 billion per annum¹¹⁴. Moreover, a growing body of research from around the world indicates that people who are active in their daily lives are more productive employees and have better attendance records.

¹¹³ Walking to Public Transit. Steps to help meet physical activity recommendations, American Journal of Preventive Medicine, 29(4), pp. 273-280, L. Besser and A. Dannenberg, 2005

¹¹⁴ Pulling Together: Absence and labour turnover survey, Confederation of British Industry and PPP, 2004

In general terms healthier employees benefit their employer through:

- reduced absenteeism¹¹⁵
- lower turnover rates¹¹⁶
- improved productivity
- employee morale¹¹⁷
- lower health care costs.¹¹⁸

4.27 The more people are active the less they are at risk of major diseases such as coronary heart disease, stroke, diabetes, arthritis, osteoporosis, some cancers, and mental health problems such as depression. The direct annual healthcare costs of heart disease alone in the UK are £1.6 billion (1999 prices)¹¹⁹. Similarly, the costs of obesity are substantial, amounting to £2.6 billion for both direct and indirect costs (2000 prices).¹²⁰

4.28 The Government has set a target in England and Wales for 70% of the population to be “reasonably active” by 2020, while in Scotland the target is for 50% of adults to achieve the minimum levels by 2022. Currently the figure is around 30% in each country. The Chief Medical Officer has stated that the target, 30 minutes of moderate intensity activity such as brisk walking on at least 5 days per week, will only be achieved by helping people to build activity into their daily lives. His 2004 report on physical activity says,

*“for most people, the easiest and most acceptable forms of physical activity are those that can be incorporated into everyday life. Examples include walking or cycling instead of driving...”*¹²¹.

Education

4.29 *“Poor transport could be a contributing factor in the low educational attainment of children from lower social classes.”*

Source: Transport and Social Exclusion, FIA Foundation¹²²

4.30 A priority for the city regions, if they are to develop their knowledge economies, is to tackle the ‘skills gap’, which is reflected in the relatively low levels of educational attainment compared with London and the South East and global competitors.

4.31 The availability and cost of transport are important factors in accessing educational opportunities and the high cost and poor availability of public transport can deter people from taking up educational opportunities. This is exacerbated by the amalgamation and

¹¹⁵ Effects of an employee fitness program on reduced absenteeism, L. Lechner, H. deVries, S. Adriaansen, L. Drabbels, Journal of Occupational and Environmental Medicine 39 (9): pp. 827-831, 1997

¹¹⁶ Relationship of employee turnover to exercise adherence in a corporate fitness program, Tsai et al, Journal of Occupational Medicine, 29(7) pp, 1987

¹¹⁷ Physical activity and work performance: Results from the national worker fitness Test 2000 in the Netherlands, Hildebrandt et al, Medicine and Science in Sports and Exercise, 34(5), pp, 1998

¹¹⁸ The relationship between modifiable health factor risks and health care expenditure: An analysis of the multi-employer HERO health risk and cost database, Goetzel et al, Journal of Occupational and Environmental Medicine, 40(10), pp, 1998

¹¹⁹ Monitoring of the progress of the 2010 target for coronary heart disease mortality: Estimated consequences of CHD incidence and mortality from changing prevalence of risk factors, A. Britton and K. McPherson, National Heart Forum, 2000

¹²⁰ Tackling obesity in England, National Audit Office, 2001 (some of the costs will relate to coronary heart disease)

¹²¹ At least five a week: Evidence on the impact of physical activity and its relationship to health, Department of Health, 2004

¹²² FIA Foundation, op cit

relocation of schools and colleges to new locations which are difficult to reach by existing public transport networks, particularly from socially excluded communities in inner cities and peripheral housing estates. Better access to all these opportunities and facilities is essential if skills are to be improved and social exclusion in the city regions is to be reduced. More effective public transport networks have a key role to play in providing that access.

Implications of the choice agenda

- 4.32 Good transport becomes even more important given the Government's emphasis on encouraging parental choice. Low income families are less likely to exercise that choice due to problems with the cost and availability of public transport than those in higher income groups. Evidence suggests that the costs of choice are likely to be less for a more affluent population. Investment in improved public transport, and improving educational choices for a wider range of the population, will provide benefits to the community, particularly those on lower incomes.
- 4.33 Part of the problem in the UK is that parental freedom of choice has meant that wealthier parents choose to send their children to high performing schools, whilst children living in deprived areas usually attend the nearest school to their home because of a lack of available transport and restrictive home to school transport policies. Low income families are therefore more likely to have no choice but to apply to their closest school. Parents who live in a social sector housing area are 1.5 times more likely to cite travel convenience as a reason for choosing a school than owner occupiers.¹²³

Access to education

- 4.34 More learning and educational activity is taking place outside school hours such as through breakfast and after-school clubs. It may be particularly difficult for children from low income homes to attend these activities due to a lack of available public transport.
- 4.35 Amongst students with special educational needs, a number of authorities have promoted independent travel training. This involves working intensively with students, some of whom may have learning difficulties, to build confidence and the ability to travel independently on public transport. Ultimately, the success of such programmes is to equip students with additional life skills that may enable them to go on into employment. Other benefits of such an approach are the reduced need and cost of specialist transport provision and the avoidance of students being institutionalised through the use of such transport.
- 4.36 Research indicates that transport can be a barrier to young people going on into further education. This may be due to the availability or cost of transport. Those participating in post-16 education or training usually do not receive travel discounts and often travel longer distances. This issue is illustrated through the following statistics from the SEU Making the Connections¹²⁴ report:
- More than one in five students has considered dropping out of further education because of financial difficulties.
 - Nearly half of 16-18 year old students say they find their transport costs hard to meet.
 - 6% of students have missed college at some point in the previous year because they could not afford transport costs.

¹²³ Parents' experience of choosing a secondary school, Sheffield Hallam University and Office for National Statistics, 2001

¹²⁴ SEU, op cit

Post-16 education in Nottinghamshire

During 2005 a study of these issues was undertaken in Nottinghamshire for the Learning & Skills Council, considering accessibility to post-16 education and work-based learning opportunities. Issues and deficiencies were identified across the county, and the Post-16 Partnerships covering City of Nottingham and Nottinghamshire looked to direct their funds to addressing these. Colleges and area networks of schools were able to apply for funding to address local issues, and a variety of projects were taken forward. These included travel independence training, secure cycle parking, and shuttle minibuses. In a couple of instances, the existence of transport enabled schools to collaborate on their curriculum and timetables, providing a wider choice of subject options and courses.

Recent feedback on such initiatives indicates an increase in the numbers of students continuing into the sixth form. Therefore, the existence of a shuttle minibus between the schools has facilitated the availability of a more extensive course programme locally and helped maintain the viability of those sixth form centres.

5 The funding gap

- 5.1 The UK city regions are competing in a global economy with other large European city regions. If the UK is to continue to compete, it is vital, as demonstrated in chapter two, that good connectivity within and between our city regions is achieved. Public transport, as identified in chapters three and four is important in providing this connectivity, and contributes strongly to the economy, sustainability and social cohesion in the city regions.
- 5.2 In chapter two, we also demonstrated that although the economies of the Core Cities and their city regions are growing, they continue to lag behind their European counterparts and London. In order to compete economically our transport systems must provide connectivity within, and between, the city regions comparable to these competitor cities and regions.
- 5.3 In this chapter we examine what world class public transport systems in London and Europe look like, and consider the level of funding that underpins such systems.
- 5.4 The chapter will show that:
- The transport funding gap between European cities and comparable English cities is significant.
 - Within the UK, the transport funding gap between London and the regions is significant and expected to continue.
 - This spending imbalance is more marked in transport than in other sectors such as health and education.

Comparative and competing transport systems

European transport provision

- 5.5 German cities dominate the upper echelons of the economic success statistics across Europe. Cologne is at the centre of a city region typical in size and character of the UK city regions. It has in excess of three million people, is polycentric, and has a history of manufacturing (particularly cars in Cologne) and other traditional industries that makes it comparable to our own city regions.
- 5.6 Cologne provides a fine example of a comprehensive and integrated public transport system, operated for the region through a combination of centralised and local control, investing over 180 million Euros annually in public transport¹²⁵.

Case study – Cologne (Köln)

The city of Cologne has a population of one million, but the city's transport network (run by Kolner Verkehrs-Betriebe AG) covers an area with 1.3 million people. The Cologne system in turn forms part of the Rhein-Sieg Transport Joint Authority (Verkehrsbund Rhein-Sieg, VRS) which covers a region with a total population of 3.2 million people. This region includes the neighbouring city of Bonn, the smaller cities of Leverkusen and Monheim, and a number of districts.

All these authorities are active members of VRS, which was set up in 1996. VRS is responsible for integrated ticketing, tariff structures and timetabling for all public transport

¹²⁵ Kolner Verkehrs – Betriebe AG Business Report 2003/4 <http://www.kvb-koeln.de/german/home/>

in its region. This includes light rail, tramways and buses, and also rail services run by the national rail operator Deutsche Bahn AG (DBAG), through its regional passenger subsidiary DB-Regio.

Passengers have a choice of 479 lines, of which 22 are DB (German Railways) lines and 23 urban railway or tram lines. Additionally there are 385 bus lines, 47 AST (called shared taxi) lines, and 2 Bürgerbusse (citizens' buses). All in all there are around 6,700 stops and access points to the public transport network.

The 22 DB services within the VRS region include three cross-city regional routes, providing links to main areas in the VRS region, and to Düsseldorf to the north; and three City-bahn lines, the latter providing frequent links between Cologne and Gummersbach, Horren and Eiskirchen, all local centres within the VRS region.

DB-Regio operates 1000 trains a day over the VRS network and the smaller neighbouring Aachen Joint Authority (AVV), a total network of 649 route kilometres. The services carry 66 million passengers a year.

Infrastructure and services are managed and developed by DBAG subsidiaries DB-Netz and DB-Stations-Services respectively.

Much of the support funding for DB services comes from the Federal Government. The Lander and the cities also provide significant funds for investment and service development; most regional and local investments are co-funded. The projects and programmes are developed and evaluated through the city and Lander transport strategies, in close cooperation with DBAG.

Responsibility for local rail services in Germany is gradually being transferred to cities and districts. Duren, in the VRS area, was an early example. DB transferred two run-down local branches to the district authority which has since built up travel and service levels on them very substantially, through integration with bus services and local activities. It also has integrated ticketing for the area and beyond within the framework set by VRS.

London

5.7

London's public transport system has been transformed in the last five years. This has been achieved through a combination of investment from central government, the development of new streams of funding and regulatory change. This has all been accomplished in an environment of strong regional governance. In London the case for investing in public transport has been won and now national and city government are working in partnership to provide the necessary funding.

Transport investment in London

London has a long history as a world leader in the provision of public transport stemming from the development of the extensive underground network in the late 19th and early 20th century.

By the end of the 20th century the public transport system in London had experienced a long period of decline through lack of investment in both new infrastructure and in the maintenance of existing facilities, resulting in increasing unreliability and overcrowding. Along with the decline of the public transport system, London has seen increasing road traffic congestion and pollution.

The Mayor's Transport Strategy

The ownership of transport assets in London rests primarily with Transport for London (TfL), the transport executive of the Greater London Authority. TfL is responsible for strategic roads, buses, the London Underground, the Docklands Light Railway (DLR), Croydon Tramlink and river services.

The Mayor set out overall policies and programmes for transport in his transport strategy, published in July 2001¹²⁶. The aim of the strategy was to increase capacity of rail and underground systems by up to 40% through new projects and rehabilitation of the existing system, and to increase bus capacity similarly by 40%. Along with improvements to public transport, the policy aimed to reduce road congestion, including a 15% reduction in traffic in central London.

Significant improvements have been made in bus services in the capital since the introduction of the Mayor's strategy. Bus ridership grew more than 38 per cent between 1999/00 and 2004/05, in contrast to a seven per cent fall across the rest of England. Buses in London now carry the highest number of passengers since 1968. In the year to March 2005, there were 1.79 billion passenger trips on the network. Bus mileage in London is higher than at any time since 1957, with 450 million km operated in 2004/5.

Significant investment in bus priority and enforcement has led to improved and more reliable journey times, whilst investment in the Countdown real-time information system at 2000 bus stops has helped passengers by taking away the uncertainty of waiting. Introduction of a higher quality and cleaner bus fleet has also improved air-quality, accessibility and image.

These improvements in London show what can be achieved within a well-funded and regulated operating environment. Six million passenger journeys are now made by bus each weekday.

An extension of the DLR to London City Airport was completed and opened in December 2005. The extension from Canning Town to King George V station at North Woolwich via the airport provides a major improvement in connectivity from Canary Wharf, The City and other parts of London for London City Airport passengers. The link also provides a connection to the underground network, serves 8,000 local residents at three new stations and forms a vital part of the transport plan for the 2012 Olympic Games. Thirty-one new carriages have recently been ordered to serve additional passenger demand.

A programme of station refurbishment has taken place across the underground network, including provision of the latest safety and security equipment. Work at a fifth of the stations on the Piccadilly, Jubilee and Northern Lines has been completed. Improvements to the Jubilee Line, vital to serve the developing Docklands area, were also completed in December 2005. This provides an extra carriage on each train, delivering a 17% increase in capacity and enabling an additional 6,000 passengers to be carried in each peak period.

TfL's fares policy has been important to the success of the Mayor's strategy. A freeze in cash fares on buses, cap on underground fares and introduction of free bus and tram travel for all under-16s have contributed to significant growth in public transport patronage. Despite fare rises in 2004 to raise £125 m for transport investment, allowing for inflation bus fares remain no higher than when the Mayor took office in 2000. The introduction of the Oyster Smartcard across the TfL network has brought benefits in both convenience and cost to passengers. Fully integrated ticketing in London has also been brought closer as Oyster is introduced into local rail franchise requirements.

¹²⁶ The Mayor's Transport Strategy, Greater London Authority, July 2001

Under-pinning all these public transport improvements has been the introduction of the Central London Congestion charge, which has reduced traffic levels in central London by approximately 20%. Measured congestion in the charged area has reduced by 30% whilst bus services have seen significant journey time reliability improvements within and also outside the zone. In 2004/05 the scheme generated net revenues of £90m, spent largely on improved bus services.

TfL Investment Programme 2005/6-2009/10

On 12 October 2004 the Mayor announced proposals for a £10 bn, five-year transport investment programme¹²⁷. The aim of the programme is to build on the investment which has taken place over the previous five years to give London a 21st century transport system, aiding regeneration and supporting the successful 2012 Olympic bid. The investment represents a commitment from both the Mayor and central government to the long term development of sustainable transport in the capital.

TfL is now able to borrow to fund transport investment: The £10 bn total is made up of £3 bn in new borrowing, £4 bn in existing PFI/PPP contracts and £3 bn government capital grant investment.

The following major investments are highlighted in the programme:

- Improvements to the underground, including train, track and signal improvement giving improved reliability and allowing two million additional kilometres to be run each year by 2009/10, and station modernisations and refurbishments at 200 stations.
- Improvements to rail and light rail including extension of the East London Line to support the 2012 Olympics and new DLR links to Woolwich Arsenal and Stratford International.
- New transit schemes including East London Transit (Phase one) and Greenwich Waterfront Transit (Phase one).
- The extension of the Congestion Charge to Westminster and Kensington & Chelsea.

Transport spending in the regions

UK transport spending compared with other European countries

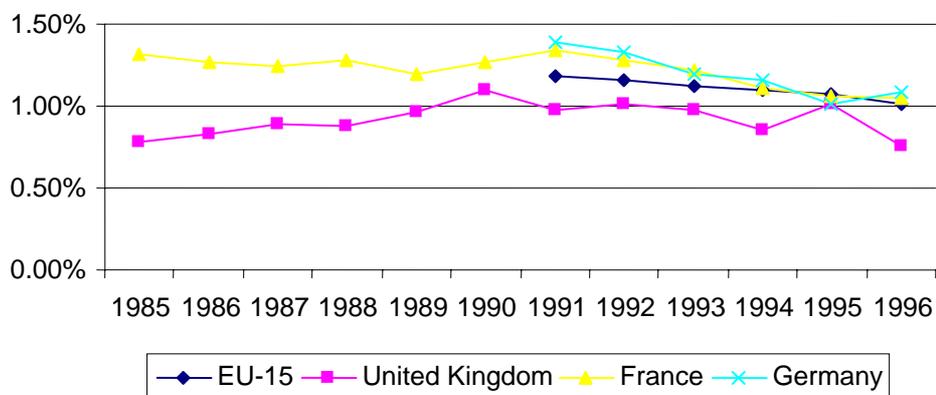
5.8

Transport investment in the UK can be compared with the rest of Europe in a number of ways. The following graph compares investment in transport infrastructure as a percentage of GDP from 1985 to 1996 – the most recent period for which statistics are available¹²⁸:

¹²⁷ 5 Year Investment Programme, Transport for London, October 2004

¹²⁸ Eurostat

F5.1 Transport infrastructure investment as % of GDP



Note: EU-15: 15 countries that made up the European Union until the end of April 2004

5.9 F5.1 indicates that the UK's investment in transport infrastructure is significantly lower than its European counterparts. At no point over the ten year period did investment levels in transport fall below 1% of GDP in either France, Germany, or the EU as a whole. Levels of investment in the UK have been consistently lower.

5.10 It is worthy of note that Germany and France rank particularly high in the top fifty European cities for Gross Domestic Product (GDP) per capita. France has one city in the top 10, whilst Germany has no less than five cities in the top ten.

UK city region public transport spending versus European counterparts

5.11 The Government's Commission for Integrated Transport (CfIT) found that: "UK Cities have the lowest levels of investment in public transport, typically a tenth of Vienna and Munich."¹²⁹ This is illustrated in T5.1.

T5.1 Investment in public transport infrastructure – European comparisons¹³⁰

	Euros per capita
Vienna	464
Munich	221
Stockholm	83
Copenhagen	63
Milan	63
Manchester	32
Glasgow	23

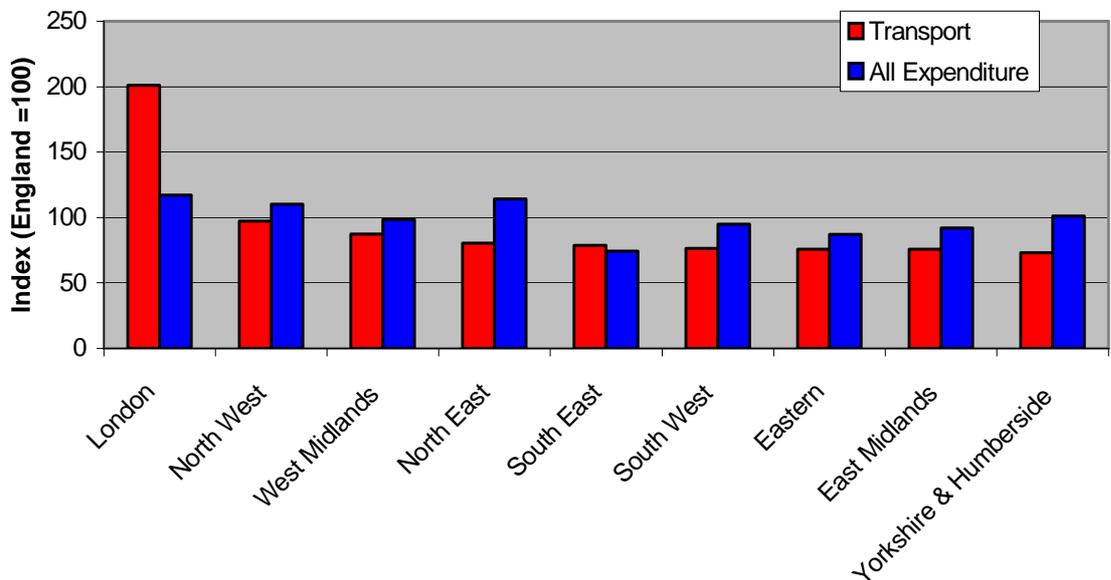
¹²⁹ Commission for Integrated Transport, "Factsheet 6a", 2001, <<http://www.cfit.gov.uk/docs/2001/ebp/index.htm>>

¹³⁰ Commission for Integrated Transport, *European Best Practice in the Delivery of Integrated Transport Report on Stage 1: Benchmarking*, 2001, Table 8.6, <<http://www.cfit.gov.uk/docs/2001/ebp/index.htm>>

UK transport spending – regional spending compared with London

- 5.12 There is a growing disparity between London and other UK regions in terms of economic performance (see T2.1 on page 12) with GVA in the northern and midlands regions being about two thirds the level of that in London. At the same time, as figure F5.2 shows, there is significantly higher spending per head on transport in London than in the northern regions and the West Midlands.
- 5.13 The disparity between spending levels per head in terms of London and other regions is far more marked on transport than it is for other key public services like health and education. For public expenditure in general, levels are reasonably consistent across the country as F5.2¹³¹ shows. However, spending levels on transport in London are significantly higher than in the regions, being more than double the amount spent in all the regions individually, and three times the levels spent in some.

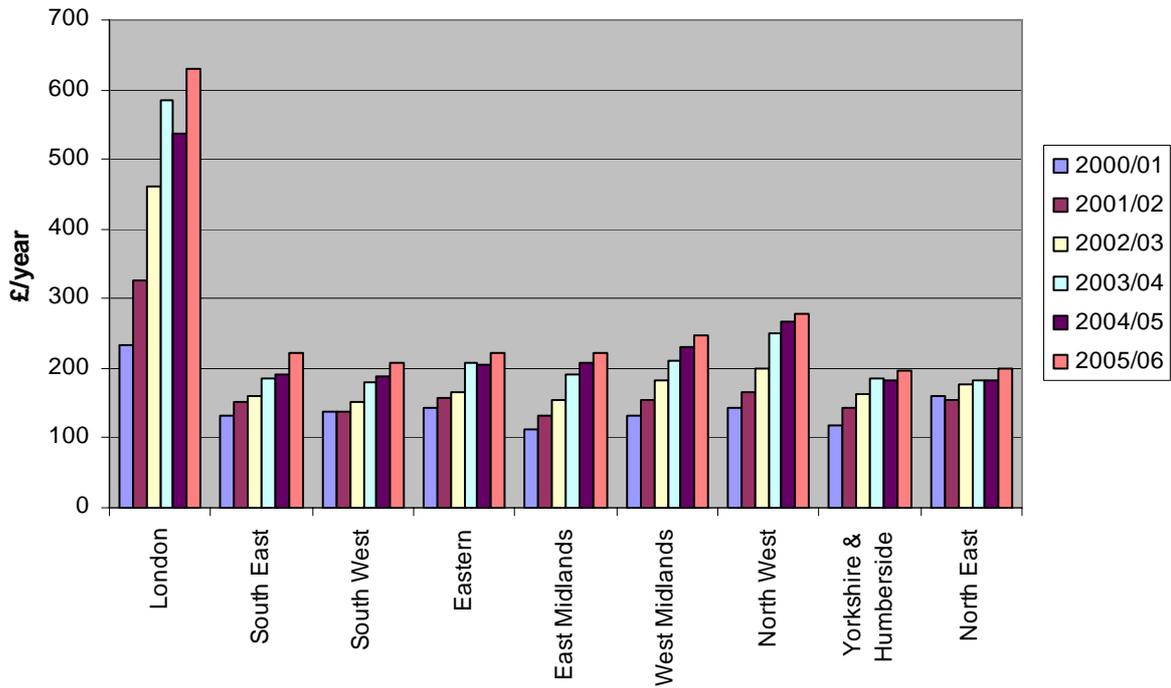
F5.2 Index of public expenditure per capita (1999/2000 to 2005/06)



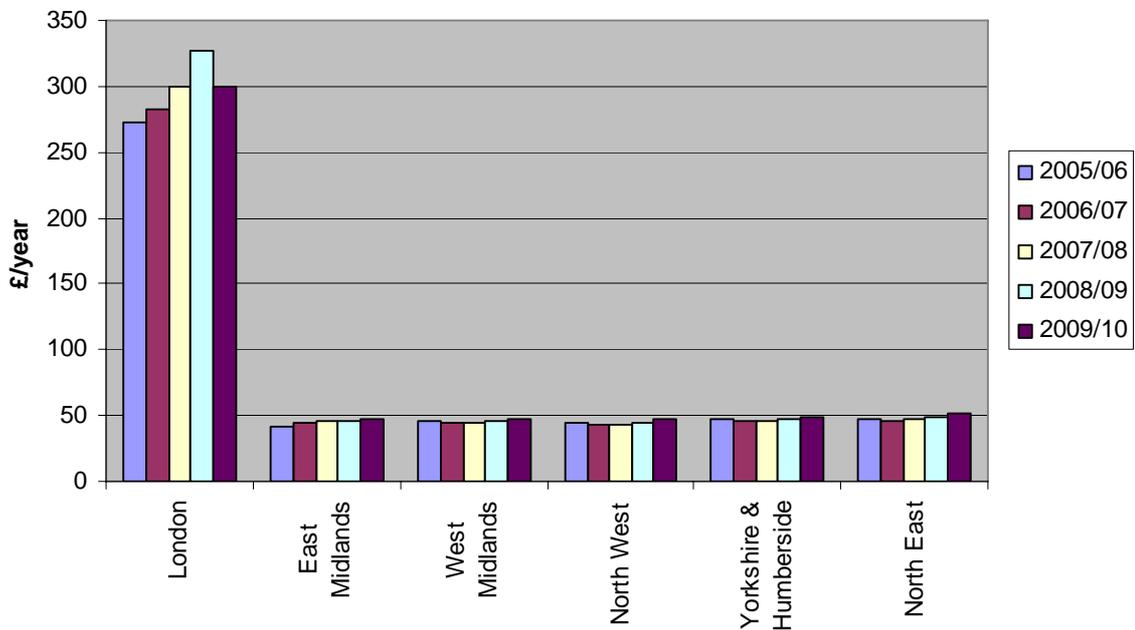
- 5.14 The growth of investment in transport since 2000 is illustrated in F5.3 overleaf, which shows public spending on transport per capita. The graph illustrates the way in which a gap has opened up between London and the regions on transport spend. It also clearly shows the impact of the successful case put by London for greater funding for transport.
- 5.15 This trend is set to continue. F5.4 shows that the ‘funding gap’ between London and the regions will be maintained in projected capital spend on transport.

¹³¹ Cumulative per capita expenditure on all public services and on transport (for the years 1999/2000 to 2005/6 inclusive) have been scaled against expenditure for England (public services compared with public services, transport compared with transport) as 100. Derived from HM Treasury Public Expenditure Statistical Analyses 2006.

F5.3 Recent public expenditure per capita on transport (£/year)¹³²



F5.4 Planned capital local transport funding per capita¹³³

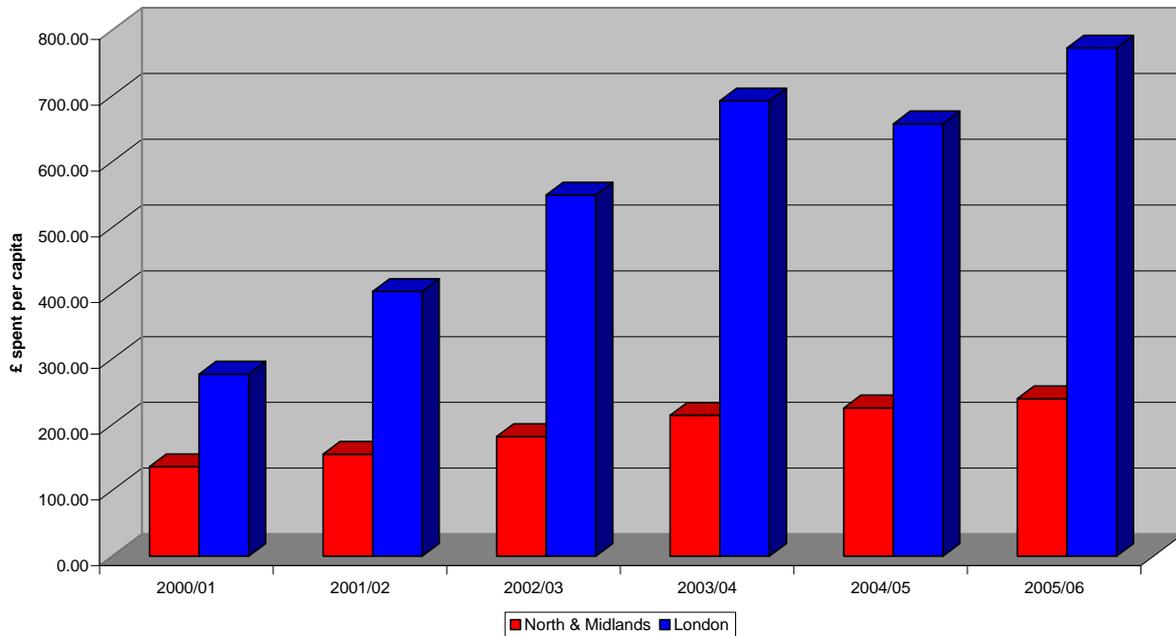


¹³² HM Treasury, *Public Expenditure Statistical Analyses 2006*

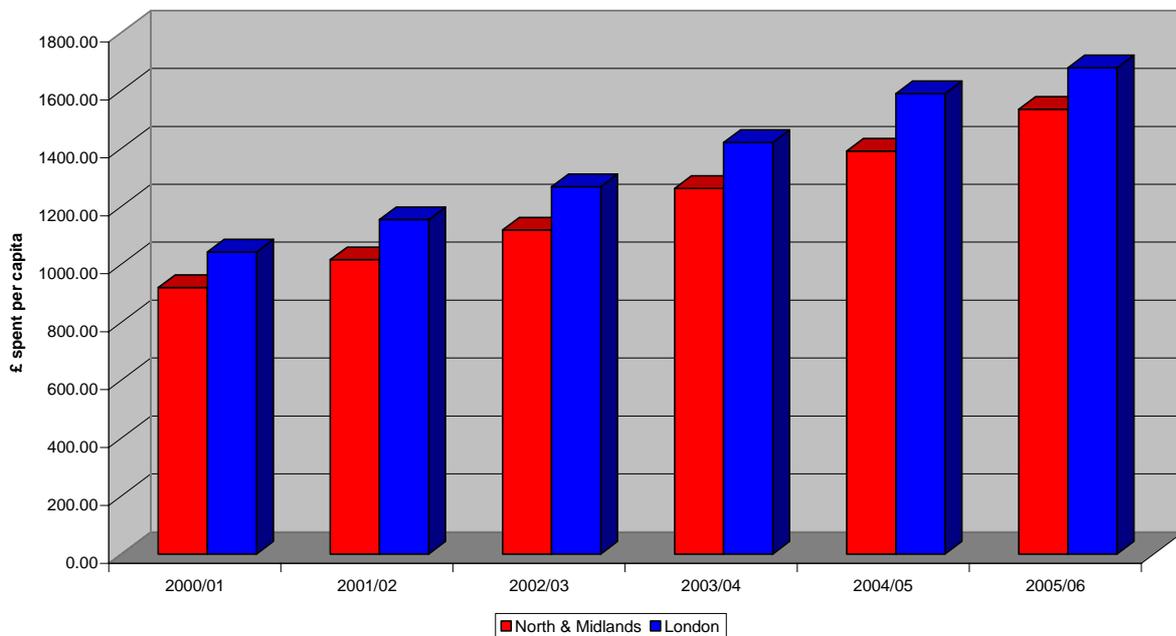
¹³³ Transport for London, *Business Plan: The TfL business plan 2006/07-2009/10*, TfL, December 2005, Table 2, p12 and DfT, "Local transport capital settlements", <http://www.dft.gov.uk/stellent/groups/dft_localtrans/documents/divisionhomepage/032393.hcsp>

5.16 As shown in F5.2, the funding gap between London and the regions is not as pronounced for other key areas of public expenditure. The three graphs that follow, F5.5 (transport), F5.6 (health) and F5.7 (education) show in detail comparable data for the transport, health and education.

F5.5 Public expenditure on transport 2000 - 2006¹³⁴



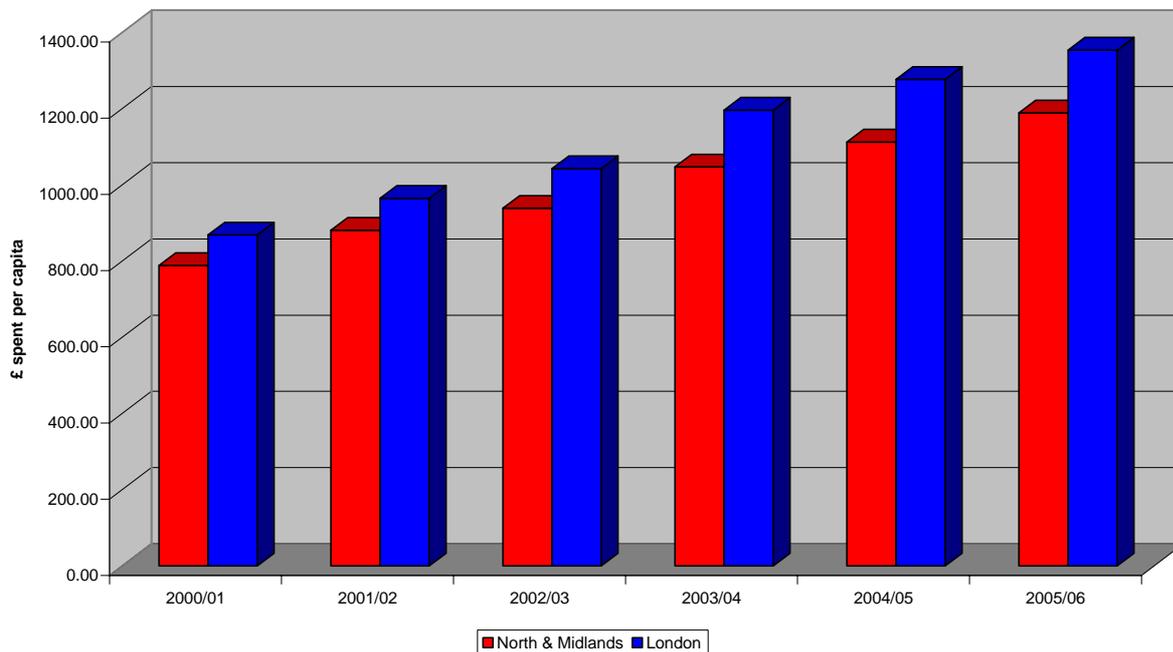
F5.6 Public expenditure on health 2000 - 2006¹³⁵



¹³⁴ HM Treasury, Public Expenditure Statistical Analyses 2006

¹³⁵ *ibid*

F5.7 Public expenditure on education 2000 - 2006¹³⁶



5.17 This data shows that whilst the regions are keeping pace with London on expenditure on health and education, they are not on transport. Health and education expenditure in the regions is roughly 10% less than London. However, historically, transport funding in the regions has been at a level of only half that in London. This differential has grown since the Millennium to a position where the northern regions and the West Midlands now receive less than 40% of the funding per capita for transport that London receives.

¹³⁶ *ibid*

6 The investment required

- 6.1 The gap between investment in transport provision in London and in European cities compared to the English city regions is clear, as is the consequent effect that this has on the performance of our cities and their regions. If we are to achieve the ideal of world class transport systems in our city regions then a significant increase in investment levels is required. The benefits to the economy and to social inclusion in our city regions outlined throughout this report can then become a reality. Sustained investment in transport in London and elsewhere in Europe has delivered substantial benefits. This report sets out the need for a similar approach in the city regions, with substantial and sustained investment in our transport infrastructure and services.
- 6.2 If England's next tier of major cities after London are to see an upgrade in their public transport networks, which is in anyway comparable to that achieved in London, then the relative levels of spend per head need to be considered. In 2005/06, annual transport expenditure in London is £631 per person. This represents expenditure of £4.717bn per annum across London. A similar total figure, £4.722bn, is spent on transport across the four English regions within which the PTE areas lie, namely the North East, the North West, Yorkshire and the Humber and the West Midlands. However, the total population of these four regions is 19.73 million, compared with 7.476 million in London. This represents a figure of only £239 per head spent on transport across the four regions.
- 6.3 If the gap between transport expenditure in London and these four northern and midland regions were reduced by a half, this would represent an additional £4bn per year with which to tackle the transport problems in the North East, the North West, Yorkshire and the Humber, and the West Midlands. An additional £4 billion a year would allow for a substantial upgrade in public transport networks in the city regions, which in turn would help narrow the productivity gap between London and the North and Midlands.

The needs of the UK economy

Research by the CBI in 2005¹³⁷ suggested there was a £60 bn gap between the predicted and necessary investment in the transport system over the next 10 years. This was the spending necessary simply to deliver projects already identified. The research indicates that if this gap were closed with the additional investment required, public investment would rise to an average of 1.4% of GDP to the year 2015. It is felt that this increase would enable the UK to address the problems caused by chronic under investment over recent decades.

It was suggested that transport policy should focus on delivering the following outcomes:

- Quick average journey times and better journey reliability on key modes.
- Good access to overseas markets through international gateways.
- Measures of increased customer satisfaction.
- Better environmental standards in the provision and use of transport assets.

The potential types of project outlined for the additional investment required include:

- Capacity management schemes.
- Infrastructure upgrades.

¹³⁷ Transport policy and the needs of the UK economy, CBI, 2005

- Additional physical capacity.

The report emphasises the need for a sustained and steady flow of investment rather than a stop go investment pattern which can undermine confidence in the overall strategy. Without this increase in certainty for the delivery of transport projects, business may lose vital capacity and incur increased future costs.

6.4

It is important to recognise that London's enhanced transport investment programme is not solely funded by national government. Transport for London is able to draw on a range of income sources including congestion charging, increased fare box revenues from public transport patronage growth, and some additional borrowing. At present the city regions do not have access to the same funding freedoms and flexibilities that London enjoys. Extending the scope and extent of funding options available to the city regions is likely to be a key part of any strategy for a long term increase in available spending on transport in the conurbations.

Freedoms and flexibilities for funding in the city regions

The success of the post 2000 London Government model has interesting lessons for the city regions. It is impractical to simply transfer the London model to the city regions. However a number of elements are relevant.

Significant work has been undertaken, using the case studies of Birmingham and Manchester, on the devolution of spending to city regions. It is estimated that each of these could have budgets in excess of £600m p.a.¹³⁸ taking account of Regional Funding Allocations for economic development, housing and transport; Learning and Skills Council funding; spending from the Department for Transport; and other sources. It is suggested that greater local control of spending will promote more creative and effective use of existing resources.

In addition there is the potential to devolve new funding powers, flexibilities and freedoms to the city regions to further increase their spending power.

These include:

- Expanding the Economic Development and Enterprise component of Local Area Agreements (LAA). This would include a clear statement of economic development goals, forcing local stakeholders to take tough decisions on what to fund using limited public resources.
- Promote the use of existing financial powers and flexibilities such as:
 - Prudential borrowing - the success of this approach has been demonstrated by TfL which has been able to raise significant sums through borrowing against fares revenue in London.
 - Workplace parking charges - an example of how this would work has been devised for Nottingham. The scheme would generate £100m over 10 years and the revenue generated would be directed towards the expansion of the tram network.
- Stronger capacity and skills at urban level – businesses in the regions' cities feel that the public sector bodies are unable to adequately address their needs. At the same time local authorities feel that the private sector does not understand the constraints they face. It is suggested that stronger capacity could be achieved by refocusing existing skills with

¹³⁸ City Leadership, Adam Marshall and Dermot Finch, IPPR Centre for Cities, 2006

initiatives to boost local authority capacity in areas such as planning.

This freedom and flexibility would move the difficult decisions, like those on scheme prioritisation, away from central government to those accountable for their delivery at a local level.

A new set of metropolitan institutions, powers and financial freedoms have been proposed in a policy discussion paper by Tony Travers and Stephen Glaister for the Local Government Association¹³⁹. These changes aim to improve the quality of city governance and transport whilst strengthening local economic development. The report suggests that metropolitan districts and unitary authorities are best placed to encourage the creation of new city region transport authorities, building on existing organisations such as the Passenger Transport Authorities and Executives. These, it is argued, would represent a good starting point requiring no substantial re-organisation to other aspects of local authority activity.

The paper also identifies a range of potential new funding streams which city region government could use to fund additional transport spending. These include tax increment finance (a tax on rising land values triggered by new transport provision); a levy on the non domestic rate; the local authority business growth incentives scheme (where local authorities can benefit from increases in non-domestic rateable values); planning gain supplements; congestion charging; tourist taxes; local add-ons to Vehicle Excise Duty; and an off-street parking levy.

The Sir Michael Lyon's inquiry into local government funding has also considered the potential for new ways of raising revenue.

6.5

An additional £4bn per year would enable a range of vital infrastructure projects to be delivered, together with necessary additional revenue support of transport services. These break down into major schemes which would unlock significant additional capacity, and smaller scale, "quick win" improvements to existing transport networks. All modes have a role to play in the sustainable development of the city regions, and appropriate projects will need to be developed to provide for specific needs.

Regional Development Agencies (RDA)

The Northern Way and Midlands Way, led by the relevant RDAs, have both identified high level priority objectives relating to connectivity within their growth strategies. The aims of the growth strategies are to help accelerate the rate of economic growth in order to bridge the output gap between the South and other regions. Both sets of connectivity priorities include a focus on inter and intra regional connectivity. The Midlands Way aims to develop gateways and linkage improvements to transport, through:

- Promotion of investment in rail infrastructure improvements.
- Securing public transport improvements in rural and urban areas to improve accessibility.
- Working in partnership to deliver on priorities for transport infrastructure and service enhancement improvement.

The Northern Way aims to improve inter and intra regional connectivity through creation of a premier transit system in each city region and stronger links between the city regions. One of the key connectivity aims of the Northern Way highlights is to maintain and

¹³⁹ Improving local transport how small reforms could make a big difference, Tony Travers and Stephen Glaister, 2006

enhance the capacity, speed and reliability of passenger services on strategic Trans Pennine and north-south rail links.

Regional Development Agencies are also responsible for providing advice to the DfT on productivity Transport Innovation Fund (TIF) projects. These are schemes of national, inter regional, regional or inter urban scale that are expected to make a substantial and sustainable contribution to national productivity. This includes proposals which will:

- Improve mobility of people and goods for business.
- Facilitate concentration of business activity.
- Support the mobility and flexibility of the labour market.
- Increase international competitiveness and trade.
- Improve network resilience and choice for business users.

6.6 The potential schemes and initiatives that follow are indicative of the programmes of investment required in our city regions. The examples are not exclusive, and nor do they represent a programme agreed by the PTEs, city regions or any other stakeholders. The examples do however provide a guide, indicative of the projects that are likely to be emerging to tackle transport priorities in the regions. These projects may be initiated by the city regions themselves, as well as by the Northern Way, the Midlands Way, and the Regional Development Agencies.

'Big Ticket' rail projects

Manchester Hub

6.7 Capacity on the central Manchester rail network is severely constrained. This has knock on affects for services across the North West and beyond. The approaches to Piccadilly Station in particular suffer from limited capacity and conflicting train movements. Twelve separate schemes have been identified to tackle these bottlenecks. The twelve schemes, collectively known as the Manchester Hub, have a combined capital cost of £1bn.

6.8 It is anticipated that the Manchester rail hub schemes could generate up to 20,000 additional jobs¹⁴⁰. Solving capacity problems at the Manchester Hub will have substantial wider economic ramifications, including making the region a more attractive location to do business, increasing productivity and GDP, creating new jobs, reducing road congestion and supporting social inclusion.

Birmingham Hub

6.9 The Birmingham Gateway redevelopment project aims to transform the already choked Birmingham New Street Station into a world class gateway to Birmingham.

6.10 The plans for the station involve increasing passenger capacity and providing world class facilities for people travelling through the station. The proposals are expected to cost around £500 million and will stand alongside plans to upgrade the key Coventry – Birmingham – Wolverhampton corridor.

6.11 Running parallel to this work is a comprehensive review of rail capacity throughout Birmingham and the wider city region. The outcome of this will be an understanding of the challenges faced and how these can best be met.

¹⁴⁰ Macroeconomic assessment of Manchester Hub Rail Schemes, CEBR, 2005

Sheffield Hub

- 6.12 There is little spare capacity approaching Sheffield from the north. As a consequence, it is impossible to improve the frequency between Sheffield and Leeds, Manchester or Doncaster. These routes are vital for providing connectivity between the northern city regions, and for accessing key northern airports.

Merseyrail expansion

- 6.13 Merseytravel has ambitious plans to develop the Merseyrail network. Merseyrail is an electric urban rail system which feeds into an underground loop serving Liverpool city centre. It is one of the most intensively used networks in the UK with over 780 trains on weekdays and over 30 million passenger journeys a year.
- 6.14 Proposals for expansion of the network include the reopening of lines to Bootle and Aintree, together with the electrification of more routes.

'Big Ticket' mass transit projects

Project Orpheus

- 6.15 Nexus has developed Project Orpheus to meet transport challenges across Tyne and Wear. The first phase comprises the revitalisation of Metro. Introduced in the early-1980s, the highly successful mass transit system requires renewal and refurbishment to maintain its pre-eminence. The second stage of Project Orpheus involves the upgrading of 29 public transport corridors, many of them integrated with the current Metro system, using high quality bus solutions developed from local experience with Superoute and lessons from similar initiatives in other areas.
- 6.16 Project Orpheus will reduce congestion - set to rise by 25% in the next ten years - by promoting modal shift onto high quality public transport. Significant investment is needed to ensure the provision of public transport of a standard high enough to attract car drivers.

Leeds Mass Transit

- 6.17 Schemes for mass public transit in Leeds are being examined to tackle the problems of serious congestion on key radial corridors within the city centre and improve public transport connectivity. Strong economic growth for Leeds is forecast but if public transport capacity is not increased, congestion will become a growing constraint on the city's development.
- 6.18 One of the alternatives being examined is a Bus Rapid Transit (BRT) option, with a route closely based on the proposed Leeds Supertram network including the provision of Park and Ride facilities. Leeds BRT is designed to be as close to the characteristics of a tram scheme as possible, while using innovative bus technology. It is considered to be distinct enough from other bus services as to be perceived as a new mode, predominantly due to having a reasonably high level of segregation, high levels of reliability both of journey time and headways, ultra-high quality vehicles, high quality waiting environments and a distinctive branding.

Light rail projects

- 6.19 Light rail in the UK has a proven record of attracting motorists out of their cars, and of both stimulating and reshaping regeneration. PTEs have plans to expand existing systems and to develop new networks. These currently include extensions of the Midland Metro (initially through Birmingham city centre and further into the Black Country), extending Sheffield Supertram to Rotherham, and extensions of Manchester Metrolink to Manchester Airport, Rochdale, Oldham and Ashton-under-Lyne. There are also plans for a new tram system for Merseyside.

'Quick Wins'

Rail projects

- 6.20 In addition to the major projects that are being developed for delivery in the medium to long term, it is vital that action to invest in the public transport systems of our city regions is taken now. Consequently there are a number of shorter term projects that could provide immediate benefits and help the Core Cities and their regions to continue their development.
- 6.21 Improving train capacity by providing additional rolling stock on congested routes could bring a 'quick win' by providing extra capacity for people commuting into the Core Cities for employment.

Bus projects

- 6.22 From Superoutes in Tyne and Wear to Quality Bus Corridors in Greater Manchester, PTEs and operators are working together to deliver some major initiatives to transform the quality and reliability of bus services. These comprehensive schemes bring investment from the private sector in the form of modern vehicles combined with bus priority measures and other high quality infrastructure delivered by the public sector. PTEs are also developing BRT schemes which aim to emulate some of the attributes of light rail (including speed and quality), while also retaining the benefits of the bus (chiefly its flexibility).

Bus services

- 6.23 Given that 85% of public transport trips in PTE areas are by bus, any credible transport strategy for the city regions will need to ensure a good network of modern and reliable bus services that operate as part of a wider integrated public transport network. The bus is particularly important in tackling social exclusion because it can link areas of low car ownership and high levels of deprivation with key facilities and opportunities (such as employment, education, healthcare and shopping). A good network also needs to be provided at the weekends and off-peak. This is likely to require higher subsidy levels than at present, as well as reform of the regulatory regime for the bus industry.

CENTRUM HOUSE, 38 QUEEN STREET, GLASGOW G1 3DX
T 0141 221 4030 F 0141 221 4050
E glasgow@jmp.co.uk W www.jmp.co.uk

CBC HOUSE, 24 CANNING STREET, EDINBURGH, EH3 8EG
T 0131 272 2705 F 0131 272 2805
E edinburgh@jmp.co.uk W www.jmp.co.uk

FLOOR 2, 66 QUEEN SQUARE, BRISTOL BS1 4J
T 01179 876216 F 01179 876217
E bristol@jmp.co.uk W www.jmp.co.uk

3RD FLOOR, CATHEDRAL BUILDINGS, DEAN STREET, NEWCASTLE UPON TYNE NE1 1PG
T 0191 261 2261 F 0191 261 1122
E newcastle@jmp.co.uk W www.jmp.co.uk

SCOTTISH AMICABLE BUILDING, 11 DONEGALL SQUARE SOUTH, BELFAST BT1 5JE
T 02890 434646 F 02890 434647
E belfast@jmp.co.uk W www.jmp.co.uk

MINERVA HOUSE, EAST PARADE, LEEDS LS1 5PS
T 0113 244 4347 F 0113 242 3753
E leeds@jmp.co.uk W www.jmp.co.uk

BLACKFRIARS HOUSE, PARSONAGE, MANCHESTER M3 2JA
T 0161 831 5600 F 0161 831 5601
E manchester@jmp.co.uk W www.jmp.co.uk

CASTLE CHAMBERS, 43 CASTLE STREET, LIVERPOOL L2 9SH
T 0151 231 6140 F 0151 231 6141
E liverpool@jmp.co.uk W www.jmp.co.uk

CORNWALL BUILDINGS, 45-51 NEWHALL STREET, BIRMINGHAM B3 3QR
T 0121 222 4141 F 0121 222 4142
E birmingham@jmp.co.uk W www.jmp.co.uk

LATCHFORD HOUSE, LYNN LANE, SHENSTONE BUSINESS PARK, SHENSTONE, LICHFIELD, STAFFORDSHIRE, WS14 0SB
T 01543 482300 F 01543 482399
E lichfield@jmp.co.uk W www.jmp.co.uk

AUDREY HOUSE, 16-20 ELY PLACE, LONDON EC1N 6SN
T 020 7388 5331 F 020 7387 0078
E london@jmp.co.uk W www.jmp.co.uk

THE LANTERNS, LANTERNS COURT, MILLHARBOUR, LONDON E14 9TU
T 020 7515 5579 F 020 7538 2946
E docklands@jmp.co.uk W www.jmp.co.uk

7TH FLOOR, TOWER POINT 44, NORTH ROAD, BRIGHTON BN1 1YR
T 01273 666380 F 01273 666381
E brighton@jmp.co.uk W www.jmp.co.uk