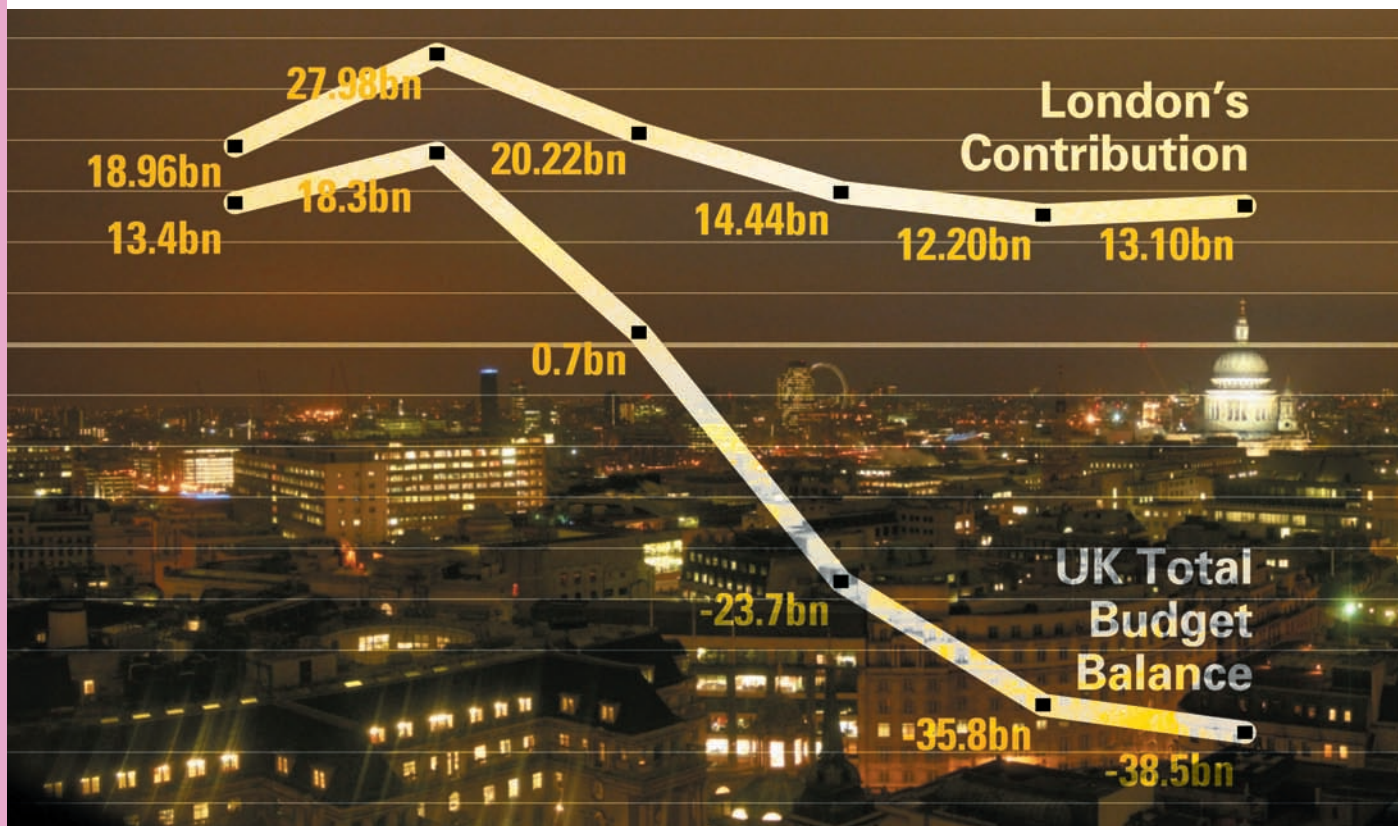


London's Place in the UK Economy, 2006-07



**Oxford
Economic
Forecasting**

London's Place in the UK Economy, 2006-07

Oxford Economic Forecasting

121 St Aldates

Oxford OX1 1HB

Tel: 01865 268900

Fax: 01865 268906

www.oef.com



November 2006

London's Place in the UK Economy 2006-07 is published by the City of London. The authors of this report are Oxford Economic Forecasting.

This report is intended as a basis for discussion only. Whilst every effort has been made to ensure the accuracy and completeness of the material in this report, the authors, Oxford Economic Forecasting, and the City of London, give no warranty in that regard and accept no liability for any loss or damage incurred through the use of, or reliance upon, this report or the information contained herein.

November 2006

© **City of London**
PO Box 270, Guildhall
London
EC2P 2EJ

www.cityoflondon.gov.uk/economicresearch

Table of Contents

Foreword	1
Executive Summary	3
1. Introduction	7
2. Key recent developments in London and the issues they raise about London's place in the UK economy.....	8
3. The London economy: the context	11
3.1 How is the London economy changing	11
a) <i>Key long term trends</i>	11
b) <i>Recent changes in London's economy</i>	13
3.2 Short-term economic prospects	13
3.3 London's influence on the rest of the UK economy	15
4. The competitive position of the London economy	16
4.1 London's sectoral specialisms and key business clusters	16
4.2 The skill base of London's labour force	21
a) <i>Londoners are more likely to be professionals and managers</i>	22
b) <i>...but less growth in knowledge jobs than might be expected</i>	24
c) <i>...and other regions enjoying faster growth in graduates in the workforce</i>	25
4.3 The productivity of the London economy	26
4.4 London's World City status	30
4.5 Other influences on firms' location decisions	33
4.6 How competitive is London?	35
a) <i>Trends in outsourcing from London</i>	35
b) <i>London's ability to attract inward investment</i>	36
c) <i>The performance of London's exports</i>	38
d) <i>London's balance of trade</i>	39
5. Structural issues for London's economy	40
5.1 Where does London's economy under-perform?	40
5.2 Accommodating London's growth	42
a) <i>The pressures on the housing market</i>	42
b) <i>Issues for the commercial property market</i>	44
5.3 London's infrastructure challenges	45
a) <i>Commuting patterns and the cost of transport delays</i>	45
b) <i>The impact of the Congestion Charge</i>	50
5.4 Could inadequate investment in utilities constrain London's growth?	52
6. London's contribution to UK public finances	54
6.1 Calculating the regional distribution of public expenditure: an overview	54
6.2 Regional expenditure	54
6.3 Public spending as a proportion of London's economy	55
6.4 London's contribution to UK tax revenues	57
6.5 London's contribution to UK public finances	60
6.6 How might London's contribution to UK public finances change?	61
6.7 Conclusions	62

7. Key issues for the future	63
7.1 London's skill needs	63
a) <i>Levels of education</i>	63
b) <i>CBI Trends Survey</i>	66
c) <i>National Employers Skills Survey</i>	67
d) <i>Financial services</i>	69
e) <i>Employee training</i>	70
7.2 The competitive position of London's higher education institutions	71
a) <i>How universities compete</i>	71
b) <i>UK background</i>	72
c) <i>London's contribution</i>	73
d) <i>London universities in the rankings</i>	74
e) <i>Foreign students</i>	75
f) <i>Financial strength</i>	78
g) <i>Assessment</i>	81
7.3 Thames Gateway	82
a) <i>What is the Thames Gateway?</i>	82
b) <i>Employment characteristics</i>	83
c) <i>Key projects</i>	86
d) <i>Assessment</i>	86
7.4 Environment	87
a) <i>Water quality</i>	87
b) <i>Air quality</i>	89
c) <i>Waste</i>	90
d) <i>Pollution</i>	92
e) <i>Assessment</i>	93
8. Conclusions – The long term outlook for the London economy ...	94
Appendix A: Public Finance Calculation	97
a) <i>Expenditure "for" rather than "in" a region</i>	97
b) <i>Regional distribution of public expenditure</i>	97
c) <i>London's contribution to UK tax revenue</i>	99
Bibliography	102

Foreword

Michael Snyder
Chairman, Policy and Resources Committee
City of London

The London economy is pivotal to the health and success of the wider UK economy, underpinning and securing investment and jobs throughout the nation. Since 1993 the City of London Corporation has commissioned independent research to quantify London's economic success in both its regional and national context. This year we commissioned Oxford Economic Forecasting to re-evaluate and measure *London's Place in the UK Economy* and their findings clearly demonstrate London's immense – and growing – contribution to the UK's economic and financial well-being.

Redistribution of resources to other regions through the tax system is understandable, but Londoners continue to face a very high tax bill, providing between 17% and 19% of UK government revenues (£76-£87 billion) in 2004/05 (depending on whether a residence-based or workplace-based calculation is used). Yet London only makes up 12.5% of the total population. Certainly London receives a high share of public spending: between £67 billion and £71 billion, or between 13.6% and 14.4% of total UK spending in 2004/05. This may appear relatively high in population terms, but it is not so when measured in terms of employment or GDP. Such expenditure can be more than justified by the need to maintain a successful capital city, which demonstrably and quite rightly benefits the rest of the UK.

Central to the report is therefore the scale of the net contribution of the London economy to UK public finances. Depending on the method of calculation used, London directly contributed between £6 billion and £20 billion to the UK Exchequer in 2004/05, with a mid-point net contribution of £13.1 billion. This compares with a mid-point net contribution of £12.2 billion in 2003/04. As the overall UK budget deficit has continued to increase, London's surplus has become even more vital to the nation's economic health. In this context, it is also important to remember that London plays a key role in the domestic economy as a trading partner with other regions. In 2005, for example, it imported over £110 billion of goods and services from the rest of the UK.

This year's report demonstrates that London's economy has grown strongly, despite weaker growth nationally, driven in large part by the strength of the financial services sector. It is estimated that London will continue to outperform the UK average growth rate next year. The report notes, however, a number of structural issues that continue to prevent even faster economic growth and which are likely to become more critical in the future as London's population growth accelerates.

Key concerns include London's high unemployment rate, which is most acute in the inner London boroughs, as well as the affordability and supply of housing, and our over-stretched transport infrastructure. Clearly, if London is to continue to contribute to the wealth of the nation, further investment must be made available to upgrade and enhance London's physical infrastructure to accommodate population growth and sustain economic development.

London's Place in the UK Economy 2006-07 also contains a special chapter identifying significant issues for the future. It provides a balanced view of the capital's education and training needs, highlighting London's skill shortages and gaps. With London at the forefront of the knowledge economy, the research also analyses how the city benefits from the presence of a number of world-class universities. Finally, the chapter looks ahead to the challenges in maximising the benefits of the proposed development of the Thames Gateway. While this area has tremendous potential to absorb the pressures associated with London's rapid economic growth, achieving the goals will be difficult. Many of the housing and retail developments are dependent on significant infrastructure improvements which will place yet more strain on the scarce resources available.

The overall picture painted by this report is at once positive and challenging. The relationship between London and the rest of the UK is a constructive, two-way process, which benefits not just London and the regions, but the nation as a whole. For it to continue to grow and prosper, we must continue to work hard to ensure that its contribution is not just recognised by policy makers, but also supported by ongoing investment and effective management of the public realm.

*Michael Snyder
London
November 2006*

Executive Summary

London is at forefront of UK economic growth...

- **The strength of London's economy has been very apparent over the past year**, after a period when the potential for recovery was clear but there was less hard evidence. Overall, the number of employees in London in mid-2006 was 1.2% higher than a year earlier, the fastest rate of growth since 2000 and well ahead of that for the UK as whole. We estimate GDP growth in London of 3.9% in 2006, compared with 2.6% for the UK as a whole.
- **Financial services have clearly played a large part in driving the acceleration in London's growth**, with stock markets, M&A activity and profitability all strong over the last 18 months. London is far more dependent on financial services than any other region of the UK, accounting for over 40% of the country's financial services industry. With financial services now directly contributing over 9% of UK GDP, compared with only 7% 10 years ago and less than 5% in 1980, the success of London's City cluster is increasingly important in determining the performance of the economy as a whole. The recent rapid growth of financial services has helped also to boost employment in business services in London, which is estimated to have risen by 2.7% over the last year, its strongest since 2000.
- **London's growth has also been bolstered by strong international immigration.** It is estimated that net international migration to London was 126,000 in 2005, more than half of the UK total. London is benefiting from large inflows of skilled professional and managerial workers, as well as from lower skilled workers who have helped to ease potential labour shortages in the retail, hotels & catering, and transport sectors.
- We expect to see a modest slowdown in London's economy next year, in response to higher UK interest rates and weaker growth in both the US and Eurozone economies. The fundamentals of both the London and UK economies remain very healthy, however, and employment in London is still expected to rise by 0.8% in 2007, with GDP expected to grow by 2.9% in London compared with 2.3% in the UK as whole.

...and remains highly competitive

- London occupies a unique competitive position in the UK economy, with high costs being more than offset by other factors making it a very attractive location for high value-added, internationally-traded services. **Gross value added per job was 26% higher than the national average in 2005.** In part, this reflects the specialisation of the London economy in a range of high productivity service sectors - most notably in financial, insurance, legal and accounting services, and in media activities (e.g. advertising, TV, radio and film). However, London's productivity is relatively high in all of the major sectors, including construction, transport & communications, and distribution.
- **London's high value added economy both depends on and prospers its highly skilled labour force.** London both attracts skills and talents through migration and allows people to develop those skills in highly productive activities. In 2005 nearly one-third (32%) of London's workforce possessed degrees or higher education qualifications (NVQ level 4 and 5) as their highest educational attainment. This compares with just over a quarter for the rest of the UK.

- London's unique position in the UK economy is reflected in its role as a "World City", competing on an international rather than a national stage. More FT Global 500 companies have their headquarters in London than any other city in the world, and nearly a third of all foreign exchange transactions are undertaken there.

Nevertheless, parts of London are continuing to under-perform...

- **Despite strong growth in the past two years, there are still areas of significant weakness.** In particular, London's unemployment rate as measured by the Labour Force Survey has risen to 7.9%, and is now the highest of any Government Office Region. These problems are typically most acute in the inner London boroughs, reflecting a complex mix of social and economic issues, and the interactions between them. Of the ten most deprived local authorities in the UK, five are in inner London.

...and there are pressures in accommodating London's growth

- London residential property prices remain the highest in the UK, with a renewed acceleration in London's house prices over the past year fuelled by higher bonus payments. With London's population projected to see further substantial growth, **affordability of housing is likely to remain a major issue**, affecting London's ability to attract and retain key workers.
- **The availability of new office space to meet the pressures of demand is important if rising rents and falling vacancies are not to threaten the competitiveness of London's economy.** Going forward, London's continued economic success is predicated largely upon on-going growth in business and financial services, which we expect in net terms to account for 90% of the increase in employment of 450,000 we are forecasting between now and 2016. These extra workers imply the continual need for significant new office developments. Prime locations in the City and the West End will continue to be sought after, but in the medium term development is likely increasingly to filter out to other areas of the city.
- London's **transport infrastructure** also remains a major challenge. The same is true of the **infrastructure needed to supply utilities to houses and businesses in London**, with worries over water shortages appearing to become a regular phenomenon in the region.

London is a major net contributor to the Exchequer

- **Public spending per capita in London is significantly higher than the UK average**, partly reflecting its relatively high unemployment and partly the unique urban nature of the region, with its large commuter belt, tourist industry and government/state functions. However, public spending per employed person in London is lower than the UK average.
- At the same time, **Londoners continue to face a very high tax bill**, accounting for 17-19% of government revenues (£76-£87 billion) in 2004-05, although they make up only 12.5% of the population of the UK.
- Overall, our estimates suggest that **London continues to be a substantial net contributor to UK public finances, by between £6 and £20 billion in 2004-05**, despite the further deterioration in public finances at a national level. The mid-point of the range of estimates implies that London made a net contribution of £13.1 billion to the Exchequer in 2004-5, up from £12.2 billion in 2003-4.

Skills and education are a key issue for the future...

- **London's specialised economy throws up many specific skill needs.** Survey evidence suggests that skill shortages are not currently a major constraint on the London economy, either when compared with other parts of the UK or with other international centres – though the proportion of firms in London & the South East reporting that skill shortages are likely to be a limiting factor on output over the next three months is running a little ahead of their average values for the period since the mid-1990s.
- Nevertheless, the most comprehensive picture of how the availability of skills matches with employers' needs suggests for 2005 that **London is less hampered by skill shortages and gaps than almost all of the other regions.** It is likely that London's favourable experience in relation to skill shortages in this most recent period is at least partly a consequence of the very rapid levels of net immigration that the UK has been experiencing since the Accession States joined the EU in mid-2004, with London acting as a key entry point.

...including for London's universities

- **London benefits from the presence of a number of world-class educational institutions** that score highly in their ability to attract academic staff, students and research monies. But not all of London's universities are near the top of the league tables. A high productivity, high cost location is not necessarily ideal for a university location, even if it facilitates the two-way flow of ideas and research monies between the economic base of the city and its universities. While the tier of prime universities and institutions in London seem well-placed to meet increasing domestic and global competition, there may be issues related to the organisational and management structure of London's universities, with many small units lacking the financial muscle to match that of the most powerful institutions worldwide.

There are also challenges in maximising the benefits of Thames Gateway...

- **Success in meeting the goals of the Thames Gateway will provide London with the additional people and space that it needs** to keep cost levels under control and to maintain its position as a leading world city and the dynamic core of the UK economy. However, achieving the goals will be challenging. The infrastructure projects, including the Olympic venues, will place yet more strain on the scarce resources available in the construction sector, while many of the housing and retail developments will be dependent on these infrastructure developments. Delays in planning and execution of the major infrastructure and transport projects could in turn undermine the housing and related projects that are urgently required to improve the supply and affordability of London's housing and, in turn, facilitate the continued expansion of the city's labour supply.
- **Just as challenging will be lifting the economic performance of the lagging wards in the Thames Gateway.** With a high proportion of inactive working age people and relatively poor levels of educational attainment, the issues are similar to those facing the deprived areas of the UK's old industrial towns and cities, with the additional impact of a high proportion of new arrivals to the UK.

...while London's environmental record raises issues

- **The geographical concentration of economic activity in London means that it has a significant impact on the environment:** water quality and air quality indicators are worse than the UK average, while the amount of waste produced per head is second only to the South East. Efforts are being made to increase recycling,

which compares unfavourably with other regions – perhaps affected by the difficulties of arranging kerbside collections of recyclable material for those living in flats and the relatively high proportion of number of households without gardens for composting.

London set to be major jobs creator over the next decade

- **Overall, our assessment remains that London is well-placed to prosper over the next decade.** To some extent this reflects London's unique competitive position in the key exporting private service sectors that we expect to drive UK economic growth. This favourable sectoral balance provides a strong stimulus to future jobs in London. There is also still a degree of spare capacity in the London economy, despite the more rapid employment growth of the past two years, which facilitates the city's renewed expansion. Moreover, London continues to be a magnet for international migration, which adds both to the labour pool available to London's employers and to the level of demand in the economy, thereby stimulating employment opportunities. As a result, we expect London to create an extra 600,000 net jobs by 2016.
- **Our forecast shows a continuing significant strong impact on population from international migration.** London's population is projected to continue to grow at a similar rate to that seen over the past ten years, in marked contrast to the falling population seen during the 1970s and 1980s. Without this influx of people, there would be an impact both on the level of demand in London and the ability of employers to attract the staff they want in a variety of different occupations, including investment bankers and doctors as well as catering and hotel staff and office cleaners. Equally, London's success in meeting the challenges of rising population and employment cannot be taken for granted, and could be undermined by potential structural constraints, notably in transport, housing and utilities.

1. Introduction

This report is the latest in a series of annual reports commissioned by the City of London to look at London's place in the UK economy, how this has been evolving and how it is likely to develop in the future. This potentially covers a very wide range of issues, and the approach we have adopted here as in previous years is to focus on a limited number of specific subjects of importance in determining London's place in the UK economy, alongside our latest assessment of London's economic performance and how much London contributes to UK public finances.

This report is organised as follows:

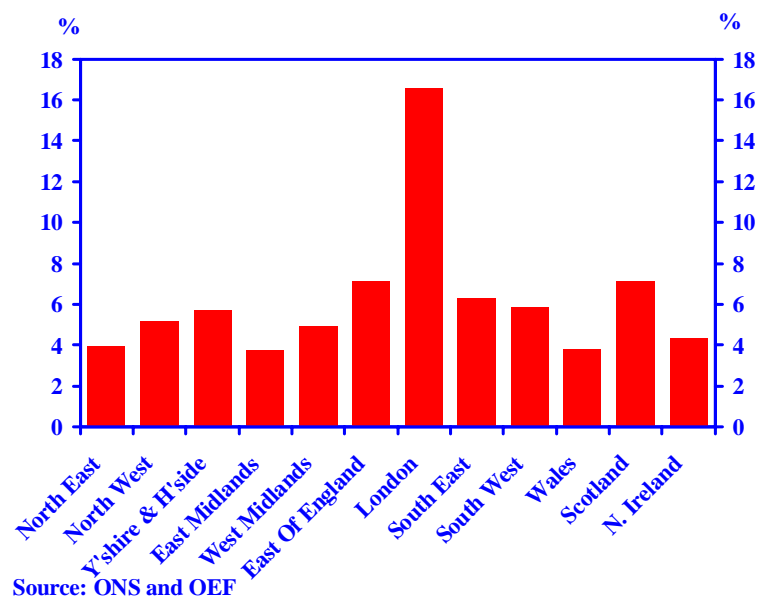
- Chapter 2 sets out some key recent developments in London and issues they raise about London's place in the UK economy;
- Chapter 3 provides context on the shape of London's economy, how it is changing, and short-term economic prospects for London;
- Chapter 4 looks at the competitive position of the London economy, including the key activities in which London specialises, the skills and productivity of the London workforce, and the impact of company mobility on London through outsourcing and inward investment;
- Chapter 5 focuses on some structural issues facing the London economy, including the contrasts and diversity between different parts of London's economy, and potential constraints on London's economic growth from physical space limits, transport infrastructure and the availability of utility services;
- Chapter 6 analyses London's contribution to UK public finances, both in terms of public spending and in terms of taxes raised;
- Chapter 7 covers some topical key issues for London's future – London's skill needs; the competitive position of London's higher education institutions; the re-development of the Thames Gateway; and London's impact on the environment;
- Finally, Chapter 8 offers some conclusions on the long-term outlook for London.

2. Key recent developments in London and the issues they raise about London's place in the UK economy

The strength of London's economy has been very apparent over the past year, after a period when the potential for recovery was clear but there was less hard evidence. Overall, the number of employees in London in mid-2006 was 1.2% higher than a year earlier, the fastest rate of growth since 2000 and well ahead of that for the UK as whole. Similarly, anecdotal evidence about recruitment rates and the take-up of office space points to a return to strong growth. We estimate GDP growth in London of 3.9% in 2006, compared with 2.6% for the UK as a whole.

Financial services have clearly played a large part in this, with a recovery in stock markets, M&A activity and profitability - London is far more dependent on financial services than any other region of the UK. The strength of City bonuses earlier this year reflects better times in the financial services sector, with an estimated jump of 16% in bonus payments this year to a record £19 billion.

Chart 2.1: Contribution of financial services to total output by region (2003 data)



The importance of financial services in London means that it accounts for over 40% of the UK's financial services industry, and an even higher proportion of the export-earning potential of the sector. With financial services now accounting for over 9% of GDP, compared with only 7% ten years ago and less than 5% in 1980, the success of London's City cluster is a key driver of economic growth in the UK.

Chart 2.2: Financial services output (2000=100)

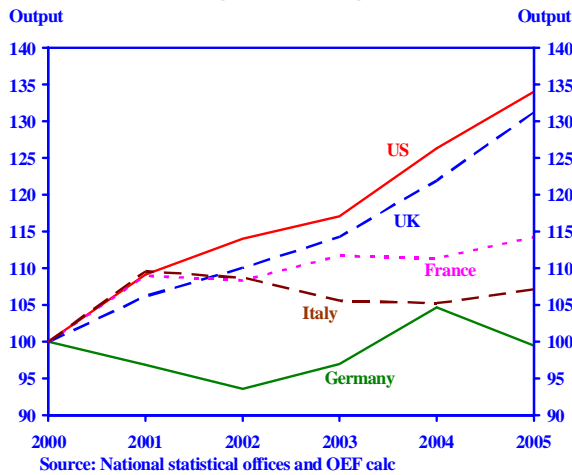
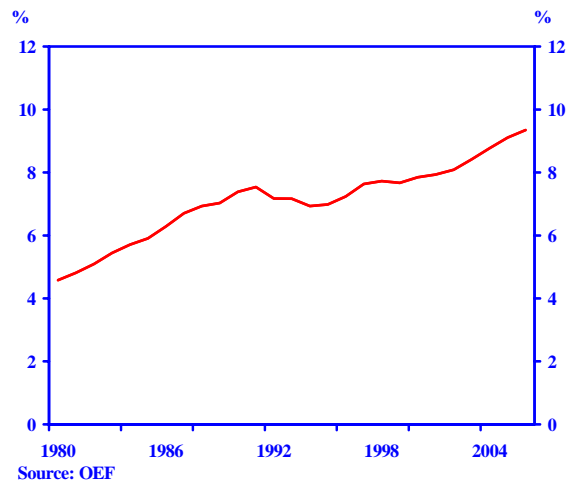


Chart 2.3: Financial services output as a share of GDP



Alongside this, London continues to be a key destination for international immigrants coming to the UK. Given the scale of recent net immigration, it is not surprising that this has had an important impact on London's economy – net working age international migration into London last year was 126,000, the highest recorded (with data going back to 1981).

Given these developments, it is perhaps not surprising that both house prices and commercial rents have risen more rapidly in London over the past year than the average across the UK as a whole, raising the issue once again of potential constraints in accommodating London's growth. These are far from the only potential constraints on growth, of course – this report also discusses issues around the transport system and utilities supply.

More fundamental to London's place in the UK economy, however, is maintaining the competitiveness of London in an international, rather than just a national, context. Judged in terms of success in exporting compared with other key economies, the UK's financial services industry is the most competitive part of the UK service economy (Table 2.1), and this underpins our forecast of strong economic growth in London over the next five years. Such a positive outlook would be at risk, however, if physical constraints were to threaten the underlying competitiveness of London's internationally successful financial and business service companies.

Table 2.1: Relative international competitiveness of services
(revealed comparative advantage (RCA) in services exports¹)

	UK	US	Japan	Germany
Financial	3.8	1.4	0.5	0.4
Insurance	3.2	0.7	0.1	1.1
Computer & information	2.6	0.9	0.3	1.3
Other business services	1.8	1.2	0.6	0.7
Communications	1.5	1.2	0.3	0.7
Personal, cultural & recreational	1.3	2.0	0.1	0.3
Transport	1.2	1.1	1.2	0.8
Royalties & licence fees	1.1	2.3	1.2	0.2
Travel	0.9	1.4	0.3	0.7
Government, n.i.e.	0.9	2.1	0.4	1.1
Construction	0.1	0.6	1.8	1.7

Source: *HMT*²

¹ Figures are calculated by taking the country share of sector exports in the country's total exports divided by the G7 share of sector exports in G7 total exports. A value greater than 1 indicates that the country has a comparative advantage in that sector.

² *Productivity in the UK 6: Progress and new evidence*, H.M. Treasury 2006.

3. The London economy: the context

Chapter 2 has already illustrated the unique nature of London's economy within the UK in terms of the importance of the contribution of financial services' to GDP. This chapter looks more generally at the shape of London's economy, both in terms of key long-term trends and more recent developments in the balance of economic activity. It also presents our forecast for London's short-term economic prospects, and discusses some of the ways London's economy influences the rest of the UK.

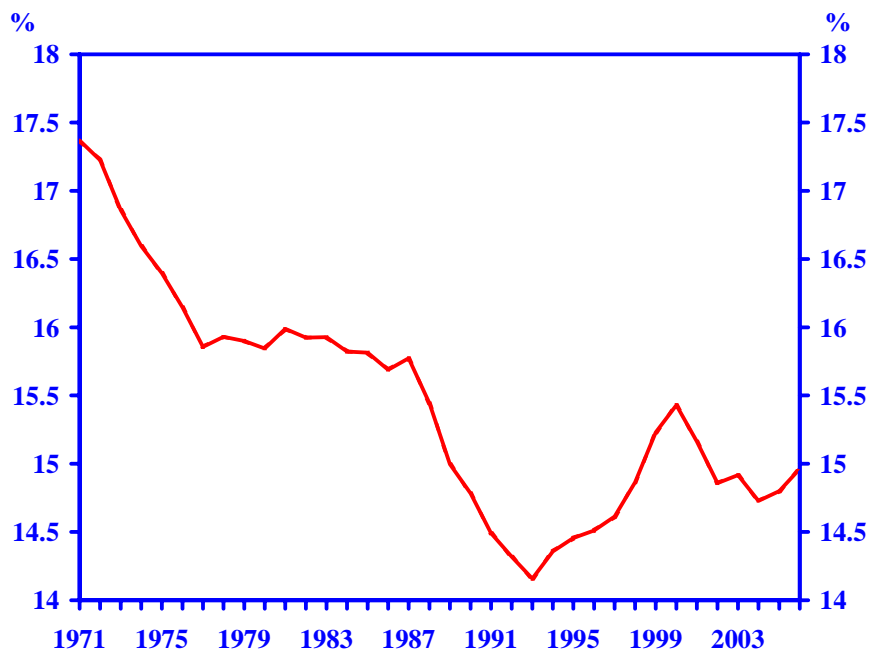
3.1. How is the London economy changing?

a) Key long-term trends

London has been a key source of growth in the UK economy over the past decade. In this respect, London's recent economic performance is in sharp contrast to the experience of much of the post-war period. For nearly 40 years London lost both people and jobs, much of it due to planned decentralisation. Even after the abandonment of such planning in 1977, the trend remained predominantly downward until 1993.

The turnaround since then has been remarkable, and has transformed London's place in the UK economy. In the thirteen years since the trough in employment in 1993, over 800,000 extra jobs have been created in London, allowing all of the jobs lost since 1971 to be replaced. The growth since 1993 means that London now employs 4.6 million people, or 15% of the UK total. There has been a similar turnaround in terms of population. Although the decline in the number of people living in the capital stopped in the early 1980s, rapid growth did not begin until the mid-1990s, since when London's population has risen by nearly 700,000 (about 10%).

Chart 3.1: London employment as share of UK



Source: OEF

This turnaround in employment and population has been achieved despite a huge shake-out of manufacturing. Thirty years ago, close to one in four workers in London were employed in manufacturing industry. One seventh of UK manufacturing production was also located in London, and manufactured products comprised London's main source of export earnings. Since then, manufacturing output and employment have fallen greatly, as industry has contracted and decentralised. Today manufacturing employs just 230,000 people in London, 5% of its total employment, compared to around 1 million in 1971. Of course, the UK as a whole has also seen a very large shake-out of manufacturing jobs over this period. This has amounted to around three-fifths of the number employed in 1971, however, rather than over three-quarters, as in London. Much of what is left of London's manufacturing is in activities which rely on face-to-face contact, a need for fast-changing information, or else serve local markets - over 40% of manufacturing employment is in printing and publishing.

Table 3.1 London's jobs by sector (% of all jobs in London)				
	1971	1981	1991	2001
Manufacturing	22.5	16.2	9.3	6.5
Other production (inc. construction)	7.6	7.0	6.3	5.1
Distribution & hotels	19.7	20.7	20.5	20.9
Transport & communications	10.9	10.1	8.6	8.0
Financial & business services	15.9	19.1	27.2	33.0
Non-market & personal services	23.1	26.6	27.8	26.5
<i>Memo: UK shares</i>				
Manufacturing	30.5	23.6	17.4	13.7
Other production (inc. construction)	12.9	12.0	10.7	8.6
Distribution & hotels	19.4	21.4	22.5	23.2
Transport & communications	6.9	6.4	5.9	6.2
Financial & business services	9.0	11.3	15.6	19.3
Non-market & personal services	20.3	24.4	27.1	28.5

Source: ABI and LFS

At the same time, London has continued to develop as the principal international financial centre in Europe, home to one of the world's three largest financial markets alongside New York and Tokyo. Perhaps even more striking has been the way that business services have developed in London. This broad range of activities - which includes accountancy, law, advertising, consultancy, computing, R&D, recruitment, security and office cleaning amongst a host of other services - has been the most important source of employment growth in the UK over the past thirty years, with 2¾ million more employees in 2006 than in 1971. London has attracted over half a million of these new jobs.

b) Recent changes in London's economy

The rapid growth London enjoyed through the 1990s – which was driven primarily by the strong expansion of the financial and business services sector – was brought to an end by the collapse of the high-tech boom and its impact on global financial markets. Between 2000 and 2002, nearly 100,000 net jobs were lost in London. Since then, though, there has been a return to jobs growth in London, which in the past year has exceeded the rate of growth across the UK as a whole.

Just as financial and business services contributed most to the late-1990s employment boom, they also contributed the lion's share of the jobs shake-out that followed, with 60,000 fewer jobs by 2002 than in 2000. Although these sectors still account for a lower share of London employment than they did in 2001 (Table 3.2), they are now clearly expanding again and it may not be long before the 2001 share is exceeded.

	2001	2005	2006
Manufacturing	6.5	5.2	5.0
Other production (inc. construction)	5.1	4.7	4.8
Distribution & hotels	20.9	20.4	20.1
Transport & communications	8.0	7.8	7.9
Financial & business services	33.0	32.2	32.5
Non-market & personal services	26.5	29.8	29.7

Source: OEF estimates

3.2. Short-term economic prospects

Last year's report on *London's Place in the UK Economy* noted that London's employment growth was no longer lagging the economy as a whole, and looked forward to a time when London would return to robust growth, even though recent economic indicators at the time were mixed. This year, it looks clear that the recovery in London's economy has happened. Overall, the number of people employed in London in mid-2006 is estimated to have been 1.2% higher than a year earlier, the fastest rate of growth since 2000.

Evidence from the property market supports this conclusion. Vacancy rates in 2006Q2 fell to the lowest for over five years according to RICS, with Savills reporting central London office vacancy rates of 7% and FocusNet reporting 6% - almost half their levels in 2003. Consequently, most agents report double-digit rental growth.

Financial services have clearly played a large part in this, with a recovery in stock markets, M&A activity and profitability. The strength of City bonuses earlier this year reflects better times in the industry, with an estimated jump of 16% in bonus payments this year to a record £19 billion. Financial services employment rose in 2006 after three years of falls, with its fastest growth since 1999. Even more important across London as a whole, business services employment grew at an estimated 2.7%, slightly faster than in 2005 and much higher than the four years previously.

The Purchasing Managers' Index of business activity in London showed the strongest rate of jobs growth for more than five years in July. Although it was a bit weaker in September, it was still stronger than in most of the period since 2000, and also above that in any other region. Similarly, business activity rose for the thirty-ninth consecutive month and order books continued to rise, pointing to a continuation of growth. At the same time the CBI reported rising confidence amongst London businesses for the first time in over two years, and the HBOS labour market index for London also points towards continued employment growth with financial services leading the way.

These tentative signs may, however, be reversed as a result of the interest rate increase in August and expectations of further rate rises in response to the inflationary concerns expressed by the Bank of England. We expect this monetary tightening, coupled with weaker growth in the US and the Eurozone, to induce a modest slowdown next year. The fundamentals of both the London and UK economies remain very healthy, however, and employment in London is still expected to rise by 0.7% in 2007, with GDP expected to grow by 2.9% compared with 2.3% in the UK as a whole.

	2004	2005	2006	2007	2008	2009
Employment (000's)						
Primary	12	13	15	12	12	11
Manufacturing	249	233	230	222	214	206
Construction	210	199	206	216	230	242
Wholesale distribution	227	227	233	234	234	233
Retail distribution	380	382	385	386	387	388
Hotels & catering	313	305	302	301	303	310
Transport & communications	338	349	360	360	362	363
Financial services	350	345	355	362	371	378
Business services	1063	1100	1133	1173	1213	1246
Public admin.	233	237	237	235	233	231
Health & education	699	725	741	750	763	776
Other services	361	377	384	390	397	403
Total employment	4441	4483	4562	4617	4688	4759
Population	7429	7518	7600	7678	7753	7826
Total GDP(basic prices, £2002bn)	186.8	190.9	198.2	204.1	211.4	219.1
% change on previous year						
Total employment	-0.4	1.0	1.8	1.2	1.5	1.5
Population	0.6	1.2	1.1	1.0	1.0	0.9
Total GDP(basic prices, £2002bn)	3.2	2.2	3.9	2.9	3.6	3.6

3.3. London's influence on the rest of the UK economy

Greater London accounts for a larger share of the UK's economy than any other Government Office Region, directly contributing about 19% of GDP and 15% of total employment. London has also been a key source of growth in the UK economy over the past decade. The various ways in which London's economy complements and supports the economy of the rest of the UK were discussed in an earlier report by OEF for the City of London in 2004.³ Most obviously, these include trade links – for example, firms based outside London supplying goods and services to London's consumers and businesses - and employment links – for example, people who live in the rest of the UK commuting into London for work. Using the methodology in that report, our latest calculations show that London spent around £113 billion on goods and services imported from the rest of the UK in 2005, up from £110 billion in 2004 and £108 billion in 2003.

Financial and business services account for the largest share of London's imports from the rest of the UK, but these are substantially less than London's exports of these services to other parts of the country. As might be expected, London is heavily dependent on the rest of the UK for the supply of goods, with manufactured items accounting for almost as many imports to London from the rest of the UK as financial and business services, and more than three times as much as the manufacturing output London sells to other parts of the UK.

Sector	Imports (£ billion)
Agriculture	3.0
Mining and quarrying	2.2
Manufacturing	39.2
Electricity, gas and water supply	3.5
Construction	11.2
Wholesale and retail trade	6.2
Transport and communication	2.7
Financial & business services	43.6
Other services	1.2
Total	112.9

Source: OEF estimates

While such links are important in their own right, there are other linkages that can be loosely described as facilitating, dynamic or catalytic in their effect, related to making things happen in the rest of the UK that would not otherwise occur but for the presence of London. One example of such catalytic effects is the spending in the rest of the country by foreign tourists who would not have visited the UK but for the attraction of London. Another is the jobs located in regions outside London that support the activities of the City's international banks - organisations that, if they were not in London, would probably be in Frankfurt or New York rather than elsewhere in the UK. The next chapter looks more specifically at how well London competes with such international cities, as well as with other parts of the UK.

³ *London's Linkages with the Rest of the UK*, Corporation of London, May 2004.

4. The competitive position of the London economy

London occupies a unique competitive position in the UK economy, with high costs being more than offset by other factors favouring the location of high value-added, internationally-traded services. This chapter looks at key issues affecting the competitive position of the London economy. This includes an analysis of the key activities in which London specialises, the skills and productivity of the London workforce, and the impact of company mobility through outsourcing on the one hand and inward investment on the other, as well as London's special position as a World City.

4.1. London's sectoral specialisms and key business clusters

Specialisation lies at the heart of economic success. Producing specialist goods and services that are difficult to replicate, are in great demand and which generate trading surpluses provides a firm base for prosperity. London's economy is driven by its success in a number of specialised activities, which in turn underpin the high levels of productivity achieved by workers in London and the wealth generated by London. It is London's specialist activities that make the city such an asset to the UK and provides opportunities for people and businesses in the other regions of the country.

To see the specialist sectors as the leaders, and the supporting activities as the led, however, misses the important inter-relationship or symbiosis between the two. Without successful and competitive support activities – both in London and elsewhere in the UK – it is highly unlikely that the city would remain home to these specialist activities, most of which are highly mobile across international boundaries. In examining the ways in which London differs from the rest of the UK, or indeed from other European or capital cities, it is important to recognise that the city functions as an integrated entity and that highlighting and categorising its specialisms does not mean that other activities are somehow unimportant or necessarily in decline.

One way of illuminating specialisms is to calculate how the share of an area's employment in an activity differs from that of the nation as a whole. Thus if a region has a high proportion of its workforce employed in financial services relative to the nation as a whole then that is evidence of specialisation in that sector. But such a simple measure misses some of the subtleties of specialisation – particularly given that:

- Some activities by their very nature offer more scope for geographical specialisation than others, where local production for local needs is likely to be much more the norm.
- The aggregative nature of the available data can mask the presence of true specialisms that are particularly location-dependent.

For example, there is a considerable difference between, on the one hand, a sector where London is one of a sub-group of regions that between them account for a high proportion of employment in the sector in the UK, and, on the other hand, a sector where London has a high proportion of employment but where there is little variation in employment proportions across the other regions. In the former case there is evidence that the sector provides reasonable scope for specialisation for a minority of regions which possess the special characteristics to be competitive in the activity. Mining is a classic example of this type of specialised activity, where the presence or absence of plentiful mineral resources accounts for the concentration of the industry in one region rather than another. In the latter case there is a suggestion that the region's specialisation is more unusual – maybe (given the inevitably aggregate nature of the

data) the result of additional activities falling within the same broad sectoral definition, in what otherwise appears to be a locally driven industry.

Chart 4.1 distinguishes among these different types of specialisation by measuring both the degree of specialisation and its variability across the regions that are being compared. (The percentages in brackets show the distribution of London’s employment in 2004.) Activities that fall within quadrant A represent those which are widely and relatively evenly spread through the UK, but where London can be said – in varying degrees – to be specialised in something different within the activity. A good example from this quadrant is legal services. Legal services are present relatively uniformly in all regions. However in addition to the legal services it requires to service local demands, London is also home to legal services serving specialist markets such as corporate finance or international companies. It is these specialist activities rather than the base-load legal services that represent London’s true edge within the sector.

The activities in quadrant B combine a degree of specialisation and an above-average degree of variability of specialisation levels across all regions. This is more akin to the classic definition of specialisation, and activities in this quadrant can be viewed as London’s most competitive sectors: London possesses something – in terms of organisations, skills and customers – in which few, if any, other regions in the UK have a real presence.

Quadrant C can be seen as predominantly locally-driven activities. Finally, quadrant D typifies activities whose location is discretionary and where London does not appear to enjoy particular competitive advantages, and in the case of a very low index for London activities where London can satisfy its needs from the rest of the UK.

Chart 4.1: Distinguishing specialisation

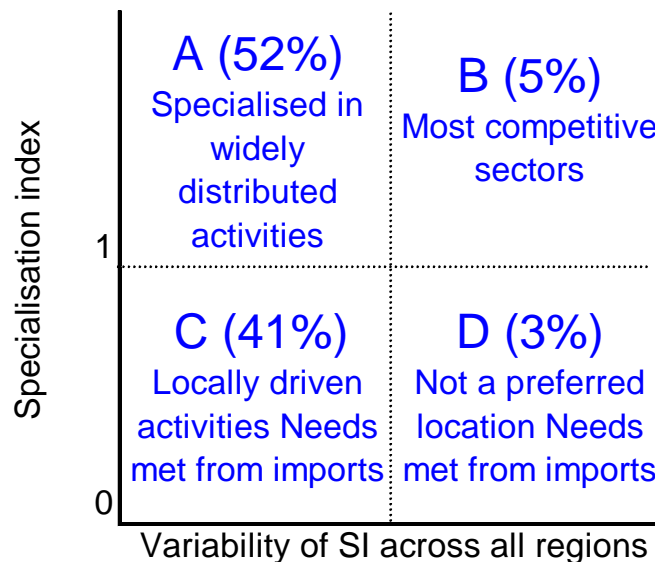


Chart 4.2: Key London activities by quadrant

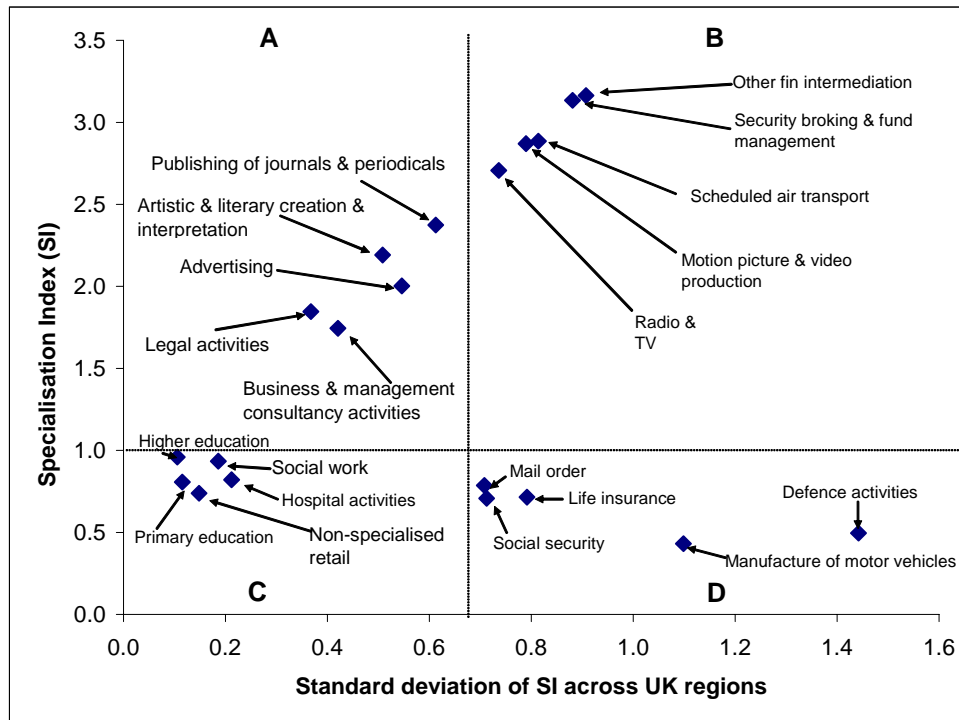


Chart 4.2 identifies key activities in each of the quadrants identified in Chart 4.1. London's key specialisms emerge as its capital markets, its role as an air transport hub and the home it provides for UK and international media. Other activities that fall in this "most competitive" category are related to these three areas, with centralised government functions – central banking and foreign affairs – and some specialist manufacturing ranked highly in terms of the degree of London's specialisation. In total this most competitive category accounted for 208,000 jobs in 2004, up from 206,000 in 2003, accounting for 5% of the total.

As shown in Table 4.1 the list of activities falling into London's specialities within relatively widely-distributed activities (quadrant A) is much larger than the list of specialities within more generally concentrated activities, embracing much of the business services sector, some financial services activities and activities related to London's cultural capital role. With 2.0 million jobs these activities accounted for 52% of all employment in London in 2004, down from 2.1 million in 2003. This is some 616,000 greater than if London had average UK employment shares for these activities.

It is worth bearing in mind, though, that the distinction between quadrants A and B to some extent depends on the degree of disaggregation in the data. A finer disaggregation of the data on, say, legal or accountancy employment, would reveal that, although broad business services activities are relatively widely distributed across UK regions – leading to the classification of London's specialisms here into quadrant A – if the sectors were defined at a more detailed level then a number of smaller sectors would also be revealed as of highly varying size across regions, leading to additional activities being classified to quadrant B for London rather than to A.

There are some surprising omissions from London's specialisms identified from the employment data. London has a number of world class universities and colleges (see Chapter 7.2), and specialist hospitals. Nevertheless, employment in London in both

higher education and hospitals is below the average proportion for the UK as a whole. This reflects the extent to which London's workforce commutes into the city, with their needs in terms of publicly-funded services provided where they live rather than in the city itself, and to a lesser extent cost pressures in some areas of higher education. Thus, relative to the total number of jobs, London appears under-represented in these activities. If resident population were used as the base or if more fine-grained data were available then a different picture would emerge.

Specialisms change over time. Indeed, successful economies are adept at moving from one set of activities where they have comparative advantage to another as the economic environment and related technologies change, though there are also some constants that, once established, tend to endure. There are recent specialisms – in digital imagery for films, for example, that have only emerged in the past decade, while other media specialisms have disappeared from London over time. For example, many of the activities associated with how newspapers used to be printed can hardly be found in London anymore. Some other sectors have been over-represented in London for a very long time – central banking has been a London specialism for hundreds of years and air transport for fifty years. The continual renewal process as old specialisms are replaced with new ones makes it difficult to be precise what London's key specialisms will be in a decade from now. But the city's success in re-inventing its role in new high value-added activities over a long period suggests that London will continue to specialise in challenging activities that feed off the concentrations of people and knowledge that London brings together and that generate sufficient value-added to justify a high-cost location.

Table 4.1: Specialisation in London

A: London's specialities within widely distributed activities		B: London's most competitive sectors	
<i>Activities with more than 3,000 employees in 2004 – ranked by specialisation index</i>	SI*	<i>Activities with more than 1,000 employees in 2004 – ranked by specialisation index</i>	SI*
Activities of professional organisations	2.47	Central banking	3.79
Publishing of journals and periodicals	2.37	Motion picture and video distribution	3.37
Publishing of books	2.33	Security broking and fund management	3.16
Artistic and literary creation and interpretation	2.19	Publishing of sound recordings	3.16
Wholesale of perfume and cosmetics	2.17	News agency activities	3.15
Other supporting land transport activities	2.15	Other financial intermediation nec	3.13
Activities auxiliary to financial intermediation nec	2.13	Foreign affairs	3.12
Activities of trade unions	2.07	Administration of financial markets	3.09
Activities of business and employers organisations	2.06	Scheduled air transport	2.89
Advertising	2.00	Motion picture and video production	2.87
Activities of religious organisations	1.98	Reproduction of video recording	2.86
Market research and public opinion polling	1.97	Radio and television activities	2.71
Operation of arts facilities	1.96	Reproduction of sound recording	2.03
Legal activities	1.85	Manufacture photographic chemical material	1.96
Transport via railways	1.80	Manufacture of jewellery and related articles nec	1.65
Business and management consultancy activities	1.74		
Publishing of newspapers	1.73		
Other scheduled passenger land transport	1.72		
Accounting, book-keeping & auditing activities; tax consultancy	1.70		
Management of real estate on a fee or contract basis	1.68		
Wholesale of clothing and footwear	1.65		
Data base activities	1.64		
Other supporting air transport activities	1.63		
Other entertainment activities nec	1.60		
Management activities of holding companies	1.57		
Activities auxiliary to insurance and pension funding	1.57		
Photographic activities	1.57		
Other monetary intermediation	1.54		
Manufacture of other outerwear	1.53		

* *Specialisation Index*
nec - not elsewhere classified

Source: OEF analysis of ABI

4.2. The skill base of London's labour force

London's high value-added economy both depends on and prospers through its highly skilled labour force. London both attracts skills and talents through migration and allows people to develop those skills in highly productive activities. Some of this skill – and experience – base then flows out to the rest of the UK and internationally through reverse migration flows of older workers.

The specialisms of the London economy identified in the preceding section are typically large employers of those with high levels of educational attainment engaged in creative, knowledge-intensive tasks. As a result, London's resident workforce contains a much larger proportion of graduates than is the case for the UK as a whole. As shown in Table 4.2, in 2005 nearly one third (32%) of London's workforce possessed degrees or higher education qualifications (NVQ level 4 and 5) as their highest educational attainment. This compares with just over a quarter for the rest of the UK. Thus, London's population contains 15% of UK residents with a higher education compared with its weight of only 13% of the overall workforce. At the most highly qualified post-graduate level the figures are even more stark – nearly one in thirteen of London's resident workers has gained a post-graduate qualification, with 20% of the UK's highest attainers in terms of education in the London workforce.

This over-representation of graduates in the London workforce does not, however, translate into an equal under-representation across all other levels of educational attainment. Indeed, London has a very similar proportion of poorly qualified workers as the UK as a whole, with the proportion of London's workforce with no qualifications almost the same in London and the rest of the UK. It is in the mid-range of educational attainment (NVQ levels 3 & 2) – broadly equivalent to possessing one or more A-levels or five or more GCSE at grades A*-C at the end of education – that London's workforce compensates for an abundance of high attainers. For example, according to the data for 2005, there are nearly 30% fewer in the London workforce with level 3 qualifications than in the rest of the UK.

Table 4.2: London's workforce by highest qualification, 2005

	Degree or equivalent	Other higher education qualifications ⁴	GCE A level or equivalent	GCSE A*-C or equivalent	Other	None
Share of workforce						
London	26.1%	5.9%	17.2%	17.1%	18.5%	14.2%
Rest of the UK	16.4%	8.8%	24.5%	23.7%	11.7%	14.1%
% point difference	9.7%	-2.9%	-7.3%	-6.6%	6.8%	0.1%
Number by qualification						
London (000s)	870	197	573	570	617	473
London's share of UK total	18.2%	8.7%	9.0%	9.2%	18.2%	12.4%
Relative to working age population (UK=100)	148	71	73	75	148	101

Source: *Regional Trends 39, May 2006*

⁴ Higher education qualification below degree level includes NVQ level 4, higher level BTEC/SCOTVEC, HNC/HND, RSA Higher diploma and nursing and teaching qualifications.

a) Londoners are more likely to be professionals and managers...

High levels of educational attainment in the resident London workforce are reflected in the occupations carried out by Londoners. There is an over-representation of professionals, associate professionals and managers in jobs carried out by residents employed in London. For example, 16% of employees in London are classified as professional, compared with under 12% for the country as a whole. As described in Box 4.1, these occupations tend to require individuals with high levels of knowledge and to involve non-routine tasks. This non-routine, knowledge component of employment accounts for over half of all jobs in London, compared with the national figure of just over 40%.

The emphasis on knowledge-based occupations in London results in fewer process-driven jobs in the city, with process operatives, skilled trades, elementary occupations, sales and customer service representatives and personal service occupations all under-represented in London. Though it is outdated to equate skills solely with managerial and professional occupations, this snapshot of the occupational distribution of London jobs for residents is consistent with a picture of London as a centre that thrives on highly skilled labour working in a high cost, high productivity environment, where the benefits of proximity to other highly skilled groups outweigh the cost disadvantages.

Table 4.3 London's occupational structure, 2005

	London (000s)	Share of all employed (%)	London's share relative to UK (UK=100)
Managers & senior officials	605	17.6	119.7
Professional	552	16.0	128.0
Associate professional & technical	642	18.6	131.9
Administrative and secretarial	463	13.4	106.3
Skilled trades	262	7.6	67.9
Personal service	232	6.7	85.9
Sales and customer service	212	6.2	80.5
Process, plant & machine operatives	169	4.9	64.5
Elementary occupations	290	8.4	73.7

Source: *Annual Population Survey Jan 2005 – Dec 2005*

Looking at data on occupations at a finer level of disaggregation helps highlight occupational sub-groupings that are particularly important in London compared with the rest of the country (Table 4.4). London's presence in business services and corporate management shows clearly, with nearly twice as many business & public service professionals in London than would be the case if London shared the occupational structure of the UK as a whole. Similarly, there are around 50% more business & public service associate professionals, and 40% more corporate managers on this basis. However, it is in culture, medial & sports occupations where London's share of all UK jobs is greatest, with 2.3 times more jobs (5% of the total) than if UK averages prevailed in London. This illustrates both the strength of London's media cluster and the relative importance of cultural activities in the city, with the latter contributing both to its status as a world city and to the attractions of London as a place to work and live.

Box 4.1 How Are Occupational Classes Defined?

Managers & senior officials: This group covers occupations whose main tasks consist of the direction and coordination of the functioning of organisations and businesses. Most occupations in this group will require a significant amount of knowledge and experience of the production processes, administrative procedures or service requirements associated with the efficient functioning of organisations and businesses.

Professional: This group covers occupations whose main tasks require a high level of knowledge and experience in the natural sciences, engineering, life sciences, social sciences, humanities and related fields. The main tasks consist of the practical application of an extensive body of theoretical knowledge, increasing the stock of knowledge by means of research and communicating such knowledge by teaching methods and other means. Most occupations in this group will require a degree or equivalent qualification, with some occupations requiring postgraduate qualifications and/or a formal period of experience-related training.

Associate professional & technical: This group covers occupations whose main tasks require experience and knowledge of principles and practices necessary to assume operational responsibility and to give technical support to Professionals and to Managers and Senior Officials. The main tasks involve the operation and maintenance of complex equipment; legal, financial and design services; the provision of information technology services; providing skilled support to health and social care professionals; and serving in protective service occupations. Culture, media and sports occupations are also included in this group. Most occupations in this group will have an associated high-level vocational qualification, often involving a substantial period of full-time training or further study.

Administrative and secretarial: Occupations within this group undertake general administrative, clerical and secretarial work, and perform a variety of specialist client-orientated clerical duties. Most occupations in this group will require a good standard of general education. Certain occupations will require further additional vocational training or professional occupations to a well-defined standard.

Skilled trades: This group covers occupations whose tasks involve the performance of complex physical duties that normally require a degree of initiative, manual dexterity and other practical skills. Most occupations in this major group have a level of skill commensurate with a substantial period of training, often provided by means of work-based training programme.

Personal service: This group covers occupations whose tasks involve the provision of a service to customers, whether in a public protective or personal care capacity. Most occupations in this group require a good standard of general education and vocational training. To ensure high levels of integrity, some occupations require professional qualifications or registration with professional bodies.

Sales and customer service: This group covers occupations whose tasks require the knowledge and experience necessary to sell goods and services, accept payment in respect of sales, replenish stocks of goods in stores, provide information to potential clients and additional services to customers after the point of sale. Most occupations in this group require a general education and skills in interpersonal communication.

Process, plant & machine operatives: This group covers occupations whose main tasks require the knowledge and experience necessary to operate and monitor industrial plant and equipment; to assemble products from component parts according to strict rules and procedures and to subject assembled parts to routine tests; and to drive and assist in the operation of various transport vehicles and other mobile machinery. Most occupations in this group do not specify that a particular standard of education should have been achieved.

Elementary occupations: This major group covers occupations which require the knowledge and experience necessary to perform mostly routine tasks, often involving the use of simple hand-held tools and, in some cases, requiring a degree of physical effort. Most occupations in this major group do not require formal educational qualifications.

Source: *Standard Occupational Classification 2000*

	London employment	Share of all employed (%)	London's share relative to UK (UK=100)
Culture, media and sports occupations	193,000	5.0	231.2
Business and public service professionals	224,600	5.9	182.1
Business and public service associate professionals	300,600	7.8	147.8
Corporate managers	619,700	16.2	137.0
Health professionals	52,500	1.4	133.7
Secretarial and related occupations	155,200	4.0	127.5
Science and technology professionals	154,000	4.0	115.4
Protective service occupations	51,200	1.3	113.6
Managers and proprietors in agriculture & services	127,300	3.3	110.3
Leisure and other personal service occupations	76,600	2.0	107.0
Administrative occupations	382,400	10.0	104.4
Science and technology associate professionals	67,400	1.8	102.4
Teaching and research professionals	183,200	4.8	100.4

Source: *Annual Population Survey Workplace Analysis, September 2005*

b) ...but less growth in knowledge jobs than might be expected...

With this picture of the London economy, it is somewhat surprising to find that the short run of consistent time series data available shows that through the period of relatively weak employment growth in London from 2001 to 2004/05 it is skilled trades and process operatives that have made the biggest gains in job numbers in London relative to the experience in the rest of the country (Table 4.5). For example, given the experience in Britain as a whole, London could have expected to lose over 1,000 jobs in skilled trades. Instead London gained 33,000 of these jobs – in other words a gain of 14% on the 2001/02 base compared to the position that would have prevailed had national trends applied in London. In two of the leading London occupational specialisms – managers and professionals – the growth in the number of jobs in London was below the national average, while in the associate professional grouping there was a shrinkage in the number of jobs in London at a time of growth in the country as a whole.

The most recent past has been a period of rapid employment growth in the public sector – with the peripheral regions tending to enjoy the most rapid of this growth. In contrast, London's employment is more private sector-driven. With many of these new public sector jobs likely to be in managerial or professional roles, London's recent under-performance in these occupations can be viewed as a temporary phenomenon related to the emphasis on public sector growth in the UK economy – a phase that is expected to draw to close as government spending growth subsides to a more sustainable rate from 2008. Nevertheless, it is possible that, given the policy emphasis on education and the changing nature of the UK economy, London's lead in terms of the proportion of jobs in these knowledge-based occupations may have peaked – even if the absolute numbers and proportions continue to grow.

Table 4.5 Changing occupational mix			
	Actual employment change 2001/02 to 2004/05	Relative gain / loss	Relative gain / loss as % of 2001/02 employment
Skilled trades	33,000	34,100	13.8%
Process, plant & machine operatives	8,000	22,100	14.3%
Personal service	11,000	11,200	5.4%
Elementary occupations	-9,000	-600	-0.2%
Managers & senior officials	52,000	-7,600	-1.3%
Sales and customer service	-11,000	-18,200	-8.0%
Professional	27,000	-22,100	-4.3%
Administrative and secretarial	-66,000	-43,300	-8.2%
Associate professional & technical	-18,000	-47,000	-7.4%

Source: *Labour Force Survey four quarter average to Jun 2004 – May 2005*

c) ...and other regions enjoying faster growth in graduates in the workforce...

London's lead in the proportion of its resident workforce possessing degree-level qualifications may also be beginning to erode. With policy aimed at raising the proportion of the population who attend university, all regions have seen strong growth in the number of graduates in the working age population. For example, between 1997/98 and 2004/05 this number grew by 29.4% for Great Britain as a whole, but only by 27.4% in London, putting the city in fourth-lowest place in terms of mainland UK regions.

These figures clearly demonstrate the general expansion of higher education in the UK. From its starting point as the area with the highest concentration of graduates in the workforce, it is understandable that the city should be towards the bottom of the league in terms of growth – the base is simply higher. There may also be cost pressures at work. With higher living costs in London, only the best graduates or those with the most sought-after skills can earn enough initially to enter the labour force – or take a job early in their career – in London. With more graduates available, the range of starting and, indeed average career earnings, is likely to widen, making London viable for only a subset of all graduates. It would therefore not be surprising if London's lead in terms of graduates in the workforce continues to erode. A more difficult, and contentious, question to answer is the relative quality of graduate skills available in London compared with the rest of the UK.

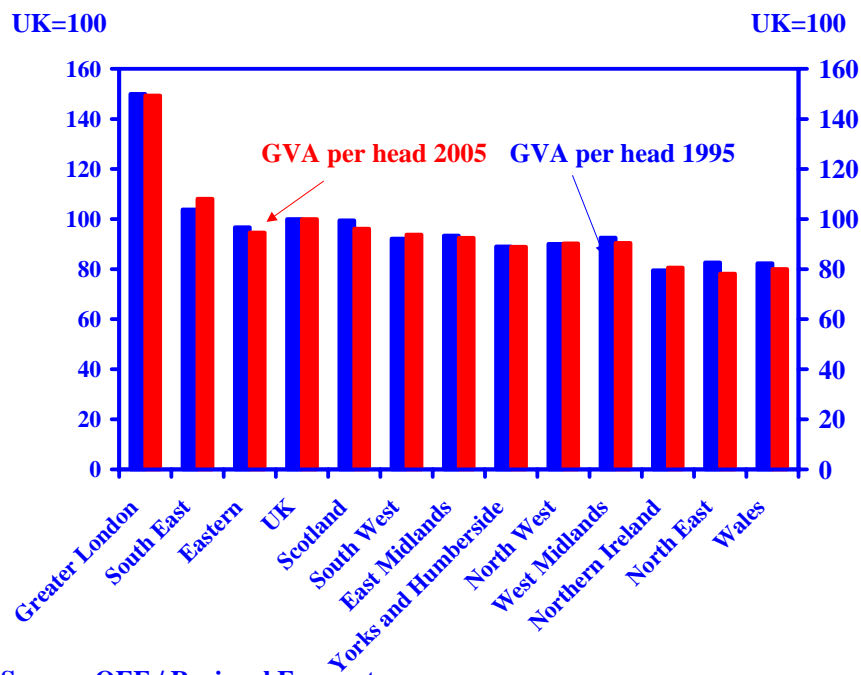
Table 4.6: Change in number of graduates in the workforce (% change from 1997/98 to 2004/05)	
East	37.7%
East Midlands	35.3%
Scotland	34.0%
North East	32.5%
West Midlands	32.1%
Wales	29.7%
South East	28.4%
London	27.4%
North West	26.8%
South West	23.4%
Yorkshire and The Humber	22.1%

Source: *Labour Force Survey four quarter averages*

4.3. The productivity of the London economy

London enjoys a considerable lead among UK regions and cities in terms of productivity. There is much debate about what drives productivity levels and growth in productivity in both local and national economies. It is broadly accepted that a wide range of factors, and interactions among them, influence productivity, however. It is teasing out the strength of individual influences where there is most disagreement. Factors likely to influence productivity include the skills and experience embodied in the labour force; endowments of capital – both at the level of the individual firm or organisation and in terms of social infrastructure; benefits flowing from proximity with other businesses (known as agglomeration economies); and the openness of the economy to competition. London scores highly relative to most other parts of the UK on these measures, helping to explain its well-entrenched productivity lead – a lead that may even be widening in some sectors.

Chart 4.3: London's productivity lead

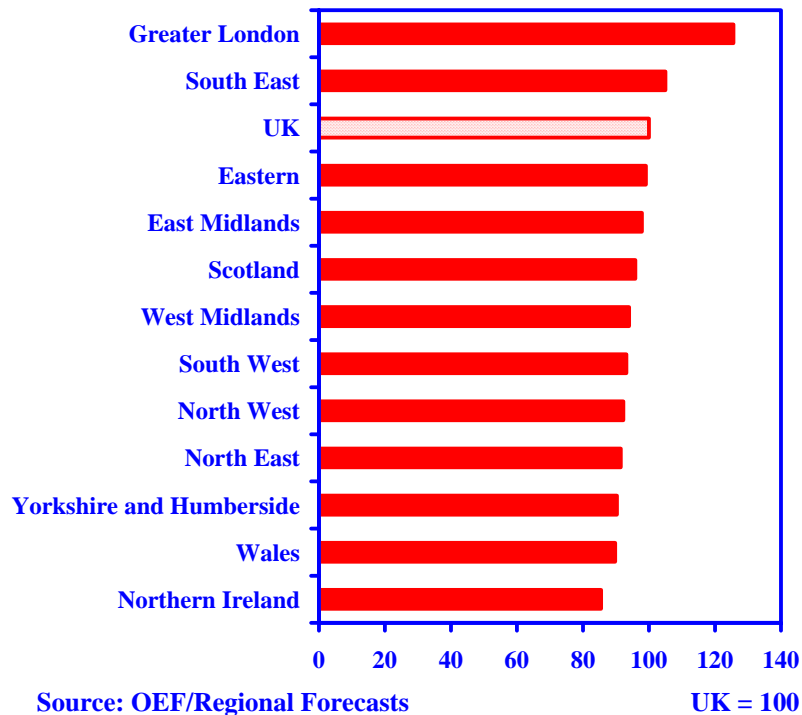


Source: OEF / Regional Forecasts

A commonly used measure of aggregate productivity is GDP (or GVA) per head of population. This measures the total output of a region relative to its population whether they are working or not. Other things equal, economies with a relatively low proportion of the population in work – like London - will tend to score lower on this measure than those where there is a small dependent population or where unemployment is relatively low. On the other hand, economies that enjoy a high degree of net in-commuting can be flattered by this measure since the in-commuting boosts the labour force relative to the resident population. Care is therefore required in making inter-regional comparisons. As Chart 4.3 shows, GVA per head of population in London in 2005 was around 50% higher than the national average, 38% ahead of the second ranked region, the South East, and over 90% higher than the lowest ranked region, the North East.

A straightforward way of controlling for the impact of commuting on comparisons among regional economies is to calculate GVA per job. As can be seen from Chart 4.4, this changes the magnitude of London's productivity lead but does not change the picture of London outstripping all other regions in the UK in terms of the productivity of its economy. In GVA per job terms London is 26% ahead of the UK average (28% ahead of the rest of the UK figure excluding London), compared with a lead of 50% on the GVA per head of population measure. The South East is the only other region where GVA per job is higher than the UK average, but London leads even this dynamic region by 20%. The gap between London and Northern Ireland – the lowest ranked region on this measure – is 47%, while of the remainder only Eastern and East Midland regions enjoy gaps of less than 30%. So, whether the productivity of the London economy is measured against population or of jobs, it is clear that that London enjoys a substantial lead and offers something special to the UK economy as a whole.

Chart 4.4: Productivity – output per job, 2005



As Chart 4.5 shows, London's lead is not simply due to the presence of a concentration of higher productivity sectors. Measured against employment, each major sector is more productive in London than in the UK as a whole. Unsurprisingly, this lead is most marked in London's financial and business services sector, where productivity in London outstrips that in the UK as a whole by over 27%. In manufacturing – another highly mobile sector – the lead is 26%. Even sectors that perform relatively “poorly” in productivity terms in London, such as education & health and distribution, the lead over the rest of the country is over 10%. It is also possible to explore to what extent London's lead is due to its different structure and specialisms by calculating what London's overall GVA per job would be if London's employment make-up was the same as the UK's as a whole but the output per job in each of the sectors was maintained at their actual levels. On this basis, London's lead over the UK as a whole would reduce to 20%, from the actual figure of 27%. Put another way, London's structure only accounts for about a quarter of its productivity lead; the rest is down to the productivity of its workforce relative to workers elsewhere in the UK.

High levels and high wages go together. The average worker in London can earn more than the average in the other regions as a result of higher productivity levels per worker in London than in the rest of the country. When the relationship between productivity and average earnings across the regions is examined, however (Chart 4.6), it is clear that London's workers are, on average, overcompensated for their higher productivity. Wages are higher than would be the case if London had an average relationship between earnings and productivity – as is the case, for example, in the South East. This has a number of implications. First, it means that unit wage costs are higher in London than in other parts of the country. In itself this reduces London's competitiveness, particularly in labour-intensive activities, and is another pressure to find ways of improving productivity despite the existing significant lead over the rest of the UK economy. Second, it suggests that London would be an even more successful economy if it had a more plentiful labour force with appropriate skills – as such, it is evidence that housing

affordability and availability, and transport quality and costs, are holding London back, to the detriment of the UK as a whole.

Chart 4.5: London's productivity by sector

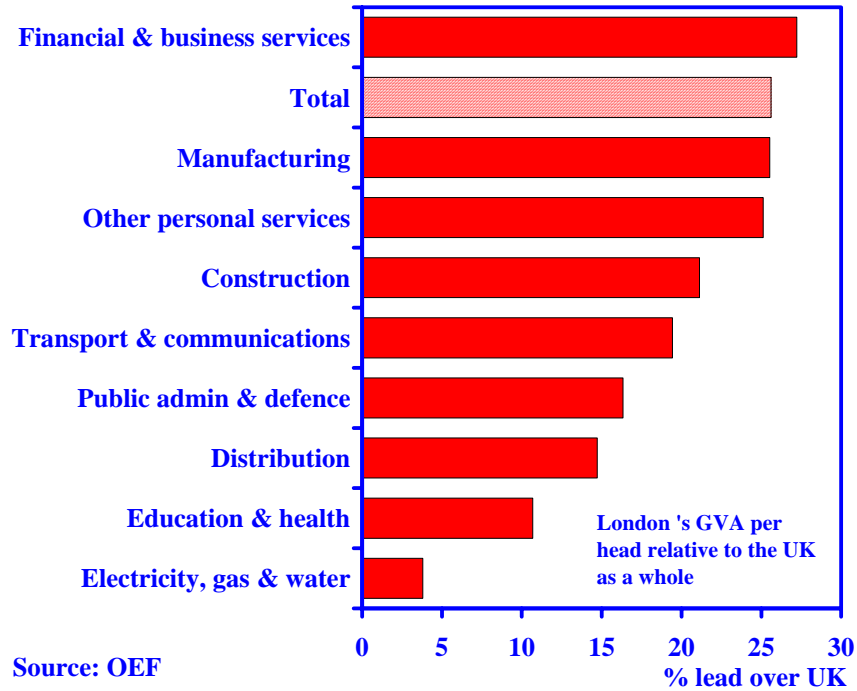
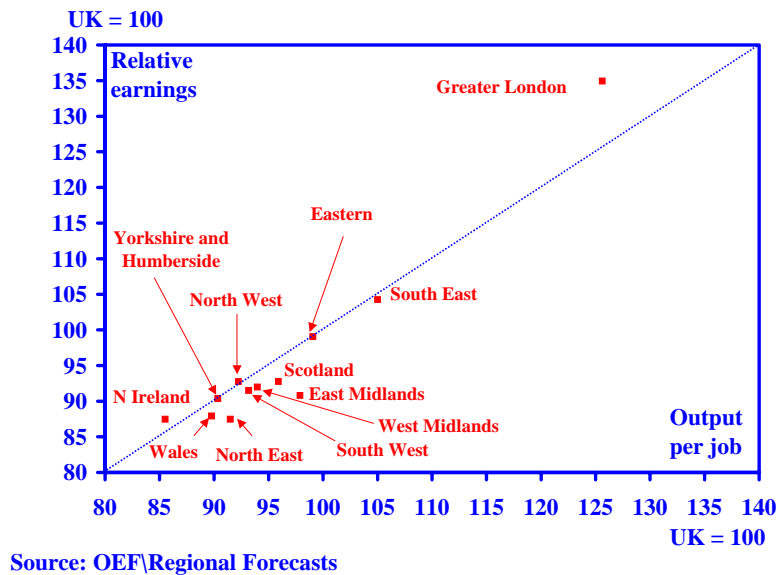


Chart 4.6

Relative unit labour costs



4.4. London's World City status

London is widely regarded as a World City. Indeed, it was one of only four cities cited by all 15 sources covered in a 1999 literature review on world cities.⁵ However, there is no agreed definition of what is meant by 'World City'. The term suggests an openness to the rest of the world, a vast geographic footprint in terms of its influence, a significant presence of globally-facing activities and a multicultural population – indicating its attractiveness as a place to live in world terms. Thus, a World City is likely to attract international migrants, contain a large and varied stock of foreign nationals, hold significant attractions as an international tourist destination, provide a base for international business management functions, foster high degrees of entrepreneurship, serve an international market place, possess internationally recognised seats of higher education, provide a home for internationally recognised cultural assets – and as a result enjoy higher levels of output per capita than in the rest of its national economy. Strong economic growth on the back of these attributes, supported by a dynamic population, also characterises cities that might be regarded as 'World Cities'. Few cities worldwide boast all these attributes. London, New York, Los Angeles, Paris, Hong Kong and, perhaps in the future, Shanghai might claim membership of this exclusive club.

With no definition of what constitutes a World City, and differing approaches to defining administrative boundaries and collecting data, any comparison of World Cities has to rely on fragments of data and some conjecture.

One aspect where London is unrivalled is as a geographic location that allows standard office hours to overlap with normal office opening hours across the rest of the globe. This footprint for London covers 99% of world GDP.⁶ Moreover, if economic power is shifting inexorably towards Asia, London remains a crucial bridge to the eastern United States where office hours do not overlap with those in the Far East.

World Cities are an attraction in themselves as places to live and visit. In World Cities a high proportion of the highest quality housing is owned by foreigners keen to have a base in the city. In terms of buyers in 2005-06,⁷ and despite the higher cost of prime housing on a per square metre basis,⁸ London is now more global than the other great world cities, with 51% of houses selling for more than £2 million bought by foreigners. In comparison, international buyers accounted for 34% of prime sales in New York, 27% in Paris and just 13% in Hong Kong.

The transport hubs of World Cities as portals for international visitors, but survey evidence suggest that the cities themselves are a big part of the draw. Business travellers – a very important part of the total in terms of spend – are clearly drawn by the business activities of these major cities. While data on international visitors are not necessarily fully comparable or complete, statistics published for 2005 put Hong Kong and London well out in front with 23.4⁹ and 13.8 million international visitors respectively, compared with just over 9 million for Paris, and with New York and Los Angeles lagging with 6.8 and 4.6 million respectively.

With their wide range of specialist services, deep, talented labour pools and financial markets, World Cities are natural attractors of the headquarters of the world's biggest companies. London scores highly in this regard. Eighty-five of the world's 500 biggest

⁵ Beaverstock, J.V, Smith, R.G. and Taylor, P.J. 'A roster of world cities', published in *Cities* 16, pp.445-458 (1999).

⁶ 2004 estimates on a purchasing power parity basis.

⁷ "Foreign buyers swamp London property market", *Financial Times*, August 26 2006.

⁸ According to CB Richard Ellis Hamptons International prime residential property in London currently costs around \$2,300 per square foot, compared to \$1,900 in New York.

⁹ This reduces to 12.5 million when Mainland Chinese visitors are excluded from the total.

companies¹⁰ are located in London, New York, Los Angeles, Hong Kong and Paris, accounting for an aggregate market capitalisation of nearly one quarter of the total for these world-leading firms. Within this elite group of cities, London leads with 28 headquarters from the top 500 companies with an aggregate market capitalisation of \$1.9 trillion or 8.4% of the aggregate value of the world's biggest companies. Company headquarters are a key driver in regional economies. The concentration of headquarters of international companies in and near to London creates a symbiotic relationship with a wide range of London's specialisms – such as legal, accounting, design and media services. Without the London effect, there seems little likelihood that as many international businesses would be headquartered in the UK. In turn, this would undermine the market for specialist services that contribute to the efficiency and effectiveness of international and domestic businesses alike. Nor would the UK attract as much international talent, and the base for both economic growth and taxation would be impoverished.

One insight to the relative position of the five World Cities compared here is provided by the regular surveys on foreign exchange trading carried out by the Bank of International Settlements (BIS).¹¹ Foreign exchange trading is essentially international and therefore gives a better measure of the international exposure than say equity or bond market turnovers, which have both domestic and international components. While the BIS data do not give any details of turnover at a city or regional level, it is a reasonable working assumption that the financial centres of London, New York and Paris will account for the vast majority of foreign currency trading in the UK, US and France respectively. On this basis London's dominant role – partly reflecting its world footprint - is demonstrated by the finding that nearly one-third of all foreign currency transactions in 2004 were undertaken in the UK. By comparison the US accounted for just under 20% - implying that London and New York dwarf Hong Kong (4.1%) and Paris (2.6%) in this regard. Indeed, to the extent that their contribution to world financial markets characterises World Cities, Tokyo would overshadow those considered here other than London and New York.

Even with their relatively high cost bases, the World Cities in North America and Europe each possess some of the most highly-ranked universities in the world. According to the rankings produced by Shanghai Jiao Tong University,¹² Los Angeles has 4 of the top 100 universities in the world – with none outside the top 50. London and Paris come next with 3 apiece – though the average London ranking is above that for Paris. New York has two highly-placed universities in the top 100. Hong Kong has no representation in the top 100.

¹⁰ *FT Global 500*, March 2006.

¹¹ Triennial Central Bank Survey, *Foreign exchange and derivatives market activity in 2004*, March 2005.

¹² *Top 500 World Universities 2006*, Institute of Higher Education, Shanghai Jiao Tong University.

Table 4.7: World cities

	London	New York	Los Angeles	Paris	Hong Kong
World footprint	99%	72%	85%	95%	73%
Population (million) – latest estimate	7.429	8.008	9.519	2.147 ¹³	6.880
Foreign nationals – latest census	27.1%	33.7%	36.2%	17.6%	7.6% ¹⁴
International tourist arrivals (million)	13.8	6.8	4.6	9	23.4
FT 500 headquarters – number (31.03.06)	28	24	6	20	7
FT 500 headquarters - % market cap (31.03.06)	8.4%	7.6%	0.8%	4.3%	1.2%
Financial market volumes (% world FX)	31.3%	19.2%	0.0%	2.6%	4.1%
Universities in top 100	3	2	4	3	0
Olympic games	3	0	2	2	0

Sources: OEF, ONS, GLA, US Census Bureau, INSEE, The Government of Hong Kong, Globalization Studies Network, VisitBritain, NYC Statistics, LA Inc, Paris Convention & Visitors Bureau, Hong Kong Tourism Board, Financial Times, Bank of International Settlements, Shanghai Jiao Tong University, International Olympic Committee

Though fragmentary, the data tend to confirm that London and New York are the first among equals in terms of World Cities. Each is beaten in particular aspects by the other cities, but across a diverse range of indicators both perform strongly on nearly every measure.

The evolution of London as a World City has had important effects on the rest of the UK. London's economy is different in structure to the rest of the UK, with much of this difference driven by London's role in the world economy. As a consequence, London tends not to compete in the same product markets as the other UK regions. Without its world role London would look more like the rest of the UK in terms of economic structure and would undertake some activities currently based elsewhere in the UK.

At the same time, the success of London in world terms results in demand spillovers for the rest of the UK. The fact that London's economic structure is different sets up trading opportunities with the rest of the UK to the benefit of both areas. And with London successful in fast-growing service industries, the nature of its demand for ancillary activities supports structural change across the UK away from slower-growing to faster-growing sectors, building comparative advantage for the UK as a whole. A significant part of the UK's relative economic success in terms of growth rates in recent years must therefore stem from the pervasive influence of London through all parts of the country.

Finally, London's worldwide status is likely to boost demand from outside the UK for other parts of the UK, through both inward investment and tourism to the UK. As well as being a magnet for inward investment in its own right, the familiarity of London, the wide range of services available, the presence of brand name international legal, accountancy and consultancy firms in the city and its international transport hub, facilitate investment by overseas companies in the rest of the UK.

¹³ The administrative area covered by Paris is only a part of the wider city. The broader area of Ile de France had a population of 10.98 million in 2000.

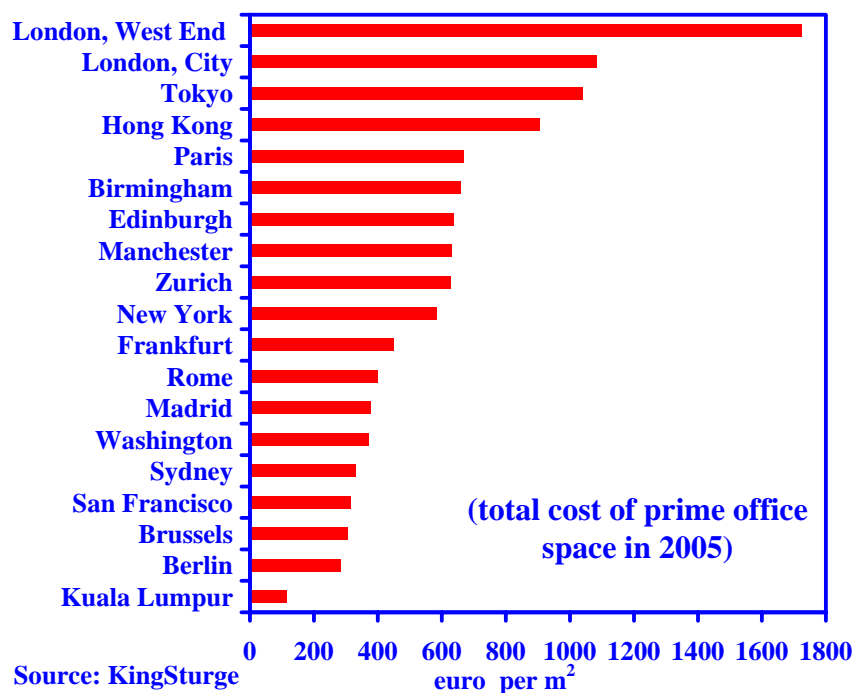
¹⁴ This rises to 42.6% if Mainland Chinese are considered foreign-born.

4.5. Other influences on firms' location decisions

The sections above have looked at a number of the attractions offered by London as a location for business. These benefits come at a cost in terms of the price of commercial space, housing and congestion, which act as an actual or potential constraint on the London economy.

Space costs in London – whether prime offices, retail premises or more general commercial property – are expensive, both in UK terms and internationally. Office costs relative to other parts of the UK are quite cyclical, but are typically at least twice as high as the average. Internationally, the West End is the most expensive office location in the world (Chart 4.7), and indeed the premium over other major international cities increased last year compared with 2004, with the City of London overtaking Tokyo as the second most expensive location of those covered in the chart. Space costs are a key influence on the performance of London's economy, particularly as they vary in a counter-cyclical fashion – with softening space costs encouraging activity in London during downturns and vice-versa. They also have an important influence on productivity developments. High costs drive a search for different ways of doing things to economise on the expensive resource. Some of London's dynamism is therefore likely to come from the innovation that is associated with reducing the need for space – for example, from restructuring processes to allow outsourcing or from applying technology to reduce the need for people. The net effect of this is to increase London's specialisation in highly productive tasks and raise the overall labour productivity of the city. Apart from the more direct effects – such as outsourcing to other parts of the UK or the demand generated in the rest of the UK by a highly competitive London economy - over time some of this innovation feeds into the rest of the UK economy.

Chart 4.7: Office rents



Congestion is another feature of London's economy that has a pervasive impact on activities carried out in the city. It bears on both businesses and individuals, with over 97% of City of London companies believing that the productivity of their staff is either seriously or somewhat reduced by problems faced in commuting.¹⁵ Congestion forces costs on economic activity and reduces efficiency relative to what would be possible in an uncongested city. But it also has the effect of driving the search for better ways to do things – through the use of technology and the search for new processes - to minimise the costs.

While space costs and congestion do have a positive effect on productivity growth as businesses seek to overcome the constraints they impose, this does not mean that providing appropriate space as cheaply as possible or finding ways of easing congestion pressures on London should not be a priority. Reducing space costs and easing congestion would allow more activity to take place in London. The activities attracted would tend to be high productivity in UK terms, would benefit from and contribute to the agglomeration of specialist functions in London, and many of them would have other city locations worldwide as alternative locations rather than other parts of the UK.

Entrepreneurial activity is increasingly seen as one of the key drivers of productivity and growth, with government policy oriented to stimulating new business formation. This stems from the belief that the drivers of productivity – innovation, skills, investment, competition and enterprise – all benefit from higher business start-up rates, while also recognising the UK trails some developed economies in terms of the levels of entrepreneurial activity undertaken.

London is the most entrepreneurial of the UK regions, with a significant lead over the country as a whole. For example, in 2005 entrepreneurial activity rates in London were more than a third above the average¹⁶ (Chart 4.8) – a similar lead to that shown in 2003, albeit with somewhat lower rates of entrepreneurial activity in both London and elsewhere than shown in the last edition of *London's Place in the UK Economy*.

While the individual and cultural drivers of entrepreneurial activity are complex, London's unique socio-economic composition plays a big role in explaining its higher rates of business start-ups. Survey data shows that individuals with higher incomes, more education and from ethnic minorities are all more likely to begin new businesses, although there are significant differences between different groups within the ethnic minorities. On each of these scores London leads the rest of the UK, while the size and concentration of buying power for products and services of all types no doubt boosts the incentives for starting a new business. Without London and its special attributes, the UK as a whole would miss out on the significant benefits that flow from the higher overall rates of entrepreneurial activity than would otherwise be the case.

¹⁵ *The Economic Effects of Transport Delays on the City of London*, Corporation of London, July 2003.

¹⁶ *Global Entrepreneurship Monitor, United Kingdom 2005*, London Business School.

Chart 4.8: Total entrepreneurial activity by UK region, 2005



4.6. How competitive is London?

As with any economy London has comparative advantages and disadvantages compared to other economies. London's future prosperity depends on the extent to which it can build and maintain its comparative advantages in high value-added activities. This is a dynamic process that will see some activities move or continue to move to other parts of the UK or the world, while new activities develop in London, either through local entrepreneurship and innovation or through inward investment by businesses and organisations for whom London offers key attractions.

a) Trends in outsourcing from London

While it may be a relatively new concept in the public consciousness, outsourcing and its international variant, offshoring, have been integral to all economic progress. This process is one of the engines that improves economic efficiency through division of labour, the development of specialisms and trade. For London as a whole to maintain high levels of productivity relative to other economies – both regionally and internationally – the efficiency of the value chain behind its production is a crucial factor. Outsourcing – which occurs within London itself, as well as across its boundaries, enables individual firms to improve their economic efficiency and to raise the value-added of their production. Outsourcing is therefore a healthy part of economic change rather than the bogeyman sometimes portrayed in the media. Without a continual search for better ways to do things by businesses and organisations in London – even when this means moving economic activity elsewhere – the city would be in danger of losing its economic edge and diminishing the potential of its people and businesses.

Outsourcing may be a venerable process, but changing communication technologies and the development of new skill bases in cheaper operational locations have extended the range of activities where a re-organisation of the production process can bring advantages to both the organisation doing the outsourcing and the new production

location. In recent years this has led to the offshoring of a number of service activities that previously could only be carried out domestically. This is a long-term trend that has much further to run and which will change the nature of tasks carried out not just in London but across all economies. While much outsourcing is a relatively invisible process, offshoring tends to be more lumpy, and often creates a group of employees who face uncertainty and job changes, so generating pessimistic headlines. The advantages it confers in terms of freeing up resources to be re-deployed in higher value added tasks or to the customers and other stakeholders in organisations carrying out the offshoring are therefore easily ignored. But these advantages are real and as a result outsourcing and offshoring are likely to be an enduring feature in London's future.

Of course, a shift in the location of certain activities to overseas locations has an impact on the destination as well. The popularity of India as a location for financial service support activities has had a noticeable impact on the cost of office space and workers in places like Mumbai. Although it remains a significantly cheaper location than London, it may be that some sort of balance will be reached in which this is offset by other higher costs associated with outsourcing. At the same time, other destinations for offshoring will develop, which are likely in due course to gain activity not just from places like London but also from Mumbai.

b) London's ability to attract inward investment

Investment location is increasingly discretionary in a globalising world, with more choice for individual projects and more competition from locations for those projects. In many senses inward investment is the mirror image of outsourcing and offshoring. Just as technology and globalisation are impacting on these processes, so the nature of inward investment is changing too. Gone are the days of inward investing simply meaning a new manufacturing facility. Now inward investment ranges across a broad spectrum of economic activities that include key growth sectors such as business services and education. The UK has been a consistently strong performer in terms of inward investment in the recent past. Within this success London's unique attributes are playing a bigger and bigger role in attracting activities whose alternative locations are spread across the globe rather than in another region of the UK. Without London the UK would miss out on these projects that, in addition to economic activity, often bring with them other benefits, including technology, new skills, higher quality inputs for other businesses, new ways of doing things and more highly paid jobs than would otherwise be available.

Measured by stock, the UK lies second only to the US as a recipient of inward investment. According to UNCTAD,¹⁷ the value of this stock stood at US\$817 billion at the end of 2005, 8% of the world total and also nearly 35% higher than the equivalent figure for France and 60% above that of Germany. The Ernst & Young European Investment Monitor continues to rank the UK ahead of all other European locations, with 559 projects in 2005, compared with 538 for France and 181 for Germany, in second and third place respectively. The number of projects coming to the UK in 2005 was static, compared with strong rises for France, Germany and Spain. However, data for the first half of 2006 show both a pick-up in the number of projects coming to Europe, and an increase in the UK's market share. Moreover, forward-looking indicators place the UK in a favourable light. The UK was ranked fourth, behind China, India and the US India by the A T Kearney 2005 FDI Confidence Index®. Reasons put forward by UK Trade & Investment for this success include the openness and flexibility of the UK economy, as well as London's role as the "financial capital of the world".¹⁸ In terms of market share, the Ernst & Young Monitor identifies London and the South East as receiving over 20%

¹⁷ UNCTAD, *World Investment Report 2006*.

¹⁸ *UK Inward Investment 2005/2006 Report* by UK Trade & Investment.

of all software projects coming to Europe in 2005, while London is seen as the reason that the UK captures three times more of the rising number of mobile financial services projects than any European competitor.

Since the mid-1990s London has played an increasing role in direct investment projects coming to the UK. This reflects both a shift in the nature of the projects away from manufacturing towards the service specialisms of London and the success that London has had in adding to the overall number of projects coming to the UK. For example, foreign direct investments in business services – one of London’s strengths - accounted for nearly 10% of the total in 2004, up from negligible levels in the early 1990s.¹⁹ Meanwhile, the survey-based Cushman & Wakefield 2006 European Cities Monitor ranks London first out of European cities as a location for business, with London’s lead over Paris widening over the course of the year. Manchester (the next highest ranked UK city in 2005) has slipped from fifteenth to twenty-first place,²⁰ hinting that specific London factors, rather than UK-wide changes, drove London’s widening lead.

London has also improved its ranking this year on several of the factors ranked essential by companies taking location decisions (Table 4.8). The only factor on which London’s relative position has declined over the past year is in terms of value for money for office space costs, though London has also dropped to eighth from sixth last year in terms of cities judged to be trying to improve themselves.

Table 4.8 London’s European ranking on key location factors			
Location factor (in order of importance)	2005	2006	Leader
Easy access to markets	1	1	London
Qualified staff	1	1	London
External transport links	1	1	London
Quality of telecomms	1	1	London
Cost of staff	22	16	Warsaw
Climate created by government	6	5	Dublin
Office space value for money	24	29	Warsaw
Availability of office space	3	1	London
Languages spoken	1	1	London
Internal transport	2	1	London
Quality of life	13	7	Barcelona
Freedom from pollution	27	26	Stockholm

Source: *European Cities Monitor, Cushman & Wakefield*

London’s higher cost base makes it likely that projects that choose the city are not a loss to other parts of the UK that enjoy lower costs. Rather, the alternative for London’s inward investors is likely to be other capital cities in Europe or even major centres in the US or Asia. Thus, in looking for threats to inward investment to London it is the competition from these centres that needs to be taken into account. Particular concerns for current inward investors are property costs, the transport system and quality of life issues such as crime and pollution.

¹⁹ *Ernst & Young European Investment Monitor.*

²⁰ In 2006 Manchester has been overtaken as the second-placed UK city, by Birmingham (a newcomer to the survey) in nineteenth place.

With few inward investors in London already using other UK locations prior to arriving in London, there is a clear contribution to overall income and wealth in the UK. The UK as a whole gains to the extent that these inward investors:

- make better use of UK resources – workers, property, investment;
- provide cheaper, higher quality outputs;
- demand greater quantities of locally sourced inputs;
- pay more to the Exchequer;
- pay higher wages;

than would be the case if the same resources were deployed in domestic establishments. Moreover, through the linkages between London and the rest of the UK economy, these net benefits are widely spread.

c) The performance of London's exports

One sign of the competitiveness of London's economy is its success in generating exports. As might be expected given the structure of London's economy, exports of goods are relatively low as a share of the UK total. London's £26.3 billion exports of goods in 2005 accounted for around 9% of all UK exports of goods (Table 4.9). On the other hand, our estimates show that London generated 30% of all UK exports of services in 2005.

Table 4.9 London's exports, 2005		
	£ billion	% of UK
Goods to OECD	17.9	8
Goods to emerging markets	8.4	14
Goods – total	26.3	9
Services	33.5	30

Sources: HMCR (goods); OEF estimates (services)

London's specialisation in financial and business services is confirmed by estimates of the composition of goods and services supplied to the rest of the UK – over half of these 'exports' from London are financial and business services of one type or another (Table 4.10). In total, London exported £126.2 billion of goods and services to the rest of the UK in 2005, up from £125.3 billion in 2004.²¹

²¹ For the methodology used to produce the exports estimates, see *London's Linkages with the Rest of the UK*, Corporation of London, May 2004.

Table 4.10 London's exports to the rest of the UK, 2005

Sector	Exports (£ billion)
Agriculture	0.0
Mining and quarrying	0.2
Manufacturing	13.9
Electricity, gas and water supply	2.2
Construction	6.3
Wholesale and retail trade	13.1
Transport and communication	10.5
Financial & business services	66.8
Other services	13.2
Total	126.2

Source: OEF estimates

d) London's balance of trade

Our estimates of trade between London and the rest of the UK imply that London ran an overall surplus on trade in goods and services of around £13 billion in 2005 (Table 4.11). With imports having grown rather more rapidly than exports since 2003, this is down slightly on the surplus of £15 billion estimated for 2004 and £17 billion for 2003.

The surplus is derived purely from the service sector of the economy, with London importing substantially more manufactures and other goods than it exports, underlining the extent to which London acts as the hub of financial and business services for the UK. Offsetting this trade surplus, there must be a flow of 'capital' from London to the rest of the UK. Some of this arises from the working of the tax and public expenditure system in the UK (see Chapter 6), but there are also likely to be offsetting flows of private capital.

Table 4.11 London's balance of trade with the rest of the UK (2005)

Sector	Exports less imports (£ billion)
Agriculture	-3.0
Mining and quarrying	-2.0
Manufacturing	-25.3
Electricity, gas and water supply	-1.3
Construction	-4.9
Wholesale and retail trade	6.9
Transport and communication	7.8
Financial & business services	23.2
Other services	12.0
Total	13.4

Source: OEF estimates

5. Structural issues for London's economy

Despite the success of London's economy over the past year and more generally since the mid-1990s, there are a number of structural issues it faces concerning both the contrasts that exist between the best and worst parts of the economy and possible constraints on future growth. This chapter discusses a few of these issues, including the contrasts and diversity between different parts of London's economy, and potential constraints on London's economic growth from physical space limits, transport infrastructure and the availability of utility services.

5.1. Where does London's economy under-perform?

Earlier sections of this report have highlighted many of the strengths of London's economy, both in competing in international markets and in providing a key driving force for the UK economy. It is by no means a story of uniform success across London, however, either sectorally or geographically. In particular, there is a marked contrast between the strong growth and high wages of certain parts of central London's economy with low economic activity and high unemployment in neighbouring boroughs, highlighting the extent to which many of the people who live in London fail to share in the success of those who work in London.

Indeed, despite having the highest per capita income of the UK regions and typically recording the fastest rate of economic growth over the past fifteen years, London's labour market performance is in many ways much poorer than the UK average. For London as a whole, the unemployment rate as measured by the Labour Force Survey (LFS) stood at 7.9% in the three months to July, an increase of 1.3% points on the year and above the national average of 5.5%. The North East is the only other region in the UK with an unemployment rate above 6%, and it saw a fall in unemployment over the past year to 6.6% in the three months to July 2006. London also has the lowest employment rate in the UK - i.e. the proportion of the working age population that is in work. London's employment rate registered at 69.7% in the three months to July, significantly lower than the national average of 74.6% and has been falling steadily over the past five years. The poor performance of this aspect of the London economy is even more stark when compared to the neighbouring regions of the South East and East where, in each case, the unemployment rate is under 4% while the employment rate is close to ten percentage points higher, at 79.1% and 78.4% respectively.

Closer examination reveals a very significant divergence in labour market performance across the London boroughs. Excluding the City of London, which has a working age population of just 6,000, the average unemployment rate in the inner east London boroughs is 8.4%, with the average employment rate just 62.5%. Moreover, none of the inner boroughs has a labour market performance that is better than, or even as good as, the national average. Tower Hamlets and Hackney have the worst unemployment rates, of 11.3% and 10.5% respectively, while Tower Hamlets, Newham and Hackney all record employment rates that are below 60% - indeed, these three boroughs have the lowest employment rates of any local authorities in the UK. The boroughs that currently come out worst in this analysis typically occupied similar positions ten or even twenty years ago, indicating the persistence of labour market under-performance.

The outer London boroughs have stronger labour markets on average, with unemployment and employment rates averaging 5.9% and 72.5% respectively. Here, the lowest employment rates are in Redbridge and Barking & Dagenham, at 66.4% and

62.3% respectively. Moreover, in half of the nineteen outer London boroughs, the employment rate is similar to or above the national average.

In general, there is not necessarily a contradiction between strong employment growth and high unemployment. First, London's population has grown rapidly at the same time as employment has risen, leading to more people looking for jobs at the same time as an increase in the number of jobs available. Moreover, international migration has become an increasing phenomenon, with the Home Office estimating that in the past two years as many as 600,000 people from the Central and Eastern European Countries (CEEC) are working in the UK, following the expansion of the European Union, with a significant proportion of these coming to London. Second, many jobs in London are, of course, not filled by Londoners but by workers commuting into London from surrounding areas, with commuting adding in net terms around half a million more people to London's labour supply. We saw in Chapter 4 that, while London has a higher proportion of graduates in its workforce than the UK average, it also has a slightly higher proportion with no qualifications or only qualifications below NVQ level 2. At the same time, London has significantly fewer jobs in relatively unskilled occupations than the UK average proportion. With relatively few jobs for London's less well-qualified workforce to do, it is perhaps no surprise that much of London's success in generating new jobs has primarily benefited inward commuters rather than those living in some of the under-employed inner London boroughs.

In a number of boroughs, however, the explanation is much more complex and encompasses social and economic issues, and the interactions between them. For example, even in the poorest London boroughs, the cost of living is relatively high compared to the UK average. This brings additional social problems in terms of the recruitment and retention of teachers, medical staff and other 'key workers'. Boroughs such as Hackney, Tower Hamlets, Newham and Southwark not only under-perform in the labour market, but also feature towards the top of the Government's 'Indices of Deprivation'.²² The Indices of Deprivation represent deprivation through a range of measures covering not just income and employment, but also health, education, crime, barriers to housing and living environment. In fact, London has the highest infant mortality rate and the greatest incidence of tuberculosis in the UK. Overall, of the ten districts ranked as the most deprived in the UK, five are in inner London.

Table 5.1: Deprivation by district	
Average rank, 2004	
1	<i>Hackney</i>
2	<i>Tower Hamlets</i>
3	Manchester
4	<i>Islington</i>
5	Liverpool
6	<i>Newham</i>
7	Easington
8	Knowsley
9	Nottingham
10	<i>Haringey</i>

Source: ODPM

²² *The English Indices of Deprivation 2004 (revised)*, Office of the Deputy Prime Minister, April 2004.

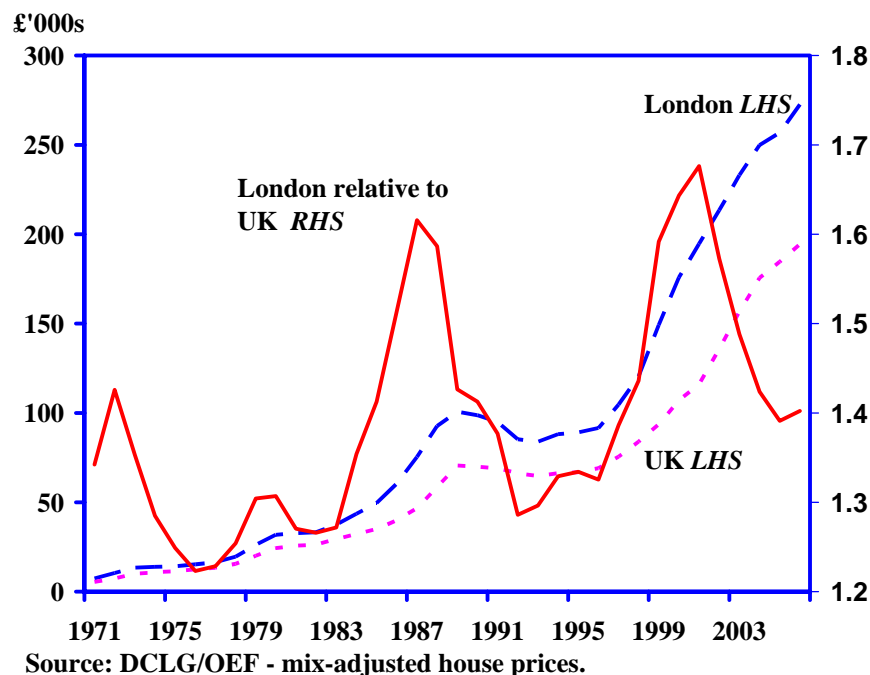
5.2. Accommodating London's growth

The success of London's economy over the past year means that issues concerning how to accommodate potential future growth are as relevant as they have ever been, and the continued growth in both population and jobs projected for London over the next decade is likely to generate increasing pressures on the planning system to find ways in which this growth can be accommodated. In part, this means that there is likely to be a recurring discussion around the role of the Green Belt in London's planning system, with questions raised over whether increasing the scope for development in certain parts of the Green Belt might allow London's economy to function more efficiently. It also suggests that competition between residential and commercial use may intensify, particularly in areas immediately surrounding the commercial centre of the city.

a) The pressures on the housing market

London residential property prices remain the highest in the UK, with a renewed acceleration in London's house prices over the past year fuelled in part by higher bonus payments. Essentially, high London prices reflect the high average incomes of London residents, as well as the relatively fixed supply of land on which to build new homes to meet the demands of a growing population. The shortage of available land contributes to a marked differential in the price of land that has outline planning permission, which in January of this year cost £8.4 million per hectare in London compared to £3.3 million for England as a whole.

Chart 5.1: London and UK house prices



Demand has also surged ahead for prime residencies following the success of the City and large bonuses payments to many of its employees, and an increase in international demand. According to Knight Frank, prime property prices in the capital rose 12.6% in the first half of 2006, after 18 months of sustained price growth. For comparison, the FTSE 100 grew just 2.6% over the same period. There is also an element of catch-up, given that London under-performed the national average between 2002 and 2005. Indeed, Knight Frank reported earlier this year that London is witnessing the tightest supply and demand conditions in over a decade. According to Primelocation, the number

of available houses and flats for sale in the region has fallen 19% over the last year, with the number of prime houses for sale down a record-breaking 29%. Consequently, multiple buyers often compete for the very best properties, bidding as much as 30% over the asking price.

Even in poorer areas, residential house prices are still very high compared to national standards. This presents particular problems for those on low incomes. Despite an increase in the resident population of close to 400,000 over the past decade, the number of new homes built in London has totalled just 156,000. High prices have led to lower-than-average owner-occupier tenure, with London as a whole just 58%, below even the North East, where the owner-occupancy rate is 65% (Table 5.2).

Table 5.2: Owner occupiers by region (% of households, 2005)	
East Midlands	75%
South East	75%
East	74%
South West	74%
West Midlands	74%
North West	72%
Yorkshire & the Humber	70%
North East	65%
London	58%

Source: *Survey of English Housing, 2004/5*

Clearly, housing supply has barely matched growth in demand and has been a significant contributor to the large increase in house prices. Looking ahead, our forecast shows London's population rising by a further 680,000 between 2006 and 2016 to nearly 8.3 million, slightly stronger than the GLA planning assumptions in the London Plan, which show a population of 8.1 million in London in 2016. In order for London to sustain this population increase, significant investment in new housing is needed. The London Plan sets a minimum target that there should be a net addition of 23,000 to the housing stock per annum, with 50% to be "affordable". With a further 11,000 each year required to eliminate the stock of sub-standard housing, the resulting goal is to add 34,000 new homes a year, which is significantly above current construction rates. In addition, the London Plan calls for new homes to be built across London. However, two areas, Central London and the East, are planned to account for the bulk of the increase, with 107,000 and a minimum of 104,000 respectively. East London incorporates many of the most deprived London boroughs and is a priority area for development, regeneration and infrastructure improvement. Much of the development will be focused on the Thames Gateway, with development for the Olympics seen as a catalyst for the area.

If it proves difficult to increase house building on the scale envisaged, then this could prove a constraint on London's future growth. It is also worth remembering that providing the housing needed to accommodate London's growth is not just about the volume of new houses keeping pace with demand. There is also a significant issue of affordability – it is no use having extra houses if they are too expensive for key workers to be able to buy or rent them. This is not an easy situation to resolve. Work on modelling regional housing markets in the context of affordability targets suggests that large increases in

construction may be needed to have any significant impact on affordability.²³ The problem is that in areas of relatively high demand for housing like London, the price of houses has to act as a constraint to choke off enough demand to maintain some sort of balance with supply. If an increase in house building put downward pressure on prices, this would lead enough people back into looking to live in London to limit any downward movement in prices and any corresponding improvement in affordability.

b) Issues for the commercial property market

In some ways, the commercial property market faces some similar issues to the residential property market, with high land prices contributing to high rental charges. The shakeout of employment in London after 2000 and the overhang of spare capacity where supply was still coming on stream (lagging the previous boom) led to significant vacancy rates and falling rents. The market for office and industrial property has returned to buoyancy in the past year, however, after two years in which development activity has slumped. The recovery in the economy, and particularly the success of business and financial services, has led to tightness in supply. Vacancy rates in 2006Q2 fell at the fastest pace in over five years according to RICS, with Savills reporting Central London office vacancy rates of just 7% and FocusNet recording 6% - almost half that of 2003. Consequently, most agents report rental growth in double digits. It is the top end of the market which is leading the way, with Drivers Jonas reporting that prime west end rents have increased sharply in 2006 to 88 per square feet (psf) in 2006Q2, an increase of over 20% compared to 2005. Moreover, Savills reports that Grade A rents have increased by 25% across Central London in the past year, compared to an increase of 13% of Grade B office lets. The market for retail property continues to stutter, however, reflecting fierce high street competition and squeezed retailer margins.

The availability of new office space to meet the pressures of demand is important if rising rents and falling vacancies are not to threaten the competitiveness of London's economy. At this stage of the commercial property cycle, with rental growth occurring again, we expect a supply response partially driven by speculative investor motives. FocusNet reports that office construction currently underway reached almost 8 million square feet in April, having fallen to a 10 year low in 2005. Moreover, over 5 million square feet is further planned for the City alone. This is led by British Land's next phase at Bishopsgate due in 2008 which will offer over 800,000 sq ft, and Hammerson's 345,000 sq ft development of Old Broad Street.

Going forward, London's continued economic success is predicated largely upon on-going growth in business and financial services, which we expect in net terms to account for 90% of the increase in employment of 450,000 we are forecasting between now and 2016. These extra workers imply the continual need for significant new office developments. Prime locations in the City and the West End will continue to be sought after, but in the medium term development is likely increasingly to filter out to other areas of the city.

²³ See *Affordability Targets: Implications for Housing Supply*, draft final report to ODPM, Geoff Meen *et al.*, April 2005.

5.3. London's infrastructure challenges

a) Commuting patterns and the cost of transport delays

Almost 4.5 million people are employed in London. Most live within the city, but just over 700,000 commute into the region to work. The transport infrastructure is vital in enabling the resident workforce to commute within London, as well as enabling non-residents to travel to work.

The mode of transport people use to get work in London depends largely on the location of their workplace. Those who work in Central London predominantly (79%, see Table 5.3) use public transport as their main method of travel. The reliance on public transport progressively declines the further out from the centre of London is a person's workplace, being used by 48% of commuters heading to the Rest of Inner London and 22% of commuters travelling to Outer London. Cars and vans are the main form of transport for workers commuting to the Rest of Inner London (35%) and Outer London (65%).

Since the Millennium, there have only been slight changes in the share of commuters travelling to work by the various modes of transport. The proportion relying on cars and vans has declined across all three parts of London, falling by 4 percentage points in the capital as a whole. For the most part this reflects the introduction of the Congestion Charge in February 2003. Former car commuters seem to have switched into using buses (usage rising across all three areas of London). The numbers of passengers travelling by bus has been boosted by the Congestion Charge, additional service provision, improvements in reliability and a fall in the real (inflation-adjusted) price of fares.

Table 5.3 Main mode of travel to work by area of workplace, autumn 2004 and 2000 (%)

	Central London		Rest of inner London		Outer London		All London	
	2004	2000	2004	2000	2004	2000	2004	2000
Car and van	11	23	35	41	65	68	40	43
Motorbike, moped, scooter	2	1	2	2	1	1	1	1
Bicycle	3	2	4	3	2	2	3	2
Bus and coach	13	9	17	12	13	10	14	10
National Rail	38	39	14	12	4	4	18	17
Underground, tram, light rail	28	31	17	17	5	4	15	16
Walk	4	4	10	12	9	10	8	9
Other modes	1		1		1		1	1
All modes	100	100	100	100	100	100	100	100

Source: *Labour Force Survey*

Inward commuting provides London with a significant share of its workforce,²⁴ and has increased by 65,000 over the past decade (Chart 5.2). According to the 2001 Census, most travel in from the South East (52%) and East of England (32%). Inward commuters significantly add to the talent pool available to firms based in London. Not only do they provide 18% of all employees in London, but two-thirds of commuters into London are employed in managerial, professional or technical occupations. Moreover, in-commuters provide a third of the workforce for London's high-value added financial sector.

²⁴ See GLA (2005), *Growing together: London and the UK economy* for a more in depth analysis of inward and outward commuting.

Heading in the opposite direction are 275,000 outward commuters, who live in London but work outside of its borders. This is 5% of the population of London of working age. Out-commuters are also more likely to be in managerial or professional or technical occupations than non-commuters. Skilled tradesmen also form a higher proportion of out-commuters than either non-commuters or in-commuters. This reflects the concentration of manufacturing and construction firms in the areas surrounding London relative to the capital itself.

The length of time it takes to travel to work in London varies by location of the workplace. The more central the office, the longer is the average journey time. The mean length of commuters' journeys into Central London workplaces is 55 minutes; for those who travel to the Rest of Inner London it is 42 minutes; and those to Outer London 32 minutes (Chart 5.3). There has been little change in average journey to work times in London in recent years. Between autumn 2000 and 2004, the average length of a journey to a workplace in Central and the Rest of Inner London both fell by 1 minute. In contrast, the average duration of a journey to work in Outer London increased by 2 minutes.

Chart 5.2: Commuters to and from Greater London

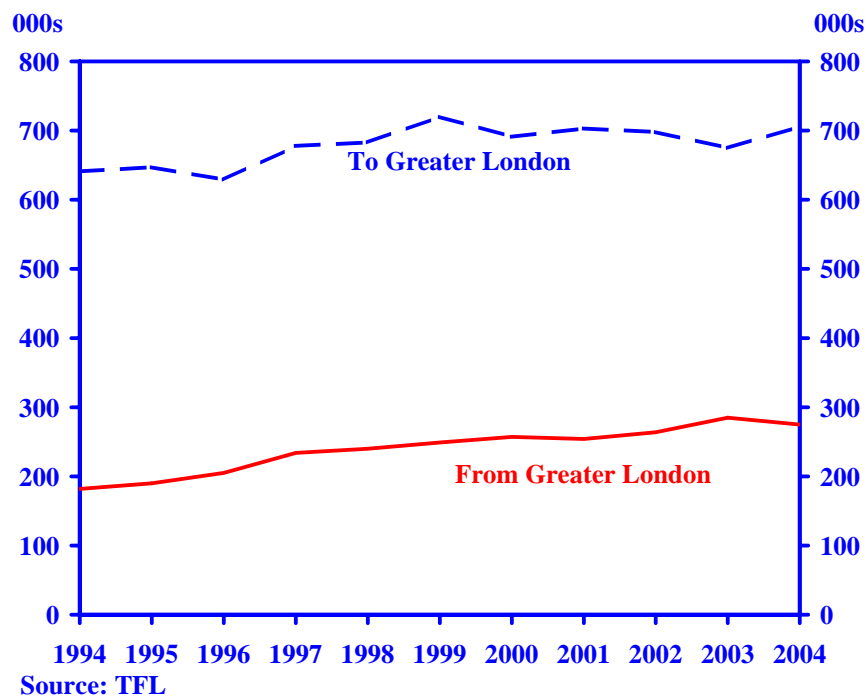
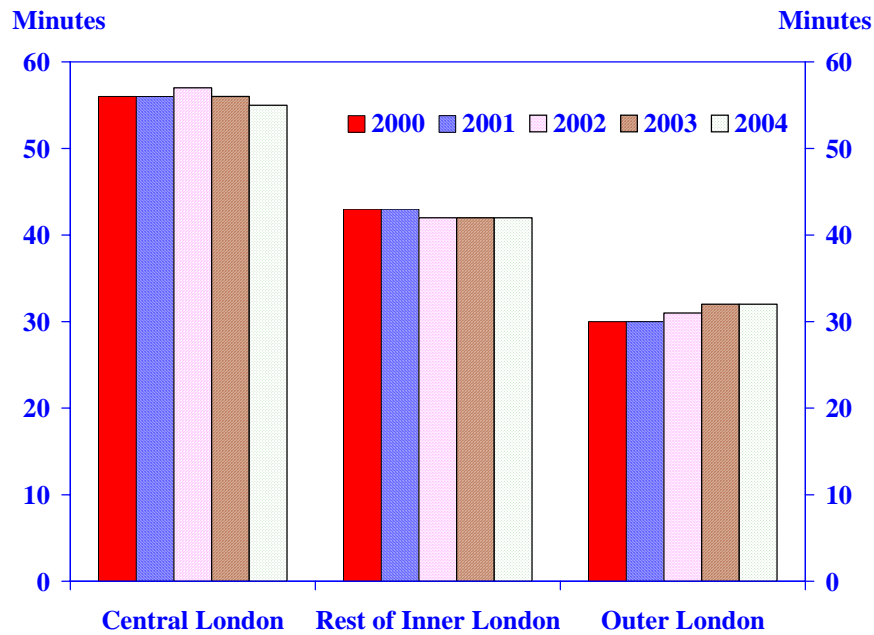


Chart 5.3: Average travel times to work by area of workplace



Source: TfL

For the 47% of commuters who travel to work in London by public transport, journey times are influenced by levels of service and reliability. Transport for London (TfL) publishes data on the extent of delays across the different modes of transport.²⁵ In 2005, London Underground's average unweighted excess journey time (defined as the difference between the actual journey time and that if the service ran on schedule) was 3.34 minutes (Table 5.4). This is 3% worse than the previous year, albeit it was influenced by the impact of the terrorist attacks in July 2005. The excess wait time (the difference between passengers' actual wait time and the time passengers would wait, on average, if the service ran on schedule) for buses on higher frequency routes was 1.1 minutes in 2005, unchanged from the previous year. The share of services on the Docklands Light Railway (DLR) that did not run on schedule was 2.7%, a slight improvement on 2004.

Journey times are also lengthened by the cancellation of scheduled services. In 2005, TfL reports 6.4% of London Underground tubes, 2.3% of London buses and 1.3% of DLR trains did not operate. Both the bus and DLR train figures are an improvement on performance in 2004. The deterioration in the performance of London Underground reflects the impact of the terrorist attacks, industrial action (which mainly affected the District Line) and problems with the Northern Line Tripcock system.

²⁵ Transport for London (2006), *TfL operational and financial report – 4th Quarter*, May.

Table 5.4 Selected service reliability indicators			
	2005	2004	2003
London Underground			
Percentage of scheduled service operated	93.6	95.3	93.1
Peak hour trains cancelled due to operative not available (%)	0.2	0.1	
Excess journey time (minutes) unweighted	3.3	3.2	3.4
CSS: Overall satisfaction	78	78	76
London Buses			
Percentage of scheduled service operated	97.7	97.7	97.2
Excess wait time – high frequency routes (minutes)	1.1	1.1	1.4
CSS: Overall satisfaction	77	78	77
Docklands Light Railway			
Percentage of scheduled service operated	98.7	98.5	98.2
On-time performance – Adherence to schedule (%)	97.3	97.1	96.6
CSS: Overall satisfaction	95	95	94
Road Network			
Journey time reliability (%)	30.6	18.7	

Source: TfL

Commuters reliant on the road network to travel to work are likely to have experienced a lengthening in journey times in 2005. Average network speeds for the typical vehicle driving around Central London fell slightly (to 16.2 kilometres per hour) from their level in 2004 (17.0 kilometres per hour). Moreover, there was a significant deterioration in journey time reliability: TfL's indicator rose from 18.7% to 30.6% in 2005.

Transport delays impose costs on both employees and their employers. We have not produced formal updates of costs estimated in a 2005 OEF study,²⁶ but there is no reason from the above indicators to think the costs of delay have been reduced. The 2005 study estimated the costs of delays for commuting into Central London was £870 million for commuters and £320 million for businesses. A further £560 million cost was borne by those travelling for non-work reasons such as tourism or shopping. The estimate was based on the importance of different transport modes for travel in Central London, the average length of delay on each mode, and the value of the time involved, with this value depending, for example, on whether the time would otherwise have been used for leisure or work purposes. So, time lost while on business travel was typically assumed to be lost to the employer, while time lost travelling home from work was assumed to be lost leisure time.

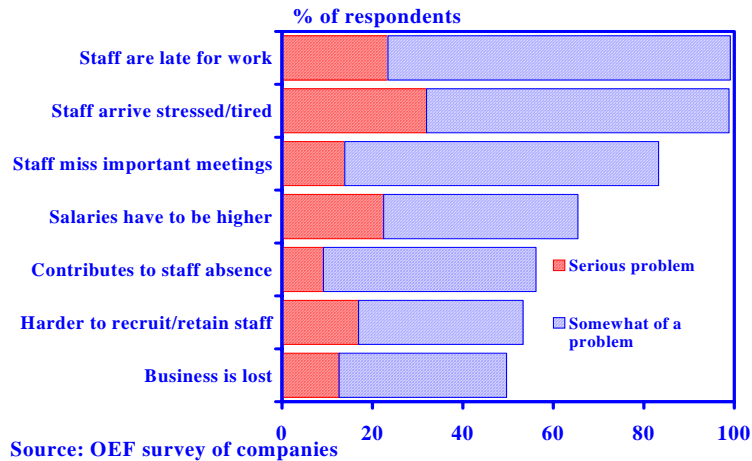
These costs are only part of the true overall cost, however. To get a feel of how the problems staff face in commuting impact their employers, OEF undertook a survey of firms based in London as part of its study. Virtually all of the businesses reported reduced levels of productivity when their staff arrived in a tired or stressed state (Chart 5.3). Moreover, transport delays can result in business being lost if important meetings are missed or delivery times not met. In addition, 63% of businesses saw the need to

²⁶ *Time is Money: The economic effects of transport delays in Central London*, produced by OEF for GLA Economics, January 2005.

pay higher wages to compensate employees for the additional stresses of commuting on unreliable transport networks. Just over half of respondents (53%) saw an impact on recruiting and retaining staff.

Chart 5.4: The impact of commuting delays

Is your organisation affected by problems your staff face in commuting to work?



There is a marked contrast between the views of those who use London’s transport for commuting and those who use it for other purposes – London has recently been rated the best city for public transport in a survey of tourists. However, there is a big difference between what works for tourists, who are likely to value the very wide network provided by London’s public transport, and what works for getting London to work, where reliability and overcrowding are much more of an issue.

Clearly, transport delays are a serious issue for business, workers and residents in London. A scenario of future commuting flows based on the London Plan²⁷ suggests that a 29% increase between 2001 and 2016 can be expected in commuter trips by rail or underground to work in London. There are clear long-run risks to the London economy if the performance of the transport network fails to improve. In response, TfL plans to invest over £10 billion in the transport infrastructure over the next five years (2004/05 to 2009/10). In the financial year 2005/6, TfL’s expenditure on capital programmes was £2,189 million.²⁸ The majority of this expenditure was invested in London Underground (61%); surface transport received 22% and London Rail (8%). There are currently eight major projects (defined as having a budget of over £100 million) underway.

²⁷ *Commuter flows in London and the wider South East 2001 to 2016/2021*, Cambridge Econometrics et al. for Corporation of London et al., October 2005.

²⁸ *TfL 5 year investment programme report – 4th quarter*, Transport for London, May 2006.

Table 5.5 Projects which have a budget of more than a £100mn within TfL's Investment Programme

Project	Total budget £ million	TfL's investment programme £ million
Camden Town congestion relief	255	124
Channel Tunnel Rail Link at Kings Cross	765	394
Congestion Charging Western Extension	n/a	n/a
DLR capacity enhancements 3 car	102	102
East London Line Extension	896	896
London City Airport DLR extension	150	80
Sub-surface train capacity	n/a	n/a
Woolwich Arsenal DLR extension	150	150

Source: TfL

b) The impact of the Congestion Charge

One policy that was introduced to combat congestion in central London has been the Congestion Charge. This was introduced in February 2003. Those wanting to drive or park a vehicle on public roads within the 22 square kilometre zone between 7am and 6.30pm on a weekday were charged £5 a day. In July 2005, the basic daily charge was increased to £8 a day. Charges for cars on the automated and notification fleet schemes were increase by £2.50 and £2 respectively, to both stand at a daily rate of £7.

The scheme reduced congestion²⁹ in central London by 30% almost overnight.³⁰ Average delays in the charging zone fell from 2.3 minutes per kilometre before charging to 1.6 minutes per kilometre in the eighteen months afterwards. Importantly, TfL's analysis of the impact of scheme found no evidence that traffic was displaced onto roads outside the zone. Since the second half of 2004, however, there appears to have been an increase in congestion across the capital. In 2005, average delays within the zone were 1.8 minutes per kilometre. This is above the levels in 2003 and 2004, but still 22% below the pre-charging conditions.

As noted earlier, displaced car drivers have largely switched to travelling by bus. In the year after the introduction of the Congestion Charge, the number of people entering the zone by bus increased by 37%. TfL estimates half of these would formerly have entered by car. There was a further significant increase in bus passenger numbers in 2004, to levels which were maintained in 2005. Passenger numbers on the two other main forms of public transport (London Underground and National Rail) seem little changed by the introduction of the Congestion Charge.

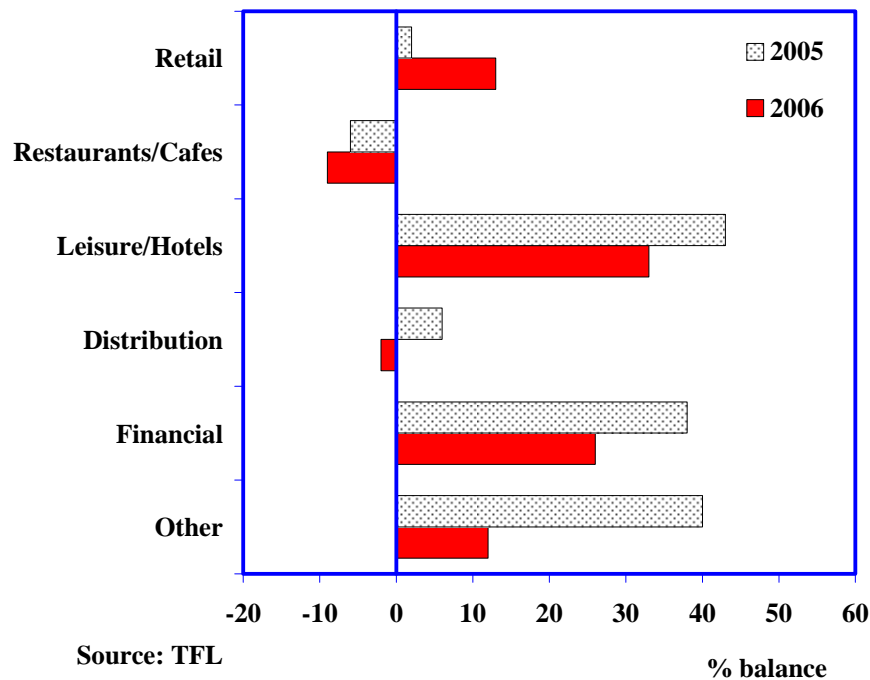
It is difficult to judge the impact of the Congestion Charge on businesses (both inside and outside the zone) as it is impossible to know what would have occurred without its implementation. The main approach studies have taken to investigate the impact is to compare indicators of business performance (employment, number of firms, turnover, business registration for VAT and appeals against business rates) within the zone to similar areas outside. Most conclude that Congestion Charging has not had an impact, either positive or negative, on business performance in central London.

²⁹ Congestion is measured as the excess delay (expressed in minutes per kilometre) over and above that which would be experienced on the same road in uncongested conditions (ie the early hours of the morning).

³⁰ *Central London congestion charging impact monitoring: fourth annual report*, Transport for London, June 2006.

TfL conducts an annual survey of businesses to gather feedback about their sentiments towards the Congestion Charge. In the autumn 2005 survey, more businesses within the zone were in favour of the scheme than against it (45% to 33%). However, the level of support has declined from 2004. Support varies across business-type. Firms in the retail (a net balance of +13%), leisure and hotels (+33%), finance (+26%) and other (+12%) sectors were in favour (Chart 5.5). Business operating in the restaurant and cafés (-9%) and distribution (-2%) sectors were against the scheme.

Chart 5.5: Support for the Congestion Charging scheme as long as there is continued investment in public transport



In September 2005, the Mayor of London announced the Western extension of the Congestion Charging zone. The extension will be bounded by Harrow Road, the West Cross Route, the inner southbound arm of the Earls Court One Way System and Chelsea Embankment. The Western extension will become operational in October 2006. At the same time, the finish time for charging within the whole of the enlarged zone will move back to 6pm.

The objective of the extension is to reduce congestion. Estimates of the average excess delays in the western extension area are around 2 minutes per kilometre. This compares to 1.7 minutes per kilometre within the zone. TfL estimates that the number of vehicles entering the western extension zone during charging hours will fall from its current level of 217,000 a day to between 178,000 to 189,000 after implementation. Vehicles liable to pay the charge are forecast to fall from their current level of 82,000 entries a day to between 40,000 and 50,000 a day. TfL estimates that the impact on businesses will be broadly neutral.

5.4. Could inadequate investment in utilities constrain London's growth?

In looking at prospects for economic growth, it is easy to take for granted an adequate supply of the utilities needed to support both the businesses and households envisaged in the future. Concerns about this summer's 'drought' in southern England, however, only serve to underline that London presents a challenging operating environment for the supply of utilities such as water, electricity and gas. In some cases, the utility infrastructure is some of the oldest in the country. For all, it is a densely populated urban area, with very high concentrations of traffic and economic activity.

Water illustrates most clearly the potential issues from a regional perspective in the supply of utilities. It differs fundamentally from electricity and gas in that there is no national distribution network which permits water to be transported between regions with a surplus to those with deficient supplies or a drought. Consequently, regions are largely dependent on their own rainfall, water and wastewater management. The Thames Water area (which includes London and the Thames Valley) has suffered from below average rainfall since November 2004. This manifested itself in the introduction of a hosepipe and sprinkler ban across the Thames Water area in April 2006 and the application to DEFRA for a drought order in June (which was subsequently withdrawn in September) to conserve supplies.

Currently, the majority of London's water is taken from the River Thames (70% of daily consumption). It is abstracted from the river upstream of the tidal limit at Teddington weir and pumped eastwards for treatment in the four treatment works situated around London. Other sources are the River Lee and aquifers in North West Kent, North East Surrey and in the Lee Valley. In 2003, 6,064 million litres of water were taken per day in the Thames region. This was 10.3% of the total abstracted across England and Wales. The majority (69%) of the water taken in the Thames region was destined for public supply. This is substantially higher than for England and Wales (29%), mainly because of considerably lower usage for electricity generation in the Thames area.

The Environmental Agency³¹ predicts London will require new sources of water supply by 2020. London's population is expected to grow by 800,000 by 2025, boosting demand for water. The impact of the increased population may be amplified by changes in lifestyle (for example, the trend towards lower household occupancy) and increased affluence (which increases the ownership of dishwashers, for example). It also reflects the likely impact of climate change. Although surrounded by uncertainty, it is expected that temperatures will increase in the future and summers will be drier, which will not only lower available water supplies but also increase demand.

Thames Water and the governmental bodies responsible for water supply intend to address the future water deficit by demand management activities and investment in developing new water resources. The major demand management issue is the reduction of leakage. In 2005/06, Thames Water's leakage was 895 million litres a day.³² This is the largest amount of water lost in any region in the UK and substantially above OFWAT's original leakage target of 582 million litres a day. As a consequence, OFWAT has placed Thames Water on special reporting measures.

³¹ The Environmental Agency (2001), *Water resources for the future: A summary of the strategy for Thames region* March.

³² OFWAT (2006), 'Leakage slightly down – companies warned against complacency', press notice.

Thames Water has undertaken a number of steps to try to tackle the leakage problem. They have lowered the water pressure, which reduces the likelihood of new leaks and the volume of water lost through existing ones. They are spending more than £500,000 a day on average on finding and fixing leaks, repairing 45,596 in 2005. A longer-term strategy is to replace the Victorian Mains. A third of the water mains in London are over 150 years old and a half are over 100 years old.³³ A total of 150 kilometres of Victorian mains were replaced in 2005.

There are a number of other ways of managing water demand. The one regarded as the most important is the introduction of a pricing system that relates the costs of usage to the amount of water consumed. This requires the fitting of water metres to measure usage. Currently only 17% of London households have water meters, which is below the average for the country of 26%. Thames Water is proposing meters should be fitted to homes on changes of occupancy.³⁴ Other strategies used by Thames Water in 2005 were distributing in excess of 140,000 water-saving cistern devices, 1.8 million self-audit questionnaires and series of tips over the radio and through other advertising to help customers reduce their water usage.³⁵

During the period 2005-10, OFWAT has agreed that Thames Water will invest £3.1 billion in their water infrastructure. One of the projects intended to be completed is the extension of the Thames Water Ring Main (which transfers supplies of drinking water around the capital via a tunnel). Thames Water plans to build two new tunnels of three miles in length to enhance the flexibility of London's water supply and provide additional storage capacity.

Investment in developing new water resources has long lead times. It can also be controversial, as residents do not always want water treatment facilities located close to their homes. The two major proposals under discussion at the moment are the opening of a desalination plant at Beckton (which would be able to supply 140 million litres a day) and the building of a reservoir south west of Abingdon (which would hold 150 million litres). The Public Inquiry on the proposed desalination plant began in May 2006. The decision as to whether the plant is built will be taken by the Secretary of State. It is expected that the Public Inquiry over the reservoir will occur between 2008 and 2010 and, if it goes ahead, it will come operational in 2019/20.

³³ Thames Water Utilities Limited (2006), *Replacing London's Victorian water mains*.

³⁴ Thames Water Utilities Limited (2006), 'Safeguarding water for future generations', Press release 14 September.

³⁵ Thames Water Utilities Limited (2006), 'Regulatory Financial Statements for the year ended 31 March 2006'.

6. London's contribution to UK public finances

Previous reports on London's place in the UK economy have consistently shown that London contributes more to the Exchequer through its share of tax payments than it receives through its share of public spending. However, the exact scale of this contribution depends on the precise methodology used to estimate it, and varies from year to year as the overall state of the UK's public finances changes. This chapter sets out in detail our latest estimates, which suggest a net 'tax export' from London in the range of £5.8-20.4 billion in 2004/05 (the latest year for which final outturn data for expenditure by region are available).

6.1. Calculating the regional distribution of public expenditure: an overview

The bulk of public spending in the UK is undertaken by central government departments, with only a small fraction of spending made directly by regional authorities themselves. In estimating the regional distribution of public expenditure, there are two possible options. The first is on the basis of where the spending actually physically occurs ("in" the region) and, second, on the basis of which regions actually benefit from the expenditure ("for" the region). There is a case for using either of these techniques, as detailed in appendix A.

Here, we adopt the Treasury's approach, which identifies regional expenditure on a "for" basis, as far as possible. This "identified expenditure" accounts for approximately 82% of all UK public expenditure within the UK. In order to apportion the remaining 18% of unidentified expenditure to the regions, we produce a range of estimates. Three alternative methods are employed to produce regional weightings. These are: (i) using the same proportions that the Treasury adopts in allocating expenditure on a "for" basis; (ii) adopting an "in" basis approach through estimating the relative shares of public sector pay; (iii) using population shares. These produce a range of estimates from which we take a maximum and minimum value. These are subsequently added to identified expenditure and a mid-point estimate is taken to report total regional expenditure.

6.2. Regional expenditure

London receives a far greater share of public spending than any other UK region, estimated at between £67 billion and £71 billion in 2004/5. However, London is also one of the most highly populated regions. While, spending per capita remains the highest in England; it is actually below Northern Ireland and similar to Scotland. Moreover, in comparing regional expenditure we must compare like-with-like. London is unique as a Government Office Region (GOR) in that it is an urban area. In contrast, other regions have both urban and non-urban areas. The relative needs of the regions clearly differ, and this will have implications for public sector spending. Looking at a wider southern region, including London as the metropolitan centre, spending per capita is actually below that for the UK as a whole.

	Min (£ bn)	Max (£ bn)	Min (£ per head)	Max (£ per head)
North East	20.9	22.2	8,200	8,700
North West	52.2	57.8	7,600	8,500
Yorks & Humber	37.6	39.4	7,500	7,800
East Midlands	29.1	31.3	6,800	7,300
West Midlands	37.9	41.4	7,100	7,800
Eastern	37.6	38.8	6,900	7,100
Greater London	66.8	70.6	9,000	9,500
South East	55.7	63.3	6,900	7,800
South West	36.7	45.5	7,300	9,000
Wales	23.6	26.1	8,000	8,900
Scotland	44.1	47.2	8,700	9,300
Northern Ireland	16.5	17.2	9,700	10,100
<i>Memo: London, East, S East</i>	<i>160.2</i>	<i>172.7</i>	<i>7,600</i>	<i>8,200</i>
UK³⁶	491.0	491.0	7,639	7,639

Source: PESA 2006, OEF calculations

6.3. Public spending as a proportion of London's economy

There are other ways of looking at public spending in different regions besides relative to population. As Table 6.2 illustrates, public expenditure attributable to London is similar to the UK average in terms of per person employed and incomes. However, in terms of spending relative to GVA, London receives 20% less than the UK average.

	Total expenditure (£ bn)	Expenditure relative to		
		Employment (£ per employed)	GVA (UK=100)	Income (UK=100)
North East	21.6	19,800	142	129
North West	55.0	16,400	118	115
Yorks & Humber	38.5	15,400	113	109
East Midlands	30.2	14,800	100	99
West Midlands	39.6	15,200	107	106
Eastern	38.2	14,300	95	84
Greater London	68.7	15,500	81	101
South East	59.5	14,100	88	85
South West	41.1	16,000	113	108
Wales	24.9	19,000	139	126
Scotland	45.6	17,900	123	125
Northern Ireland	16.9	21,200	163	150
UK	491.0³⁷	15,200	100	100

Source: PESA 2006, OEF calculations

³⁶ Total expenditure figures for the UK include £11.1 billion of spending that is classified as being 'for' outside the UK, but following PESA and previous work in this area we do not allocate this across the regions.

³⁷ Including £11.1 billion of spending not allocated across the regions since it is classified as 'for' outside the UK.

In other words, London creates far more wealth relative to public expenditure than any other region. To the extent that the prosperity of London benefits the rest of the UK, a case could be made for London receiving a higher share of public spending. For instance, London's economy imports products from the rest of the UK, receives commuters from neighbouring regions and indirectly enhances entrepreneurship as many incomers to the city return to original areas at a later date. Moreover, London is also an important tourist destination and foreign tourists often see London as the initial attraction in visiting the UK before going to other areas. In this context, perhaps it is no surprise that London receives higher spending per capita. Table 6.3 shows spending per capita on selected key functions in all of the regions, and supports the view that London's unique position as the seat of government, and effectively an entirely urban centre, lies behind the higher spending per head the region receives.

	Public order & safety	Enterprise & employment policies	Transport	Health	Education & training	Social protection
North East	435	211	184	1,460	1,169	3,078
North West	407	178	267	1,450	1,112	2,939
Yorks & Humber	543	146	184	1,369	1,103	2,661
East Midlands	317	96	207	1,205	1,040	2,480
West Midlands	343	101	231	1,302	1,095	2,722
Eastern	295	48	204	1,225	951	2,395
Greater London	654	36	537	1,589	1,277	2,738
South East	328	56	192	1,240	981	2,333
South West	332	76	189	1,261	977	2,587
Wales	401	273	235	1,453	1,112	3,055
Scotland	376	123	329	1,513	1,160	3,007
Northern Ireland	725	185	201	1,402	1,313	3,221
UK	400	109	262	1,369	1,093	2,702

Source: PESA 2006

London receives far greater public funding than the UK average for public order & safety to help to police the large urban population as well as to protect the seat of government and support tourism and state visit activities. London also receives much higher transport funding than any other region reflecting greater use of public transport and the consequent necessity to maintain the infrastructure.

Together, public order & safety and transport contribute approximately 60% of the difference in expenditure per capita between London and the UK as a whole. The rest largely consists of additional funding for health and education & training. This is probably the result of the presence in London of large training hospitals and universities, which are of benefit not just to London but all of the UK.

On the other hand, London receives less funding per capita than the UK average on enterprise, economic development and employment policies. That is, despite low employment rates and deprivation in London inner city areas (as discussed in Chapter 5), other regions receive more government encouragement to promote new business and employment. Similarly, London receives only the UK average of social protection payments per capita even though it contains, for example, three out of the five poorest

districts in Britain, is the most deprived region in terms of crime in England,³⁸ and has the highest rate of unemployment in the UK.

6.4. London's contribution to UK tax revenues

Of course, London does not just account for a relatively high proportion of government spending – it also provides a significant share of UK tax revenues. We estimate that London contributed around £82 billion in 2004/5, up from £76 billion in 2003/4.

While there are no regular and exhaustive official data that provide a regional breakdown of tax revenue, we have made detailed estimates based upon collating relevant official sources and applying robust assumptions. Calculations are summarised below (and in Tables 6.4 and 6.5).³⁹ A key issue in determining London's contribution to tax revenue is whether we adopt a residential or workforce approach, which would include approximately 500,000 commuters (net) from surrounding areas. This affects the calculation of income tax and national insurance. Consequently, a tax revenue range is produced, as Table 6.4 illustrates.

Table 6.4 Taxes on residence, workplace and business basis in London (2004/05)		
	Tax paid in London	
	(£ bn)	(% UK)
INCOME TAX (UK TOTAL REVENUE = £122.9 BN)		
- Residence-based	22.7	18.5%
- Workplace-based	28.6	23.2%
NICs (UK total revenue = £78.1 bn)		
- Residence-based	13.7	17.5%
- Workplace-based	16.3	20.8%
VAT (UK total revenue = £73.0 bn)		
- Residence-based	11.4	15.6%
- Business-based	13.2	18.1%

Source: HM Treasury Budget Report, HMRC, SPI, ASHE, EFS, ABI, OEF

- **Income Tax** data are available from HM Revenue and Customs (HMRC) Survey of Personal Incomes (SPI), with latest data available for 2003/04. This suggests that net income tax (i.e. minus allowances) from London was 18.5% of the UK total on a resident basis, while adjusting this to a workplace basis we estimate London paid 23.2% of the UK total.
- **NICs** data are determined by household payments reported in the Expenditure and Food Survey (EFS). This implies that London residents contributed 17.5% of UK total NICs, with its entire workforce contributing 20.8%.

³⁸ *The English Indices of Deprivation 2004 (revised)*, Office of the Deputy Prime Minister, April 2004.

³⁹ See also Appendix A which provides more detail on how we approach these calculations.

- **VAT** is also calculated in two ways. On a residence basis according to regional household consumer spending shares reported by ONS and projected to 2005 by OEF, we calculate that 15.6% of VAT was generated by London. This share rises to 18.1% when calculated on a business basis, which uses shares of retail turnover that takes place in London, including both London residents and visitors.

For many of the other categories of taxation there is a stronger case for only calculating the residence-based contribution of London. Where taxes are not related to working or the associated wealth generation then the contribution of London's workers is not a particularly helpful concept:

- **Council tax** paid in London represented 14.4% of all council tax paid in the UK in 2004/05.
- **Vehicle Excise (VED)** paid in London is only a small part of total taxes paid, but is calculated separately since it differs from spending in other regions. London stands out since it actually pays less per capita on this form of tax than the UK average. The share of total UK VED paid is only 9.1%, compared with a population share of 12.4%, as car ownership is relatively low and public transport is used more widely. This also explains why **fuel duty** paid in London is relatively low.
- **Corporation tax** is another large component of total UK tax receipts, which has been split across regions according to the share of profits that can be calculated from the Annual Business Inquiry. Not only does London house a large share of UK businesses, it also includes a disproportionate share of companies with high profits. This calculation suggests that London accounts for around 20.3% of total **corporation tax** payments.
- The amount of **stamp duty** paid in London has risen strongly over time according to data reported for regions by HMRC. But in recent years, the share of UK stamp duty derived in London has fallen from over 30% to 23.3% in 2004/05, as housing markets in the rest of the country catch up with London.
- **Other duties**, such as alcohol and tobacco duties, generate a significant share of UK revenue. Like VAT, they are split across regions based on relevant consumer spending shares for appropriate goods categories.
- **Business rates** data, like council tax figures, are taken from Local Government Financial Statistics.

Table 6.5 Other taxes paid by type in London (2004/05)			
	London (£ bn)	UK (£ bn)	London (% UK)
Council tax	2.9	20.1	14.4%
Vehicle Excise Duty	0.4	4.7	9.1%
Corporation tax	6.0	28.6	20.3%
Stamp duty	2.1	9.0	23.3%
Fuel duty	2.2	23.3	9.3%
Tobacco duty	1.1	8.1	13.1%
Alcohol duties	1.0	7.9	12.5%
Business rates	4.0	18.7	21.5%
Other ⁴⁰	8.4-9.1	52.8	15.8%-17.3%
Total "other" taxes	28.1-28.8	173.2	16.2%-16.6%

Source: HM Treasury Budget Report, HMRC, SPI, ASHE, EFS, ABI, OEF

Comparing these estimates for 2004/5 with our latest estimates for the previous fiscal year 2003/4 (Table 6.6) shows that residence-based receipts increased by £4.9 billion while workplace-based revenue rose by £5.4 billion. The main drivers behind these increases were NICs, corporation tax and income tax. Overall, the share of London contribution to the UK revenue increased by around 0.3 percentage points.

Table 6.6 London tax revenues: 2004/5 changes from 2003/4				
	Residence-based		Workplace-based	
	£ bn	Share of UK (% points)	£ bn	Share of UK (% points)
Income Tax	0.5	0.0	0.7	0.0
NICs	0.8	0.0	1.2	0.0
VAT	0.5	0.0	0.7	0.0
Council Tax	0.0	0.0	0.0	0.0
VED	0.0	-0.1	0.0	-0.1
Corporation Tax	0.6	0.1	0.6	0.1
Stamp Duty	0.1	0.1	0.1	0.1
Other	2.4	0.2	2.1	-0.2
Total	4.9	0.3	5.4	0.3

⁴⁰ See Appendix A for more details.

6.5. London's contribution to UK public finances

Our estimates imply that London continues to make a significant contribution to UK public finances in net terms (Table 6.7). This is particularly notable while the total UK budget balance has continued to deteriorate.

Table 6.7 Final contribution of London to UK public finances (2004/05)			
	London's contribution	UK total	London's share of UK
	(£ bn)	(£ bn)	(% UK)
Total Revenues		451.3	
- Residence-based	76.4		16.9%
- Workplace-based*	87.2		19.3%
Total Expenditure		491.0	
- Minimum (pop shares)	66.8		13.6%
- Maximum ("in" shares)	70.6		14.4%
Total Contribution		-39.7	
- Minimum	5.8		
- Maximum	20.4		

**Including Business-based VAT calculation
Source: HM Treasury Budget Report, OEF calculation*

London receives a greater share of public expenditure than any other region, from 13.6% to 14.4% of the UK total, depending on how the unidentified expenditure is allocated (which is added to the Treasury allocated "for" expenditure). The minimum estimate is calculated when population is used to apportion unidentified expenditure to regions. The maximum estimate is compiled by employing an expenditure "in" estimate that allocates expenditure relative to public wage costs.

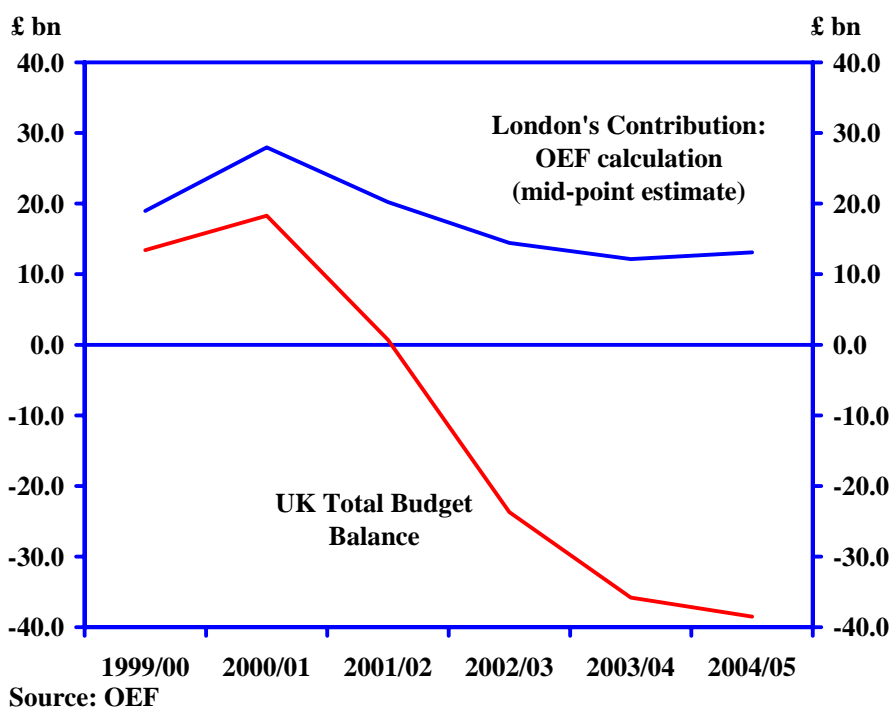
To reiterate, London's share of spending is partly explained by the unique urban environment of this region and high population, although spending per capita is still high compared with the rest of the country. A crucial point is that relative to wealth generated (in terms of GVA), London receives a relatively low proportion of total UK spending.

On the other hand, London raises more in taxes than it spends, and in effect subsidises the rest of the regions. The revenue generated from London ranges from 16.9% on a residence measure to 19.3% on a workforce basis.

As a result, the capital city made a net positive contribution to UK public finances. The size of this tax export ranges from a minimum of £5.8 billion to £20.4 billion in 2004/05 reflecting which methodology is used. The mid-point of the estimate range implies a net contribution of £13.1 billion, up from a revised estimate of £12.2 billion from the previous fiscal year.

Extending our calculation back to earlier years (chart 6.1) illustrates that the UK fiscal position relative to London has deteriorated much more sharply since the turn of the millennium. In other words, London tax export to rest of the UK has helped to mitigate the impact of an increasing UK deficit which reached £39.7 billion in 2004/5.⁴¹

Chart 6.1: London's contribution to UK public finances



6.6. How might London's contribution to UK public finances change?

London's contribution to UK public finances is likely to be affected in the future by changes on both the tax raising and public spending sides of the account. Many forecasters, including Oxford Economic Forecasting, believe that tax increases are going to be needed over the next few years if the sustainability of public finances is not to be put at risk. How this affects London's contribution will depend on which taxes are raised, but as the above calculations show a number of taxes fall disproportionately on London. Given the number of high earners in London, the more progressive a tax increase, the more likely that it would raise London's share of tax payments – we estimate, for example, that a hypothetical increase in the higher rate of income tax from 40% to 50% would lead to a significant increase in London's share of UK income tax receipts, with London contributing roughly 30%-40% of the additional funds raised, depending on whether it is calculated on a residence or workplace basis.

On the spending side, there are a number of policy developments and spending commitments that are likely to affect the share of public spending taking place in London. Moves to relocate public administration jobs out of London and the South East could reduce the proportion of spending taking place in London, while if funding issues are sorted out, building Crossrail would have a significant impact on the already relatively large share of the transport budget being spent in London. The cost of hosting the

⁴¹ As reported at the time of the 2006 Budget.

Olympic Games is currently being reviewed by the Olympic Delivery Authority (ODA) and KMPG. Previously the cost was estimated at £2.4 billion, with a further £1 billion from central government for the regeneration of Lea Valley. It is very likely, however, that this initial estimate will increase significantly. For instance, the head of ODA has said that another £2 billion may be required.

It is unclear how this cost will be apportioned between London, the Exchequer, the National Lottery and the private sector. The extent to which London might be expected to finance spending in these areas raises more general questions about the balance of funding between central and local government.

6.7. Conclusions

Our estimates suggest that London continues to be a substantial net contributor to UK public finances despite the deterioration in public finances at a national level, with a net contribution of between £5.8 and £20.4 billion in 2004/05 and the mid-point of the range of estimates implying a net contribution of £13.1 billion. London continues to make a significant contribution to UK public finances at a time when the national budget was continuing to deteriorate, with public sector net borrowing of £39.7 billion in 2004/5.

Public spending per capita in London is significantly higher than the UK average, but this partly reflects the unique nature of London as an urban environment, seat of government and the prime tourist destination for foreign visitors. On the other hand, London receives considerably less than the UK average in terms of expenditure relative to wealth created. Looking at the other side of the account, tax revenue from London is also high relative to its population. Given the economic benefits that London's success provides for the rest of the UK, a case may be made for London retaining a greater share of the tax revenue that it provides the Exchequer. These issues will come increasing into focus as the Olympics approaches and in the consultation process for greater devolution of power to the Mayor of London and the Greater London Authority.

7. Key Issues for the Future

7.1. London's skill needs

London's specialised economy throws up many specific skill needs. More generally, skills within the labour force are a key influence on London's ability to compete and its overall prosperity. London scores highly on the number of graduates in its labour force – a core foundation of knowledge-based industries. But it also suffers from skills poverty, with a high proportion of the population lacking any formal qualifications. This begs the question whether the supply of skills to the London economy is constrained and, if so, whether this will, in time, constrain the growth of the London economy.

The term “skills” is a short-hand for many individual attributes. It is typical to think of a skill as an individual's expertise in undertaking a difficult task, which has been built up over time as a result of their educational and work experiences. This characterisation certainly fits with traditional craft activities. The rapid technological and structural change that typifies a successful economy, however, suggests that at an individual level it is flexibility, and the ability to learn and apply new knowledge, that is an equally key aspect of “skill”. In addition, the value of particular skills changes over time with changes in the make-up of economic activity and the impact of new technologies. For example, a generation ago a typesetter was highly skilled and relatively highly paid. As a result of computer and software developments, this skilled task is now redundant. These considerations make “skills” a difficult concept to define and measure – and one that is highly contingent on prevailing economic structures and technologies.

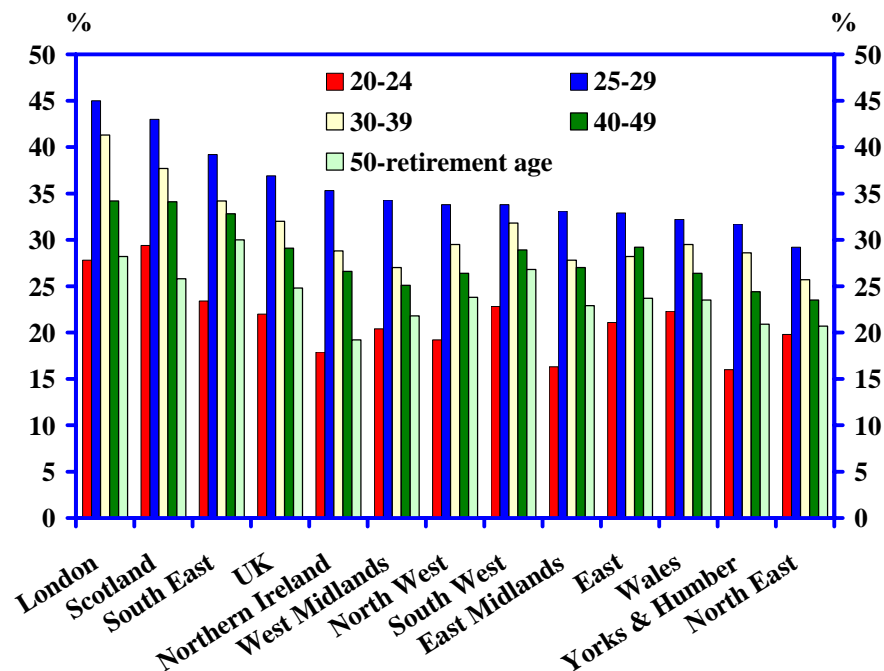
Nor should London's high wages relative to the rest of the UK (see Chart 4.6) necessarily be seen as an indication of skill shortages in specific areas. Rather, they are likely to be a reflection of London's productivity lead over the rest of the UK, along with extra compensation required by London workers for time spent commuting and experiencing congestion.

This section sets out the background relating to the supply of skills to the London economy. At any point in time there will be shortages of specific skills, but as long as the labour market is allowed to operate flexibly these shortages will tend to be met over the medium term. And the balance of evidence suggests that London does not face skill shortages that are stifling its growth. Rather, the issues are the extent to which London relies on imported labour to meet its needs, and the high proportion of the London working age population that lack the foundations on which skills currently in demand are based.

a) Levels of education

Given that knowledge-intensive industries drive the London economy, levels of educational attainment provide a reasonable proxy for the supply of skills in London relative to other parts of the UK. As described in Chapter 4, London has a much higher proportion of highly-educated people in its working-age population than other regions of the UK. As shown in Chart 7.1, this lead is particularly marked among those aged 25-39, where 43% of the population possess degree-level or equivalent qualifications, compared with the UK average of 33%. Moreover, this population cohort makes up 39% of the London working-age population compared with 33% for the UK as a whole, and only 32% for Scotland – the next best endowed region for educational attainment in the younger segment of the workforce. So London is particularly well-endowed with talented young people in the early stages of their working lives, who are likely to be able and have the appetite to learn and develop new skills.

Chart 7.1: Share of population with NVQ4+ qualifications



Source: APS & OEF

It is only in this highest category of educational attainment that London outscores the other regions, however. Compared to the rest of the UK (Chart 7.2), London has a low proportion of its workforce with other identified levels of educational qualification⁴² across all labour market age groups. This is likely to be a reflection of London's high cost, high value-added economy that offers relatively fewer of the jobs that focus more on the sort of process and repetitive tasks that are typically undertaken by workers with lower levels of educational attainment.

Similar arguments might seem likely to apply to those with no qualifications. The share of London's working age population with no formal educational qualifications is in line with the UK average of 14%, however. While this percentage is much lower for younger age groups in London, this is a pattern that is repeated across the country. One possible explanation for this feature of the London economy is the wide range of jobs available across the city in support activities, without which high value activities would not be able to flourish. In this sense London may offer more and better opportunities to individuals without formal educational qualifications, offsetting the high cost of living in the capital. London's relatively low employment rates are well-known, though. The combination of a substantial cohort of the population with few educational attainments and a relatively low overall employment rate suggests that, for at least part of the population, a lack of broadly-defined skills could be an impediment to finding work, as well as a drag on London's productive potential.

⁴² Made up of NVQ levels 1, 2 & 3, along with trade apprenticeships, but excluding the category "other qualifications".

Chart 7.2: Share of population with NVQ1-3 or trade apprentice qualifications

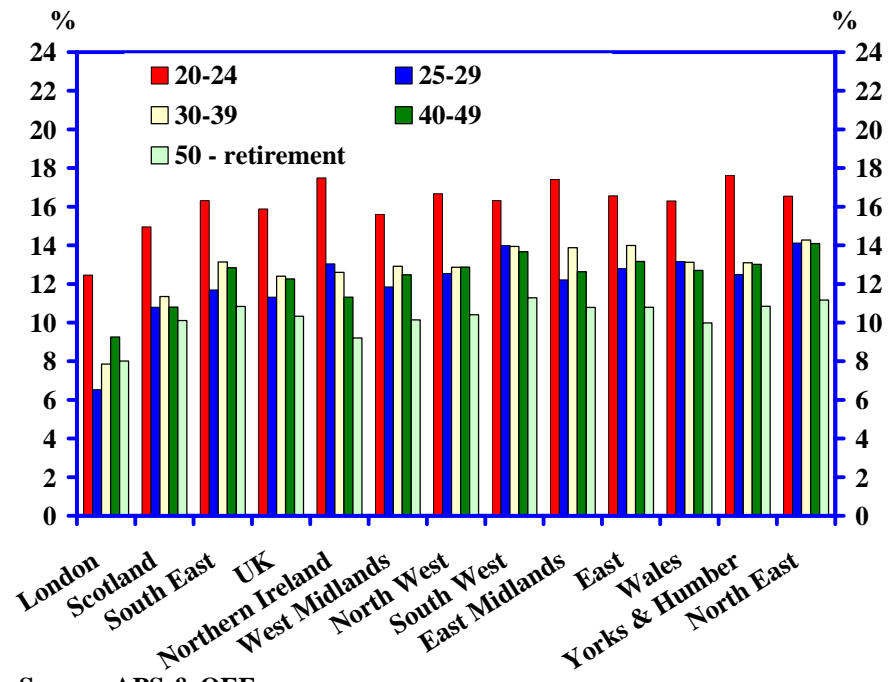
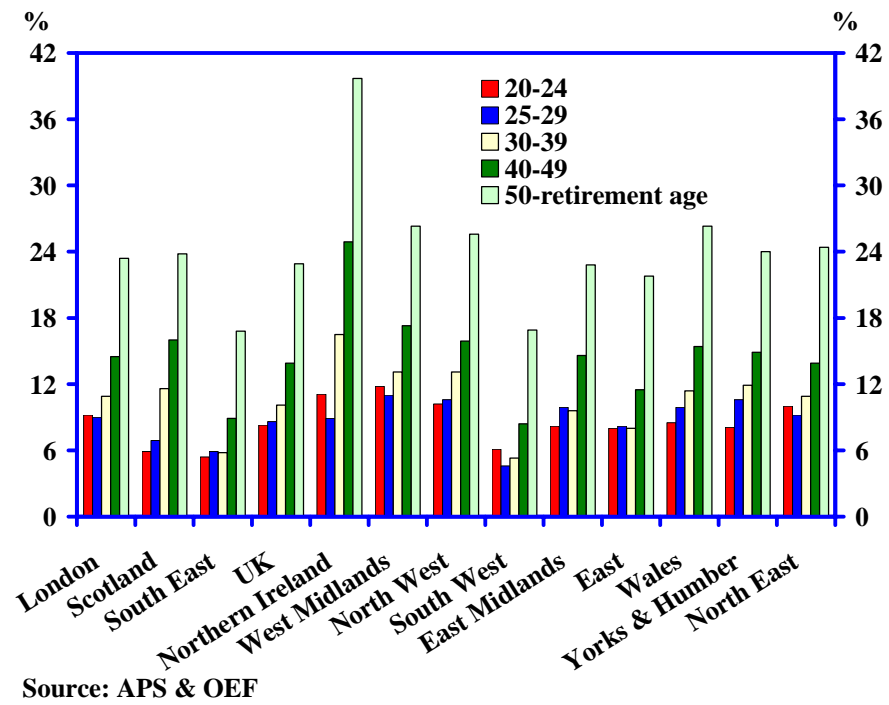


Chart 7.3: Share of population with no qualifications



b) CBI Trends Survey

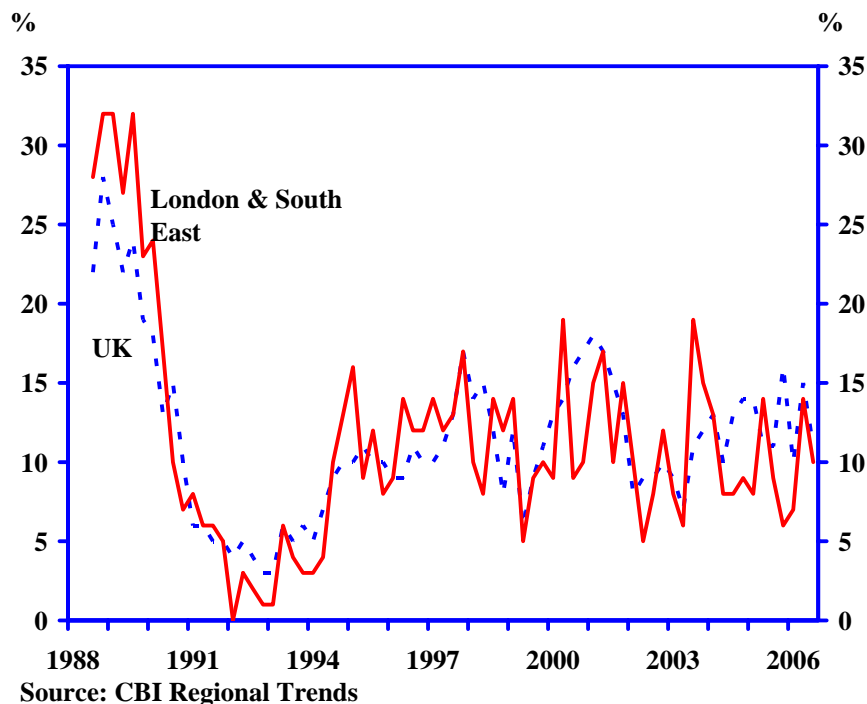
Survey evidence suggests that skill shortages are not currently a major constraint on the London economy, either when compared with other parts of the UK or with other international centres. However, there is evidence that a higher proportion of London employees suffer from some form of skill deficiency relative to the needs of their job than would be the case if national averages applied in the city.

The Confederation of British Industry has been collecting data on skill shortages as part of its regular surveys⁴³ for an extended period. Currently the proportion of firms in London & the South East and in the UK reporting that skill shortages are likely to be a limiting factor on output over the next three months is running a little ahead of the average values for the period since the mid-1990s, with the current values for the UK and London & the South East almost identical (Chart 7.4). There has been a dramatic improvement from the constraints that existed in the late 1980s. As might be expected, the London & the South East series shows more volatility than the national average, which averages out the experiences of individual regions, but the two series show broadly similar overall trends, particularly in the 1990s. However, in the most recent period since 2004 there are a number of readings where the direction of change in London & the South East differs from that of the UK as a whole, and on average through this period firms in London have reported less difficulty with skill shortages than those in the UK as a whole.

It is tempting to argue that London's favourable experience in relation to skill shortages in this most recent period is a consequence of the very rapid levels of net immigration that the UK has been experiencing since the new member states in central and eastern Europe joined the EU in mid-2004, with London acting as a key entry point. While this is one plausible explanation, there may be other factors at work, such as the knock-on effects on the private sector of rapid public sector employment growth across the more peripheral regions. Whatever the balance of the individual effects at work, it is apparent from this long-running survey that London does not currently face skill shortages that are out of line with historical experience or with national trends.

⁴³ CBI *Regional Trends Survey*.

Chart 7.4: Percentage of firms reporting skill shortages



c) National Employers Skills Survey

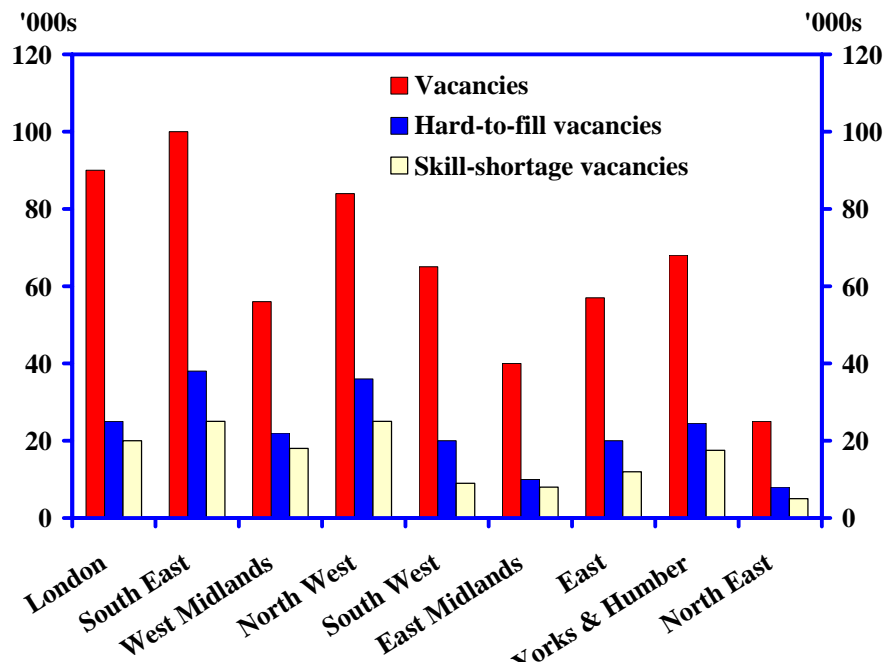
The most comprehensive picture of how the availability of skills matches with employers' needs comes from the annual National Employers' Skills Survey based on responses from over 70,000 employers in England. The results for 2005 suggest that London is less hampered by skill shortages and gaps than almost all of the other regions.

While the number of employers in London reporting vacancies in the 2005 survey was in line with the national average at 17%, the proportions in London with hard-to-fill vacancies⁴⁴ and with skill-shortage vacancies,⁴⁵ at 6% and 4% respectively, were both below average. The position in terms of the total number and type of vacancies was even better. In total, respondents to the survey identified 87,500 vacancies in London out of 574,000 in England as a whole (Chart 7.5). London's share of total vacancies was therefore only 15% compared with its employment share of 18%, with only 12% of hard-to-fill vacancies and 13% of skill-shortage vacancies reported by London employers.

⁴⁴ Hard-to-fill vacancies (HtFVs) are those vacancies described by employers as being hard to fill. Reasons often include skills-related issues, but can simply involve such aspects as poor pay or conditions of employment, or the employer being based in a remote location.

⁴⁵ Skill-shortage vacancies are those HtFVs which result either from a low number of applicants with the required skills, or a lack of candidates with the required work experience, or a lack of candidates with the required qualifications.

Chart 7.5: Types of vacancies



Source: National Employers Skills Survey

The survey shows the incidence of vacancies and skill-shortage vacancies varies by occupational type. In volume terms, associate professionals and lower level occupations, such as personal services and sales and customer services, appear to pose more of a skills and recruitment challenge than higher level (managerial and professional) occupations. This implies that part of the explanation for London's favourable experience on vacancies and skill shortage can be found in the occupational structure of employment in the city, which is much more highly weighted to higher level occupations. However, controlling for differences in occupational structures in London and England as a whole suggests that skill-shortage vacancies in London were still around 12% lower in 2005 than would have been the case if London suffered the same skill-shortage rates by occupational group as England as a whole. In other words, there appears to be a specific London effect at work in addition to the influence of occupational structure on London skill-shortages vacancy rate.

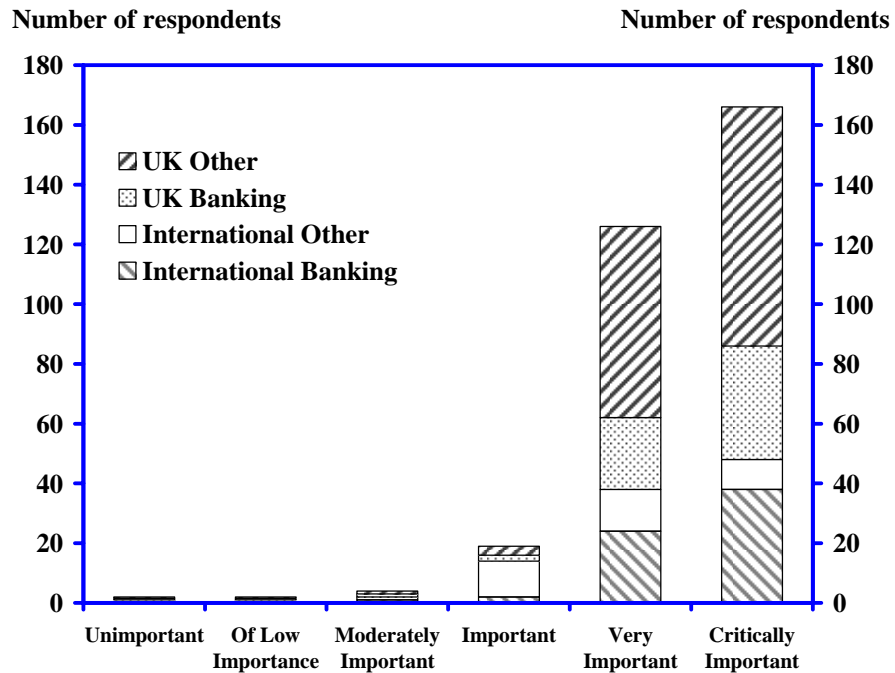
Vacancies are only one indicator of potential skill shortages. Skills gaps exist where employees are not fully proficient at their job, with employers likely to use training to close any gaps that they perceive. Newness in a job is a major cause of skill gaps, while soft skills such as team working, customer handling and oral communication, in conjunction with technical skills, are the most commonly identified gaps. And, as with skill shortage vacancies, the incidence of skill gaps varies by occupational group, with lower-level occupations showing a higher-than-average incidence of skill gaps.

The data from the 2005 National Employers' Skill Survey suggest that, while London's employers continue to suffer less from skill gaps than the average employer in England, its lead over the other regions has narrowed substantially in the recent past. While London had the lowest proportion of employers with any skills gaps (13%), the proportion of staff lacking proficiency is now more in line with other regions at 6% (218,800), and the city's share of skill gaps (17%) is now broadly equivalent to its share of overall employment (18%). But controlling for occupational structure shows that London has 14% more employees judged not to be fully proficient than would be the case if skill gaps for each occupation were in line the national averages.

d) Financial services

London’s role as the key UK centre for international financial services means that the availability of the skills needed to maintain a competitive position in providing such services is vital for London’s future place in the UK economy. In an analysis of London’s competitive position⁴⁶ as a global financial centre, over 90% of the survey respondents in London, New York, Paris and Frankfurt judged availability of skilled labour as the most important determinant of competitiveness, with over 90% of respondents regarding it to be either very important or critically important.

Chart 7.6: The importance of the availability of skilled labour



London and New York both scored very highly on the availability of skilled of staff, with 98% of respondents giving a rating of good or excellent. London, however, appeared to have a marginal advantage with an excellent rating of 75%, compared with 66% in New York. Both cities were well ahead of Paris and Frankfurt, which each received a good rating of around 60% but with 30% of respondents viewing the availability of skilled staff as poor. The report concluded that:

It is difficult to avoid the conclusion that London and New York score so highly as global financial centres because of the quality of the workforce. Whether the quality of the workforce is a cause of these cities becoming leading centres or whether skilled workers are attracted to London and New York because of the size of the financial sector within the cities is the subject of some conjecture. The availability of high quality personnel is, however, a key factor in maintaining the superiority of London and New York over other centres.

Despite London’s leadership position, there remains scope to improve the links between the financial services sector and London and UK universities in general. A recent joint report by the City of London and the Financial Services Skills Council found that UK

⁴⁶ *The Competitive Position of London as a Global Financial Centre*, Z/Yen Limited for the City of London, 2005.

Higher Education is still not as employer-aware as it could be.⁴⁷ Although there are examples of excellent collaboration between employers and UK higher education institutions, opportunities still exist for both to work more closely and form new types of relationships. For example, there are very few signs of coherent collaboration between UK higher education institutions and the major financial services recruiters. There exists a desire on the part of employers to provide a greater range of meaningful work experience opportunities for undergraduates, and a wish to see a more active role by careers services at universities in brokering relationships with financial institutions.

e) Employee training

While London has a highly educated workforce, there appears to be less emphasis on training while in employment in the city than in the UK as a whole.

According to the Annual Population Survey, in 2005 only 19.7% of London's working age population undertook training in any quarter (Table 7.1) – more than two percentage points less than the average proportion across the UK as a whole. This lower incidence of training activity was evident in a number of key labour market categories. For managers, although 33.8% undertook training, this still represents a deficit of four percentage points on the UK figure. In the public sector, while 43.1% of employees enjoyed training, this was nearly three percentage points less than in the UK. However, the incidence of training in private services and for part-time workers matched or exceeded the UK levels.

Table 7.1 Training in London		
Category	London %	London relative
Working age	19.7	89.5
Employed & self-employed	28.6	96.9
Managers	33.8	89.4
Private services	24.8	100.8
Public sector	43.1	94.1
Full time	28.8	95.0
Part time	27.8	102.2

Source: *Annual Population Survey & OEF*

The National Employers' Skills Survey adds some detail to this picture. It reports that only 62% of London employers undertook training activity in 2005, below the UK average of 65% and the second lowest proportion among the English regions. The results, however, suggest that when London employers undertake training they do so more intensely, with more focus on job related tasks. For example, London trainees received an average of 14 days training in 2005, the highest of the English regions (matched by the East Midlands), with less emphasis on induction and health & safety training, and also lower use of Further Education colleges and training towards nationally recognised qualifications.

⁴⁷ *Graduate Skills and Recruitment in the City*, City of London and Financial Services Skills Council, September 2006.

7.2. The competitive position of London's higher education institutions

Universities and higher education institutions are a key pillar of the knowledge economy. As well as educating, they provide one of the dynamics for innovation through research and researcher-training. They play an important role in regional development and can attract international talent and visitors. Increasingly, the best universities compete globally – for teaching and research staff, students, finance, recognition and prestige. This section examines how London's higher education institutions rank in this competition and the constraints that they face. Arguably, the competitive environment that UK universities face is starting to get tougher as a consequence of a falling population in the prime student age group, the possible freeing up of the tuition fee environment, the possibility that some high profile institutions will go "private", and the impact of what some authors have called the "de-localisation" of university functions on the back of web-related developments.⁴⁸

a) How universities compete

Universities and higher education institutions compete on a number of fronts. These include:

- **Specialist staff**, with the best universities vying for the leading teachers, authorities and researchers across a range of fields. Increasingly, these staff are internationally mobile, are sought after by commercial organisations, and wish to work in well-resourced prestigious universities with strong reputations in their particular specialism.
- **Attracting students**, both in terms of numbers and quality, with this competition extending to foreign students, including post-graduates. Non-EU students typically pay much higher fees, but for the best of them there is a global range of institutions from which to choose.
- **Excellence in research**, which is driven by an amalgam of factors including track record, quality of facilities, living environment, salaries, depth and reputation of staff, and ability to attract internationally mobile research contracts, with major funders of research, including charitable foundations and multinational corporations, seeking out the best research groups in the world.⁴⁹
- **Financial strength**, involving both the ability to generate tuition-fee income from students, the attraction of research grants, licensing revenues from successful commercialisation of research findings, donations from alumni, the management of endowments and even access to capital markets.⁵⁰
- **Local resources and context**, including the cost, availability and quality of services, support staff, facilities and accommodation.
- **Prestige**, or what in the commercial world might be called brand strength, driven by the university or institution's perceived performance across a wide range of attributes, including the ability to differentiate in the marketplace from competing institutions.

⁴⁸ *Are Elite Universities Losing Their Competitive Edge?* E. Han Kim, Adair Morse and Luigi Zingales, NBER Working Paper No. 12245, May 2006.

⁴⁹ Professor Ivor Crewe, President, Universities UK, speech to Universities UK's Annual Conference in Keble College, Oxford, September 2005.

⁵⁰ "An education in finance", *The Economist* May 18 2006, reports on the trend towards universities worldwide raising loans to fund better facilities.

b) UK background

There is no single measure – such as economic value-added or return on equity – that captures the competitive abilities of a university or higher education institution. However, there are a range of league tables from a variety of sources that provide insights into the strengths (and weaknesses) of individual institutions.

The UK scores well on the quality of its universities. While the United States dominates the league tables in terms of measures of attractiveness to foreign students, quality of research and levels of income, the UK tends to occupy second place, ahead of the other large developed economies. For example, in the annual Academic Rankings of World Universities compiled by Shanghai Jiao Tong University, which ranks universities by several indicators of academic and research performance⁵¹, the UK lies in second place whether the ranking is based on the top 100 universities in the world or on a wider basis across the top 500. As shown in Table 7.1, the UK's ranking far outstrips its share of world population and is also ahead of its share of world GDP.

	Top 100	Top 500	Population	GDP
USA	53.5%	33.4%	4.6%	28.4%
UK	10.9%	8.6%	0.9%	5.1%
Japan	5.9%	6.4%	2.0%	11.2%
Germany	5.0%	8.0%	1.3%	6.6%
Canada	4.0%	4.4%	0.5%	2.4%
France	4.0%	4.2%	0.9%	5.0%
Sweden	4.0%	2.2%	0.1%	0.8%
Switzerland	3.0%	1.6%	0.1%	0.9%
Netherlands	2.0%	2.4%	0.3%	1.4%
Australia	2.0%	3.2%	0.3%	1.5%
Italy	1.0%	4.6%	0.9%	4.1%
Israel	1.0%	1.4%	0.1%	0.3%
Denmark	1.0%	1.0%	0.1%	0.6%
Norway	1.0%	0.8%	0.1%	0.6%
Finland	1.0%	1.0%	0.1%	0.5%

Source: *Higher Education Institute, Shanghai Jiao Tong University*

UK universities are the second most important producer of scientific and scholarly research in the world in almost all disciplines, accounting for 4.5% of the world's spend on science, but producing 8% of the world's scientific papers and 13% of the most highly cited. As a result, UK research productivity far outstrips that of the US. In the fifth European Framework Agreement, UK universities secured almost a quarter of the contracts placed among EU higher education institutions and half of all the funding.⁵²

⁵¹ Ranking indicators include the alumni and staff winning major international awards, highly cited researchers in major research fields, articles published in selected top journals, articles indexed by major citation indexes, and performance per capita.

⁵² Professor Ivor Crewe, President, Universities UK, speech to Universities UK's Annual Conference in Keble College, Oxford, September 2005 and Universities UK international Strategy, March 2005.

At 11% in 2004, the UK has the second-largest world market share of overseas students,⁵³ compared with a share of 22% for the US, 10% for Germany and 7% for France. The Socrates and other EU student exchange programmes produce a huge net inflow into the UK – the equivalent of two medium-sized universities. International students are attracted by the UK's reputation for quality, intensive degree programmes, professional support services for students and high completion rates.⁵⁴

Universities have a considerable economic impact both via their contribution to the development of human and social capital and also as businesses in their own right. For example, in 2003-04 UK universities and higher education institutions generated revenues from public and private sources totalling £16.9 billion. Of this, £4.6 billion (27%) came from the UK private sector and £2 billion (12%) from international sources. It has been estimated that spending by universities and their staff supported nearly 600,000 jobs in the UK, or 2.5% of the workforce⁵⁵.

In addition, international students and visitors to universities made a considerable contribution to the UK's earnings from visitors. Off-campus expenditure of international students attending UK universities and higher education institutions in 2003-04 amounted to £1.5 billion, equivalent to 9% of all UK receipts from overseas visitors to the UK in 2004, while expenditure by international business and recreational visitors to UK universities and higher education institutions added another £106 million, or around 1% of all UK receipts from overseas visitors in 2004. It is estimated that this spending supported a further 25,000 jobs in the UK.

c) London's contribution

London Higher,⁵⁶ the representative organisation for universities and higher education colleges in London, comprises 43 members (Table 7.2), including 19 colleges of the University of London who have individual membership of this umbrella organisation. According to London Higher's website and Annual Review 2005-06,⁵⁷ London has one of the largest and most diverse clusters of Higher Education institutions in the world. Higher education institutions in London range from large multi-faculty, multi-campus universities with thousands of students to the smaller colleges providing a wide range of specialised courses covering areas such as the arts, healthcare and business, all of which offer students a world class education. Some 22% (83,000) of London's students are of foreign origin, with 56,000 from outside the EU. It is estimated that in total these foreign students contribute £750 million to the UK economy each year. This gives London a foreign complement of students over twice as great as any other English region. These institutions attract £600 million per annum of research funding, of which 15% (£90 million) is attracted from international sponsors – with the total representing 25% of all research funding to universities and higher education institutions in the UK.

⁵³ "Education at a Glance", OECD Indicators, 2006.

⁵⁴ Professor Ivor Crewe, President, Universities UK, speech to Universities UK's Annual Conference in Keble College, Oxford, September 2005 and Universities UK international Strategy, March 2005.

⁵⁵ *The economic impact of UK higher education institutions*, UK Universities, March 2006.

⁵⁶ http://www.londonhigher.ac.uk/about_lh.htm.

⁵⁷ http://www.londonhigher.ac.uk/about_lh.htm and *London Higher Annual Review 2005-06*.

Table 7.2: London's higher education institutions	
Birkbeck University of London*	Rose Bruford College
Brunel University	Royal Academy of Music*
Central School of Speech & Drama*	Royal College of Art
City University	Royal College of Music
Conservatoire for Dance and Drama	Royal College of Nursing Institute
Courtauld Institute of Art*	Royal Holloway University of London*
Goldsmiths College University of London*	School of Oriental and African Studies, University of London*
Guildhall School of Music & Drama	School of Pharmacy*
Heythrop College, University of London*	St George's, University of London*
Imperial College London*	St Mary's College
Institute of Cancer Research*	Thames Valley University
Institute of Education*	The Open University in London
King's College London*	The Royal Veterinary College*
Kingston University London	Trinity College of Music
London Business School*	University College London*
London Metropolitan University	University of East London
London School of Economics and Political Science*	University of Greenwich
London School of Hygiene & Tropical Medicine*	University of London*
London South Bank University	University of the Arts London
Middlesex University	University of Westminster
Queen Mary, University of London*	Wimbledon School of Art
Ravensbourne College of Design and Communication	
Roehampton University	<i>* Colleges of the University of London</i>

Source: *London Higher*

d) London universities in the rankings

In rankings of UK universities London institutions are spread through the tables, but with some bias towards high and low positions. For example, of the 19 London universities and higher education institutions identified in the Times Top Universities 2007 league table⁵⁸ of 109 UK universities, six are ranked in the top quartile, but equally eight are located in the bottom quartile. To some extent this suggests a link to London's bi-polar economic performance, where pools of deprivation and relative economic underperformance co-exist with a vibrant world-class city. Equally, it means that only a subset of London's universities are currently significant contenders among the global elite of universities.

⁵⁸ <http://www.timesonline.co.uk/section/0,,716,00.html> The top universities league table 2007 ranks universities by measuring nine key aspects of activity. Scores were weighted by 1.5 for student satisfaction and research assessment.

Table 7.3 Overall rankings of London's universities	
Institution	UK rank
Imperial College	3
London School of Economics	4
University College London	5
Royal Holloway	12
King's College London	17
School of African & Oriental Studies	18
Queen Mary	41
Goldsmiths College	45
Brunel	50
City	53
Roehampton	70
University of the Arts, London	84
Kingston	89
East London	93
Westminster	94
Middlesex	96
London South Bank	101
Greenwich	106
Thames Valley	109

Source: *Top Universities 2007 League Table* <http://www.timesonline.co.uk/section/0,,716,00.html>

London's top higher education institutions can, however, rightly claim to be world class. The ranking of the top 200 universities for 2005 produced by the Times Higher Education Supplement⁵⁹ includes six London universities – the London School of Economics, Imperial College, University College London, Kings College London, School of Oriental & African Studies and Queen Mary College – with the first three ranked in the top 30 and none below 112th.

These overall rankings, while bringing together a wealth of information about overall university performance, do, however, omit some indicators that provide insights into the competitive position of individual institutions. The following sections examine two of these – the attractiveness of London universities to foreign students and the relative financial strength of London higher education establishments.

e) Foreign students

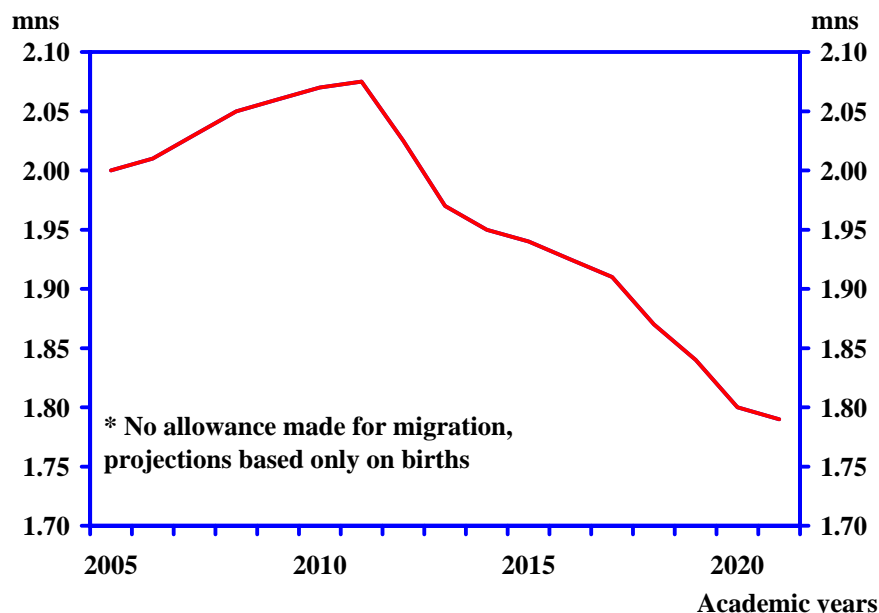
Ability to attract international students is a key, and easily measured, indicator of the competitive position of individual institutions. Moreover, foreign students are likely to become even more critical to the fortunes of individual universities given that the domestic population of student age will start falling in a few years' time (Chart 7.7). The detailed data on domicile of origin of students from the Higher Education Statistics Agency (HESA)⁶⁰ show that London's universities and higher education institutions make a significant contribution to attracting foreign students to the UK. In 2004-05 an aggregate of 83,000 foreign students, or 26% of the total in the UK, studied in London. This compares with London's share of all students in the UK of 18% (442,200) for that year – itself a much higher figure than London's population share of 12%. This high share of foreign students in London is a feature of both undergraduate (27%) and

⁵⁹ *Times Higher Education Supplement*, <http://www.thes.co.uk/worldrankings/>.

⁶⁰ <http://www.hesa.ac.uk/holisdocs/pubinfo/student/institution0405.htm>.

postgraduate (25%) education, with the half the foreign students in London following undergraduate courses (41,600) and half postgraduate studies (41,000). Nationals of other EU countries make up just under one-third (26,400) of London's foreign students – again fairly evenly split between undergraduate and postgraduate studies.

Chart 7.7: Projection of UK population of student age



Source: Higher Education Policy Institute, ONS, Government Actuary's Department, Department for Education & Skills

The dependence of individual institutions on foreign students varies markedly. In three of London's specialist higher education establishments – the London Business School, the London School of Economics and the London School of Hygiene and Tropical Medicine – the quotient of foreign students is over 50% (Table 7.4), with eleven of the forty institutions identified by the Higher Education Statistics Agency relying on foreign students for more than one-third of their student numbers. Almost all of these institutions are among London's most specialised educational establishments. Only three non-London institutions have foreign student quotients above one-third – the privately-run University of Buckingham (75%), Cranfield University (38.3%) and the University of St Andrews (33%). At the other end of the spectrum, only a handful of London institutions score below the UK average of 13% for foreign student quotients – these include the Royal College of Nursing, Thames Valley University and Birkbeck College.

Table 7.4 Share of foreign students in London's higher education institutions
(ranked by proportion of foreign students)

Institution	Foreign students	%	% (under-grads)	% (post-grads)
London Business School	1040	64.0%		64.0%
London School of Economics and Political Science	5450	61.8%	45.0%	75.9%
London School of Hygiene & Tropical Medicine	565	58.2%		58.2%
The School of Oriental and African Studies	1965	45.7%	36.2%	56.0%
Royal Academy of Music	325	44.2%	35.3%	51.9%
Royal College of Music	265	43.4%	35.6%	55.1%
The Institute of Cancer Research	60	38.7%		38.7%
Royal College of Art	330	38.2%		38.2%
Imperial College of Science, Technology & Medicine	4245	34.8%	29.6%	44.3%
University of London (Institutes and activities)	155	34.8%	5.9%	41.7%

Source: HESA & OEF

The universities and institutions where foreign students make up the largest proportion of student numbers are not necessarily those that foreign students are most likely to attend, however, – some of the largest London universities and institutions have more foreign students than those shown above, even though foreign students make up a smaller proportion of their total intake (Table 7.5). Only the London School of Economics and Imperial College rank in the top ten both by share and absolute numbers of foreign students, with London Metropolitan University (7,100), Middlesex University (6,000) and the University of Westminster (5,700) leading the way in terms of the highest numbers of foreign students.

Table 7.5 Number of foreign students in London's higher education institutions
(ranked by number of foreign students)

Institution	Foreign students	%	% (under-grads)	% (post-grads)
London Metropolitan University	7090	22.6%	19.3%	38.7%
Middlesex University	6000	23.9%	17.3%	44.8%
The University of Westminster	5655	21.1%	14.8%	34.9%
University College London	5640	28.8%	23.0%	38.0%
London School of Economics	5450	61.8%	45.0%	75.9%
City University	5445	22.8%	13.4%	38.1%
Imperial College	4245	34.8%	29.6%	44.3%
University of the Arts, London	4245	16.4%	31.8%	42.0%
The University of Greenwich	4145	18.6%	13.1%	33.0%
King's College London	4050	18.4%	12.3%	31.7%

Source: HESA & OEF

Entry requirements provide both an indicator of the academic excellence of institutions and a route through which universities can compete for students. The data below relate to undergraduate entry requirements. According to this snapshot for 2002-03, there was a tendency for the proportion of foreign students to rise as entry standards increased – as would be expected if foreign students are drawn primarily by reputation and quality of fellow students. It is notable, however, that even for those London universities towards the lower end of the entry requirements league table, the proportion of foreign students

significantly exceeds the UK average and there are some outliers – such as Middlesex – that suggest particular efforts are being made to attract foreign students.

Table 7.6 London universities and higher education institutions – undergraduate entry requirements⁶¹			
Institution	Entry standards 2002-03	UK Rank	Foreign undergraduate quotient 2004-05
Imperial College	468.2	3	29.6%
London School of Economics	466.9	4	45.0%
University College London	410.8	11	23.0%
King's College London	393.7	16	12.3%
Royal Holloway	345.3	34	22.3%
University of the Arts, London	345.1	35	31.8%
SOAS	328.6	39	36.2%
City	314.7	44	13.4%
Queen Mary	314.1	45	17.5%
Brunel	303.2	51	8.3%
Goldsmiths College	295.5	53	13.4%
Roehampton	229.2	92	7.3%
Westminster	217.8	100	14.8%
Thames Valley	202.5	106	12.4%
Greenwich	200.6	107	13.1%
Middlesex	200.0	108	17.3%
London South Bank	192.3	110	11.3%
East London	191.7	111	14.3%
UK average			8.7%

Source: HESA via the Times Educational Supplement and OEF
http://www.thes.co.uk/statistics/university_performance/league_tables/2006/entry.aspx

These data suggest that London itself plays a key role in attracting foreign students to the UK, with many more foreign students in the city than would be the case if London's experience was merely in line with that of the rest of the UK. Moreover, it is not just the specialist institutions ranking highly among UK and world universities that are important in attracting foreign students to London. Universities well down the overall ranking for the UK are also capable of attracting a higher proportion of foreign students than the average university in the UK. This may suggest that, in addition to the undoubted academic attractions of some of London's high profile institutions, London is also seen as a particularly attractive place to live and study.

f) Financial strength

In terms of income and accumulated financial wealth, the older and more specialised of London's universities and higher education institutions tend to rank very highly against their UK peers. Indeed, calculated data for income per student suggest that fourteen of the top twenty institutions on this measure are located in London. In part, this is a reflection of the higher costs of operating from a London base and the requirement to generate sufficient income to cover these costs. However, it also demonstrates that the highly-ranked institutions in London possess competitive strengths that result in high income levels. Nevertheless, half of the thirty-four institutions ranked on this measure

⁶¹ Full UCAS tariff, first degree students under 21, 2003-04.

suffer income per student levels below the UK average, with London's newer universities predominating in this part of the ranking.

Table 7.7 London universities and higher education institutions – income levels				
Institution	Income 2002-03 £000	Student numbers 2004-05	Income per student	UK rank
Institute of Cancer Research	49,402	155	318,723	1
University of London	93,816	445	210,822	2
London School of Hygiene & Tropical Medicine	53,382	970	55,033	3
London Business School	72,386	1625	44,545	5
Imperial College of Science, Technology & Medicine	409,304	12185	33,591	6
University College London	457,929	19950	22,954	8
Royal College of Art	19,746	865	22,828	9
Royal Veterinary College	30,631	1440	21,272	10
Royal College of Music	12,113	610	19,857	12
Courtauld Institute of Art	7,496	400	18,740	13
Royal Academy of Music	12,143	735	16,521	16
St George's Hospital Medical School	56,782	3510	16,177	17
King's College London	327,416	21965	14,906	19
London School of Economics and Political Science	121,584	8815	13,793	20
Queen Mary and Westfield College	149,054	11005	13,544	21
Royal College of Nursing	8,631	880	9,808	33
School of Pharmacy	12,761	1400	9,115	41
Royal Holloway and Bedford New College	69,006	7655	9,015	42
School of Oriental and African Studies	36,713	4300	8,538	46
Central School of Speech and Drama	6,857	970	7,069	60
Institute of Education	46,637	6770	6,889	61
Goldsmiths College	46,856	7660	6,117	71
Brunel University	93,088	15455	6,023	72
Rose Bruford College	4,656	865	5,383	80
University of Surrey, Roehampton	42,381	7955	5,328	81
St Mary's University College	5,727	1135	5,046	88
Kingston University	101,156	20645	4,900	93
Middlesex University	122,764	25125	4,886	94
City University	106,487	23925	4,451	113
University of East London	71,380	16360	4,363	115
University of Westminster	114,329	26775	4,270	121
London Metropolitan University	132,442	31440	4,213	124
London South Bank University	93,373	22395	4,169	127
Wimbledon School of Art	5,899	1415	4,169	128
Conservatoire for Dance and Drama	4,256	1035	4,112	131
Birkbeck College	51,732	14905	3,471	143
Edge Hill College of Higher Education	35,933	14620	2,458	156
Thames Valley University	63,433	52885	1,199	162

Source: *The Times Educational Supplement, HESA and OEF*

London's universities rank less highly on endowments of financial assets than they do on income per student measures – and lag well behind the wealth of Cambridge and Oxford. London has only six of the top twenty universities in the UK ranked by financial wealth, with the richest – King's College – almost six times less well-endowed than the two leading UK universities. In common with typical UK universities, most of those based in London have small endowments relative to the size of the “businesses” that they run. Twenty-six of the thirty-nine universities and higher education institutions ranked had endowments of less than £5 million in 2002-03. Moreover, the gap with the leading institutions may well have widened in the last four years as a result of the marked recovery in the equity market that will have favoured those institutions with large endowments and significant commitments to equities.

Table 7.8 London universities and higher education institutions – endowments (2002-03)

Institution	£000	UK Rank
King's College London	83,124	7
University College London	75,423	8
University of London	44,601	13
Royal Holloway and Bedford New College	42,438	14
Imperial College	38,242	15
London School of Economics and Political Science	35,843	16
Queen Mary and Westfield College	26,422	22
Royal Academy of Music	21,803	27
Royal College of Music	20,217	28
Courtauld Institute of Art	15,727	31
School of Oriental and African Studies	15,569	32
Royal College of Art	8,291	38
Royal Veterinary College	6,939	41
London Business School	4,890	44
London School of Hygiene & Tropical Medicine	4,706	45
Birkbeck College	4,098	48
St George's Hospital Medical School	3,917	50
City University	3,095	57
London Institute	2,864	59
Institute of Education	2,783	60
Institute of Cancer Research	1,596	72
Brunel University	1,535	73
Kingston University	1,383	77
Goldsmiths College	1,228	80
London Metropolitan University	893	86
London South Bank University	578	89
University of Greenwich	571	90
Thames Valley University	443	96
School of Pharmacy	443	97
Central School of Speech and Drama	187	104
Middlesex University	36	117
University of Surrey, Roehampton	34	119
Conservatoire for Dance and Drama	0	138
Edge Hill College of Higher Education	0	141
Rose Bruford College	0	153
Royal Agricultural College	0	154
Royal College of Nursing	0	155
University of Westminster	0	161
Wimbledon School of Art	0	162

Source: *The Times Educational Supplement*

g) Assessment

The UK's universities face new challenges. The basis of funding is changing; competition via fees is beginning; the UK population of student age is set to decline; web-based initiatives are changing the ways in which education and research are delivered and undertaken; and, as in other areas of the economy, there is increased global competition among higher education institutions. London possesses both distinct advantages for this emerging environment and weaknesses that could turn into significant threats to at least some of its educational establishments.

London benefits from the presence of a number of world-class educational institutions that score highly in their ability to attract academic staff, students and research monies. But not all of London's universities are near the top of the league tables. Arguably, the spread of university type and quality across the city merely reflects the differing needs of students. For example, there is some evidence that London's best institutions cater well for foreign students. But even those London universities in the lower reaches of the league tables tend to have high foreign student quotients. This suggests that, as in other walks of life, there is a 'London effect' that draws people and activity to the city from around the world – people and skills that would likely be lost to the UK if London did not enjoy its World City status.

London's draw and status have associated costs, however. For example, universities have to compete with other businesses and organisations in their locality for resources and inputs. Some of the crucial inputs that drive the success of a university are either in short supply in London or are more expensive than in other parts of the UK and internationally. Space and ancillary staff are two key examples. As shown in Chart 4.7, property costs in London lie well above those of almost anywhere else in the world, and there is a limit to the extent to which universities can economise on space without detriment to the overall product that they are offering. Moreover, students need to be housed, and rent accounts for a substantial part of the average student budget. Universities also compete for administrative, janitorial and catering staff and services in the local market and are likely to have to pay much more in London than in other university cities. A high productivity, high cost location is not necessarily ideal for a university, even if it facilitates the two-way flow of ideas and research monies between the economic base of the city and its universities. In many respects, London's universities' needs for continued success will parallel those of other businesses located in the capital – efficient, rapid, low-cost transport, affordable housing and an attractive environment for both staff and their students.

While the tier of prime universities and institutions in London seem well-placed to meet increasing domestic and global competition, those that rank lower face the challenge of finding strategies that will allow them to develop and prosper. Education and learning are central to a knowledge-based economy, implying that there should be continuing strong demand for learning. Deciding which parts of that demand to tap into and delivering appropriate packages may, however, require considerable flexibility and change at the level of the individual institution. Similar pressures will face institutions elsewhere in the UK and globally, and the draw of London, combined with proximity to its strong, international business base, should continue to help London-based universities. However, there may be issues related to the organisational and management structure of London's universities, with many small units lacking the financial muscle to match that of the most powerful institutions worldwide. In a more competitive and changing academic world there may be a need for mergers and takeovers to allow London to get the most out of its educational endowment. Equally it is unlikely that all London's universities can prosper – and it would not be entirely surprising to see some casualties along the way.

7.3. Thames Gateway

One of the structural issues facing London's economy discussed in Chapter 5 is the challenge of accommodating London's growth in terms of both space for working and space to house a growing population. Part of the solution to this may lie in proposed developments in the Thames Gateway. This composite region, made up of nine boroughs in London itself, five local authorities in Essex and four in Kent, is home to 3.2 million people and the work location for 1.6 million. There is scope to increase both the population and the number of jobs through development of a mix of brownfield and greenfield sites, and to boost London's labour supply through the provision of efficient commuting links and affordable housing. In effect, the area offers London one of the best options for underpinning continued growth, and its development is therefore of national importance given London's leading role supporting UK growth. In addition, the Thames Gateway will enjoy the legacy of the infrastructure built to host the 2012 Olympics. While the challenge of delivering development of the Thames Gateway is already substantial, some of the London boroughs in the Thames Gateway area are the most deprived in the city, with low levels of employment, complicating the task of ensuring balanced development.

Figure 7.1 The Thames Gateway area



a) What is the Thames Gateway?

The Thames Gateway stretches on both banks of the Thames for 40 miles from central London to east of Southend-on-Sea on the north shore of the Thames estuary and to the Isle of Sheppey on the south shore. It therefore encompasses dense urban environments, degraded land from former industrial use, particularly along the riverside strip, open countryside and important marshland sites for wildlife. The area has long been recognised as offering potential for growth and for regeneration, particularly in the more deprived wards of East London and on the currently derelict land. To some extent, the successful developments at Canary Wharf, begun in the 1980s, demonstrate the potential that the area can offer to London to bolster its success as a leading World City. Ensuring sustainable development in such a diverse area raises many challenges, however.

In 2003, the Office of the Deputy Prime Minister launched the Sustainable Communities Action Plan (SCAP). This confirmed that the Thames Gateway would be one of four priority areas for the development of new residential communities, in order to tackle South East England's persistent housing supply issues.

The Department for Communities and Local Government is responsible for co-ordinating the project. Responsibility for delivery rests with three regional development agencies - the London Development Agency (LDA), the East of England Development Agency (EEDA) and the South East England Development Agency (SEEDA), as well as the national regeneration agency, English Partnerships. In turn sixteen zones within the Thames Gateway have been identified where developments are expected to be concentrated. Nine of these are in London, four in Kent and three in Essex.

Initial priorities from central government for investment and minimum targets for development⁶² include a proposal for at least 120,000 new dwellings to be delivered across Thames Gateway during the period 2003-2016, of which around 60,000 would be in London. The LDA has raised this target to 91,000 new homes.

The emphasis on building sustainable communities in the Thames Gateway puts heavy emphasis on environmental issues, including cleaning up derelict industrial land, providing plentiful green space, improving transport links to reduce reliance on car transport and measures to offset the risk of flooding.

b) Employment characteristics

The Thames Gateway is currently (2005) home to 3.2 million people and supports over 1.1 million jobs. Of this population, nearly two-thirds (2.0 million) live in London itself, while 62% of the jobs in the Thames Gateway are located in the city. Table 7.9 shows that – as might be expected – at an aggregate level there are significant differences between London's employment structure and that of the Gateway. There are activities where the Gateway is even more specialised than London. These include some aspects of financial services – with Canary Wharf playing an important role – and ancillary activities such as printing and transport. Equally, there are areas of specialism that are less developed than those of London, but still well ahead of the UK average, such as publishing and news media. There is also a wide range of manufacturing and port-related activities in which the Thames Gateway specialises, but in which London itself has a below-average presence compared with the UK as a whole.

While overall employment and unemployment rates in Thames Gateway and London are virtually indistinguishable, there are marked differences in terms of occupations and levels of qualification. A much lower proportion of the Thames Gateway workforce is in managerial and professional occupations, with only 41% of jobs falling into these categories (the same as the average for the UK), compared with 52% in London as a whole (Table 7.10). Similarly, only 34% of the Thames Gateway residents have NVQ3 qualifications or above (equivalent to two A-levels), compared with 45% for London as a whole. This level of educational attainment is also well below the UK average of 41%.

This overall picture of the Thames Gateway obscures considerable diversity among its constituent areas. For example, in Bexley nearly 80% of the working-age population are in jobs – the highest rate for local authorities in the Thames Gateway. But only slightly over 50% of those in Hackney are in jobs, where one-third of the working age population are economically inactive and do not want a job. As a vivid illustration of the complexity of the divergences within local areas, however, the proportion of higher-occupation jobs in Hackney is over 50% and very close to the London average, while in Bexley this same

⁶² *Creating Sustainable Communities: Making it happen: Thames Gateway and the Growth Areas*, ODPM, 2003.

indicator is broadly in line with the Thames Gateway average, at 41%. Hackney's resident labour force contains a higher proportion of graduates (27.5%) than the UK average (26.4%), though this coexists with nearly one quarter of the Hackney working age population who have no educational qualifications, compared with just over 14% for the UK and London as a whole, and 17% for the Thames Gateway area. In contrast, only 19% of Bexley's working age population are graduates, but the proportion of those with no educational qualifications in Bexley is half that of Hackney.

Table 7.9 Thames Gateway specialisms (Specialisation Index, UK = 1)		
	Thames Gateway	London
<i>London specialised but Thames Gateway more so</i>		
Manufacture of vegetable and animal oils and fats	8.28	1.14
Activities auxiliary to fin. intermediation, ex insurance & pension funding	3.88	3.58
Other financial intermediation	3.42	2.55
Activities of other transport agencies	2.64	1.58
Extraction of crude petroleum and natural gas	2.05	1.31
Investigation and security activities	1.83	1.55
Monetary intermediation	1.81	1.69
Industrial cleaning	1.79	1.41
Printing and services activities related to printing	1.65	1.06
Maintenance and repair of office, accounting and computing machinery	1.49	1.22
Manufacture of other wearing apparel and accessories	1.27	1.14
<i>Thames Gateway specialised but less than London</i>		
News agency activities	3.73	4.69
Publishing	1.71	2.53
Activities auxiliary to insurance and pension funding	1.65	1.72
Data base activities	1.62	1.82
Real estate activities on a fee or contract basis	1.23	1.65
Other supporting transport activities	1.21	1.94
Wholesale of household goods	1.16	1.47
<i>Thames Gateway specialised London not</i>		
Manufacture of motor vehicles	2.50	0.40
Manufacture of optical s and photographic equipment	2.32	0.28
Manufacture of refined petroleum products	2.23	0.12
Manufacture of pulp, paper and paperboard	2.10	0.16
Recycling of metal waste and scrap	1.69	0.42
Manufacture of grain mill, starches and starch products	1.52	0.43
Sea and coastal water transport	1.51	0.88
Cargo handling and storage	1.43	0.49
Primary education	1.32	0.78
Other land transport	1.30	0.91
Recycling of non-metal waste and scrap	1.28	0.68
Adult and other education	1.27	0.96
Sewage and refuse disposal, sanitation activities	1.27	0.89
Manufacture of pharmaceuticals & medicinal chemicals	1.26	0.40
Manufacture of medical and surgical equipment	1.24	0.32

Source: ABI 2004 & OEF

	London	Thames Gateway	Bexley	Hackney	UK
Employment rate, % of working age	69.1	69.7	79.3	53.2	74.3
Economically inactive, % of working age	19.2	18.7	14.1	33.5	16.6
Managerial, professional and associate professional occupations (% of jobs)	52.2	40.7	41.1	51.0	41.3
NVQ4+, % of working age	33.3	21.4	19.2	27.5	26.4
NVQ3 only, % of working age	11.9	12.6	17.0	9.0	15.0
No qualifications, % of working	14.3	17.2	12.5	24.8	14.5

Source: APS

In the Thames Gateway authorities, only employees in Tower Hamlets enjoy median weekly earnings (£727 in 2005) above the London average (Table 7.11), reflecting highly paid jobs in financial and business services in Canary Wharf and related developments. Moreover, it is likely that a high proportion of the best-paid workers in Canary Wharf commute from elsewhere in London and the South East, rather than live within the borough. Median wages in Hackney (£545) lie just below the London average and, while median full-time earnings in all the London boroughs encompassed in the Thames Gateway lie above the UK median of £431, in two of the boroughs – Waltham Forest and Bexley – the lead over the UK median is less than 5%. Given London's higher living costs compared to the UK average, this points to relatively low standards of living compared to the UK average across many of the areas of London (and non-London local authorities) within the Thames Gateway.

Local authority	£ per week
Tower Hamlets	727.2
London	555.8
Hackney	545.1
Lewisham	521.4
Greenwich	517.7
Barking and Dagenham	515.8
Newham	490.4
<i>Basildon</i>	<i>481.7</i>
Havering	470.7
Waltham Forest	451.9
Bexley	447.7
<i>Gravesham</i>	<i>443.1</i>
<i>Dartford</i>	<i>442.4</i>
United Kingdom	431.2
<i>Thurrock</i>	<i>422.1</i>
<i>Swale</i>	<i>416.9</i>
<i>Medway Towns</i>	<i>414.9</i>
<i>Rochford</i>	<i>388.5</i>
<i>Castle Point</i>	<i>381.8</i>
<i>Southend-on-Sea</i>	<i>371.8</i>

Source: ASHE 2005

c) Key projects

Key projects aimed at releasing the potential of the Thames Gateway include:

- Phase II of the **Channel Tunnel Rail Link**, which is currently under construction and runs through the redevelopment area from Stratford International station in Stratford City, crossing under the Thames near Dartford. Domestic high speed trains will also operate on the route as part of a new integrated Kent rail franchise with services terminating at St Pancras.
- The **Thames Gateway Bridge**, which has been proposed by Transport for London between Beckton and Greenwich. This would replace or provide an alternative to the existing Woolwich ferry. Along with the extensions of the Docklands Light Railway across the river to Woolwich, this will improve links between the two sides of the river and reduce the stress on existing road transport links.
- The **Stratford City project** to redevelop disused railway land around Stratford, which will also form part of the Olympic Park for the 2012 Olympic Games.
- The **Olympic Park**, lying at the heart of London's plans for the 2012 Games. The 500-acre site in Stratford will provide an easily-accessible home for the Games, seven minutes from central London. Nine new venues will be situated within easy walking distance of each other. The main 80,000-seat Olympic Stadium will host the opening and closing Ceremonies, as well as the athletics events. The Park will also house the Olympic Village, providing accommodation for every competitor and official, with 80% within 20 minutes of their event venues.
- The development by Transport for London of the **East London Transit**, a segregated or guided bus scheme. The scheme is being delivered in phases, with the first section due for completion in 2008. It will connect National Rail and London Underground stations in the London boroughs of Havering, Redbridge and Barking & Dagenham with major population centres currently only served by bus routes.

In addition to these high profile projects, there are a wide range of projects to develop sites for commercial, retail, mixed use and housing developments now at the planning stage or underway. These will complement existing successful developments such as the Bluewater shopping centre and London City airport.

d) Assessment

London's success and dynamism provides a strong base on which to build to meet the vision of the Thames Gateway. Equally, success in meeting the goals of the Thames Gateway will provide London with the additional people and space that it needs to keep cost levels under control and to maintain its position as a leading world city and the dynamic core of the UK economy. Achieving the goals will be challenging, however. The infrastructure projects, including the Olympic venues, will place yet more strain on the scarce resources available in the construction sector, while many of the housing and retail developments will be dependent on these infrastructure developments. Delays in planning and execution of the major infrastructure and transport projects could in turn undermine the housing and related projects that are urgently required to improve the supply and affordability of London's housing and the city's labour supply.

Just as challenging will be lifting the economic performance of the lagging wards in the Thames Gateway. With a high proportion of inactive people of working age and relatively poor levels of educational attainment, the challenges are more akin to those of the deprived areas of the UK's old industrial towns and cities, overlain with the additional impact of a high proportion of new arrivals to the UK. Channelling resources to allow more effective economic participation of those outside the labour force or to raise the skill levels of those in low-paid jobs stands out as one of the major tasks to be undertaken.

7.4. Environment

London is home to over 7.5 million people and produces around 19% of the UK's gross value-added. The large numbers of people and firms involved consume significant quantities of energy and resources. Moreover, they generate considerable quantities of waste, emissions and pollution, creating challenges for maintaining the quality of the environment as the city grows.

London performs poorly relative to the other regions in the UK on most of the environmental indicators discussed below. In part, this reflects the greater number of people and levels of economic activity that occur within the capital compared to elsewhere. Moreover, these people and firms are concentrated in a relatively small area: London makes up just over 1% of the UK's total land area. As a result, London is almost exclusively an urban environment, unlike any other region of the UK.

The concentration of people and businesses in London does highlight the debate over whether cities are environmentally effective. GLA Economics (2005)⁶³ argues that by bringing people with different skills and owning varied resources together, cities boost productivity by encouraging specialisation and therefore act as an engine for growth. The report points out that there may also be environmental economies of scale. For example, the public transport system in London is energy-efficient and produces less harmful emissions than if the same number of people travelled by private transport. It also suggests the possibility that, by concentrating the environmental impact of economic activity within a small region, it has less consequence on the country as a whole. However, the converse is that air emissions and pollution incidents in London will potentially have a far greater impact on human health.

This section looks at how London performs on an environmental basis. It looks at water and air quality in the capital, the quantity of waste created by Londoners and the businesses located there, and the pollution incidents that occur within the region. Information is presented on London's performance in 2005, but where possible the focus is on Sustainable Development Indicators.⁶⁴ Sustainable development has been defined as 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs'. The indicators have therefore been designed with one eye on the future. They form part of the government's effort to monitor progress towards sustainable development and identify potential problems.

a) Water quality

The Environmental Agency assesses the chemical quality of rivers and canals based on three determinants - dissolved oxygen, biochemical oxygen demand and ammoniacal nitrogen. It grades stretches of water into four broad quality categories (good, fair, poor and bad). The percentage of river length classified as being of good chemical quality is one of the government's Sustainable Development Indicators.⁶⁵

In 2005, 37% of London's waterways (by length) were judged to be of good chemical quality (Chart 7.8). This is more than double the level of ten years ago (17%) and treble the level in 1990 (12%). However, it compares poorly to all the other regions in England and Wales. Across England as a whole, 64% of all rivers were rated of good chemical quality. In Wales, the figure was 90%.

⁶³ GLA Economics (2005), *The environmental effectiveness of London: Comparing London with other English regions*, June.

⁶⁴ DEFRA (2006), *Sustainable development indicators in your pocket 2006*.

⁶⁵ DEFRA (2006), *Key facts about inland water quality and use: Chemical river quality 1990-2005*, August.

Rivers and canals are also tested for their biological quality using the same four-category assessment scale.⁶⁶ The biological grading is based on the monitoring of tiny animals which live in or on the bed of the river. The number of species found at a site is compared with those which would be expected to be present in the absence of pollution and other harmful substances. Allowance is made for the different physical characteristics of each river. Again, the percentage of river length classified as being of good biological quality is one of the government's Sustainable Development Indicators.

In 2005, 27% of London's rivers and canals (by length) were graded as being of good biological quality (Chart 7.9). This is a small improvement on the level of a decade ago (23%) and a substantial one on the level of fifteen years ago (11%). However, compared to other regions, London's rivers and canals are of very poor biological quality. The proportion ranked good in 2005 is less than half the second-poorest region (the North West at 56%). It compares to figures of 71% and 80% for England and Wales, respectively.

Chart 7.8: Chemical quality of London's rivers

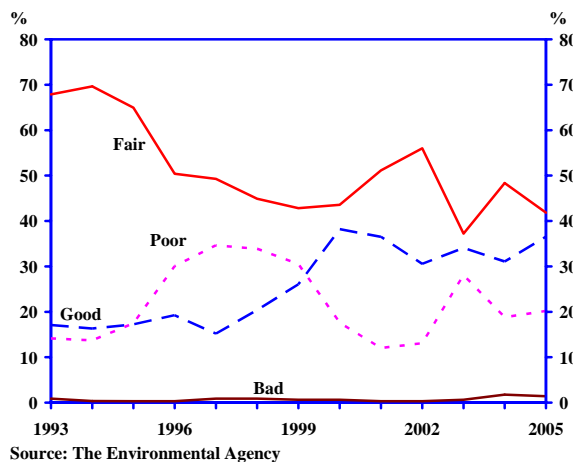
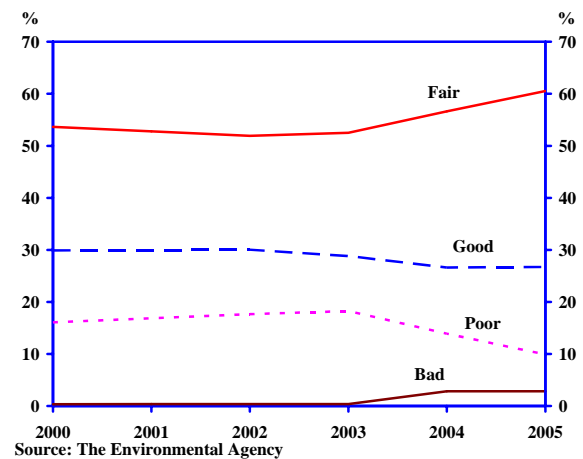


Chart 7.9: Biological quality of London's rivers



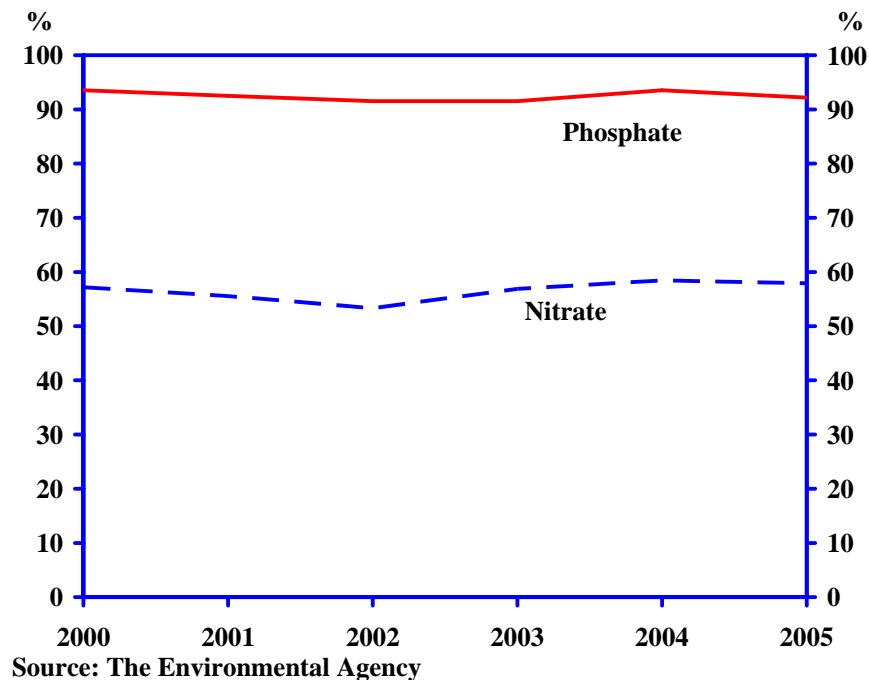
Two of the chemicals which regularly impair water quality are phosphorus and nitrogen. Both occur naturally in the UK's rivers and canals, and in the appropriate quantities help sustain plant life in and around the waterways. However, high concentrations combined with warm sunny conditions can lead to eutrophication. This occurs when the nutrient enrichment of waters causes algae and higher forms of plant life to grow excessively. It results in an undesirable disturbance to the balance of organisms present and a deterioration in the quality of the water.

London rivers contain high levels of phosphates. In 2005, 94% of its rivers (by length) were judged by the Environmental Agency as having high concentrations (Chart 7.10). This is by far the worst of any of the ten regions in England and Wales, where the median is 57%. If there is any comfort, it is that the proportion of London rivers judged to have a high concentration fell by 1.4% in 2005.

The capital's waterways are less polluted by nitrates. Only 58% of the rivers (by length) in London in 2005 were recorded as having high concentrations (Chart 7.10). This is close to the median share of 54% of all rivers across the ten regions in England and Wales.

⁶⁶ DEFRA (2006), *Key facts about inland water quality and use: Biological river quality 1990-2005*, August.

Chart 7.10: Percentage of London's rivers with high concentration of nutrients



b) Air quality

Viewed from a relatively long historical perspective, the quality of the air Londoners breathe is improving. Both the industrial and domestic sectors are less reliant on the burning of coal (and similar sulphur-containing fossil fuels) for power and heating, which has lowered the levels of smoke and sulphur dioxide emitted into the air. The major threat to air quality now comes from traffic emissions. Petrol- and diesel-engined motor vehicles emit a wide variety of pollutants.

GLA Economics (2005) argues that there are two London-specific factors that affect the volume of traffic emissions. The first is the usage of alternative modes of transport to private motor vehicles - in particular, the London Underground, bus network and overground trains. TfL reports 47% of commuters travelling to London to work use public transport, relative to just 9% for the rest of Great Britain.⁶⁷ This has a beneficial impact on emissions. Second, and more speculatively, Londoners have higher incomes than those living in other regions and may therefore have a greater propensity to purchase new cars rather than second-hand ones. New vehicles produce less air pollutants, as they have to be compliant with EU regulations on air emissions. Although these two factors may limit the scale of emissions in London, the potential impact on human health is more severe than in other regions. London is significantly more densely-populated than elsewhere, so the number of people in close proximity to air pollutants is likely to be greater.

The Sustainable Development Indicator⁶⁸ for air quality comes in two parts. Part A of the indicator focuses on the two pollutants which are believed to have the most harmful effect on human health, namely particles (PM10) and ozone. PM10 are very fine air-borne particles which are inhaled into the lungs, causing inflammation and exacerbating

⁶⁷ Transport for London (2005), *London Travel Report 2005*.

⁶⁸ DEFRA (2006), *Air quality indicator for sustainable development 2005 (final figures)*, Statistical Release, April.

existing lung or heart diseases. They may also carry carcinogens which may be absorbed into the lungs. Ozone (at ground level) irritates the airways of the lungs, increasing the symptoms of those suffering from asthma and lung diseases.

The UK Air Quality Objectives⁶⁹ set out maximum concentration levels considered to be acceptable for each air pollutant. The target for PM10 was that by 2004 the annual mean concentration should not exceed 40 microgrammes per cubic metre ($\mu\text{g}/\text{m}^3$). In 2005, the annual mean concentration at the ten national monitoring sites in London ranged between 22 and 43 $\mu\text{g}/\text{m}^3$ around an average of 28 $\mu\text{g}/\text{m}^3$. The objective was exceeded at only one site (Marylebone Road kerbside). This good performance relative to target compares poorly, however, to the average for urban sites in the UK of 22 $\mu\text{g}/\text{m}^3$ – so much so that there is now a new target for Greater London of 23 $\mu\text{g}/\text{m}^3$ and a lower one of 20 $\mu\text{g}/\text{m}^3$ for the rest of the country (to be achieved by end-2010).

Ground level ozone is not particularly prevalent in London's air relative to other regions in the UK. This is because it is destroyed by nitrogen oxides emitted from vehicles' exhausts (which also have other less fortuitous side-effects). In 2005, the mean concentration at the monitoring sites around London was 33 $\mu\text{g}/\text{m}^3$. This compares favourably to the average for the rest of the UK of 46 $\mu\text{g}/\text{m}^3$. It is also well below the UK-wide objective of 100 $\mu\text{g}/\text{m}^3$ which was to be achieved by end-2005.

Part B of the Sustainable Development Indicator on air quality focuses on the number of days each year when the concentration of any of the five major air pollutants was graded as moderate or high. The pollutants are ozone, PM10, sulphur dioxide (which affects those suffering from asthma and chronic lung diseases), nitrogen dioxide (which irritates the lungs and lowers resistance to respiratory infections) and carbon monoxide (which prevents the normal transportation of oxygen by the blood). Moderate and high grades mean that mild and significant effects, respectively, may be noticed by sensitive individuals.

In 2005, there were 37 days (or 10% of the year) when air pollution in London was recorded as being moderate (36 days) or high (1 day). This compares unfavourably to urban sites across the UK where the figure was 22 days. Ozone causes the majority of the capital's pollution days (26 days). As discussed above, it tends to be more concentrated in those parts of London where there are lower volumes of traffic. PM10 caused 10 pollution days, although this is heavily influenced by the recording at the kerbside site at Marylebone Road monitoring station. Nitrogen dioxide caused one day, while sulphur dioxide and carbon monoxide did not cause any pollution days anywhere across the capital.

c) Waste

The amount of waste produced in the UK continues to increase. It is given impetus by the rising population, changes in lifestyles and the construction of new houses. In London, 17 million tonnes of waste are produced each year. GLA Economics (2005) argues that the factors behind the rise in waste are increased migration into London, increases in the number of households, a reduction in household size and increased affluence. Disposing of the waste produced by Londoners and their businesses is an environmental challenge.

In 2004/5, local councils in London produced 4.4 million tonnes of waste (or 15% of that produced in England). London ranks second behind the South East (Chart 7.11) in terms of the quantity of municipal waste produced. When allowance is made for the size of

⁶⁹ Based on the Air Quality Regulations 2000 and (Amendment) Regulations 2002 for the purpose of Local Air Quality Management.

population living in each region, London's position improves, ranking sixth out of the nine regions in England (Chart 7.12). To give some sense of scale, London's local authorities collect 590kg of waste for each person living in the capital.

Chart 7.11: Municipal waste in 2004/5

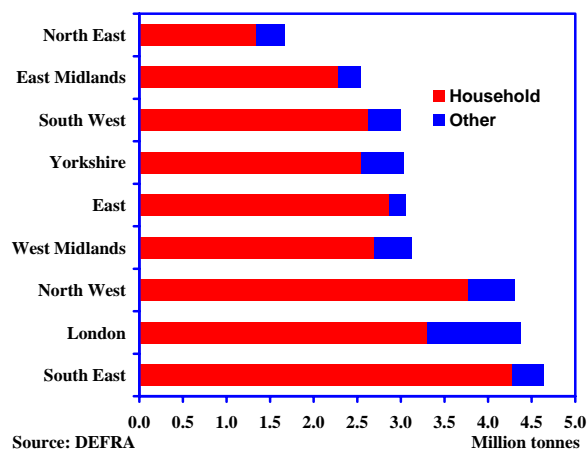
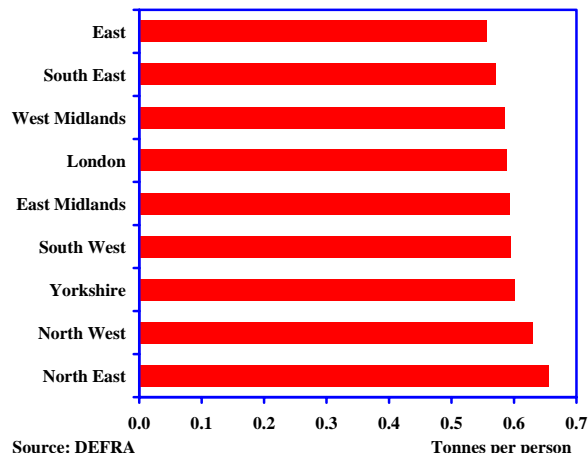


Chart 7.12: Waste per capita in 2004/5



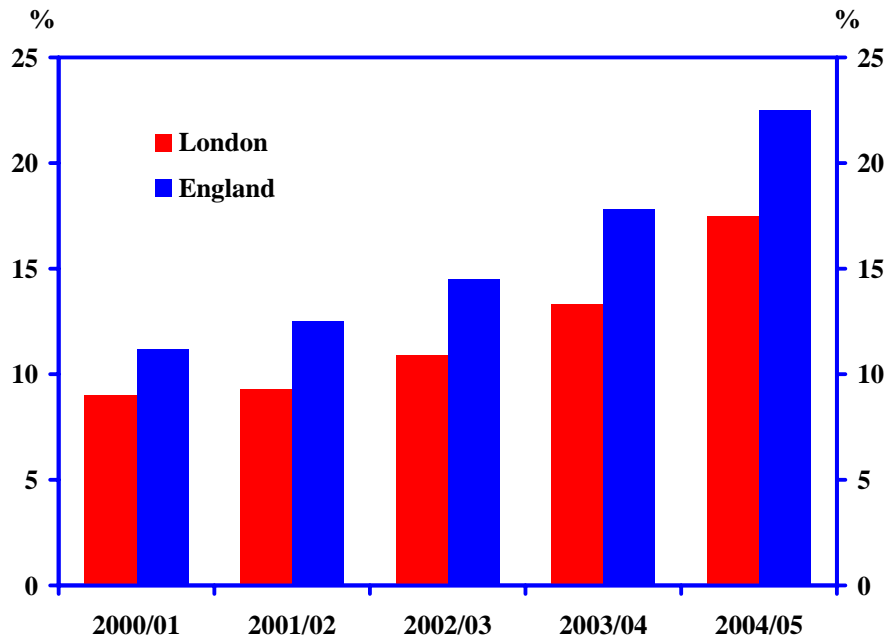
The government's two Sustainable Development Indicators on waste focus on household waste and its disposal. The first is the total quantity of household waste, of which Londoners produced 3.3 million tonnes in 2004/5. The majority (63%) is produced as part of regular household collections, 10% is delivered to civic amenity sites and 9% from other sources. The remaining 18% of household waste is recycled. The volume of household waste has declined by about 1% in each of the last three years.

The second Sustainable Development Indicator is the share of household waste that is recycled. Over the last few years, there has been a marked increase in the rate at which Londoners recycle (Chart 7.13). In 2004/5, 18% of household waste was recycled, almost double the percentage (9%) in 2000/1. The GLA puts most of the rise down to the increase in kerbside collections and the wider range of materials that are now collected (including the introduction of green waste collections).⁷⁰ Less positively from a forward-looking perspective, they argue that most of the policies that delivered easy wins in terms of boosting household recycling rates have now been implemented.

Despite the recent increase in household recycling rates, Londoners still recycle less than other regions' residents. In 2004/5, the London household recycling rate was five percentage points below the rate across England as a whole, perhaps affected by the difficulties of arranging kerbside collections of recyclable material for those living in flats and the relatively high proportion of number of households without gardens for composting. The vast majority of the rest of Londoners' household waste is buried in landfill sites, with the remainder incinerated.

⁷⁰ See Brook Lyndhurst, *Household waste behaviour in London 2005* (GLA, 2006) for a survey of Londoners' attitudes and behaviour relating to waste and recycling.

Chart 7.13: Household recycling rates



Source: DEFRA

d) Pollution

The Environmental Agency records the number of pollution incidents (for example, oil spills) that occur each year. Incidents are graded according to their seriousness. Category 1 occurrences are most serious and involve major damage to the eco-system, property, agriculture or commerce. Category 2 incidents are significant but less severe, causing significant damage to the eco-system, property, agriculture and commerce. Category 3 incidents are relatively minor, damaging the local eco-system or causing minimal impact on agriculture or commerce.

In 2005, there were 668 Category 1-3 pollution incidents in London (Table 7.12). This was 10% below the level of a year earlier. It is the lowest of all ten regions in England and Wales (with just 3% of total). In terms of importance, six (or under 1%) of the incidents in 2005 were judged to be Category 1, 38 (or 6%) were judged to Category 2 and 624 (or 93%) given a Category 3.

The major causes of pollution incidents in London are the disposal of sewage and other waste materials – just under a quarter (22%) of all incidents by pollution type resulted from sewage spills, including two-thirds of the incidents ranked Category 1. Another 8% resulted from the disposal of other waste materials. Similarly, the sewage and water industry was the source of 20% of the incidents in London, with waste management facilities another 13%.

Table 7.12: Source of pollutants to all media in London in 2005				
	Category 1	Category 2	Category 3	Total
Domestic and residential	0	0	28	28
Industry	0	4	16	20
Sewage and water industry	4	20	111	135
Transport	1	0	20	21
Waste management	0	6	78	84
Other	1	8	371	380
Total	6	38	624	668

Source: *The Environmental Agency*

e) Assessment

Assessing London's environmental performance using a number of the government's Sustainable Development Indicators shows that, broadly speaking, the quality of London's air and rivers, the number of pollution incidents and the share of household waste recycled has improved over time.

Yet when comparison is drawn with other regions in the UK, London's environmental performance is poor according to the indicators considered. In part this reflects specific features of London's make-up, in particular its high degree of concentration. With 12.5% of the UK's population and 19% of the UK's value-added in just over 1% of the UK's surface land area, the population density is very high and it is virtually all urban. This highlights the debate over whether cities are environmentally effective or not.

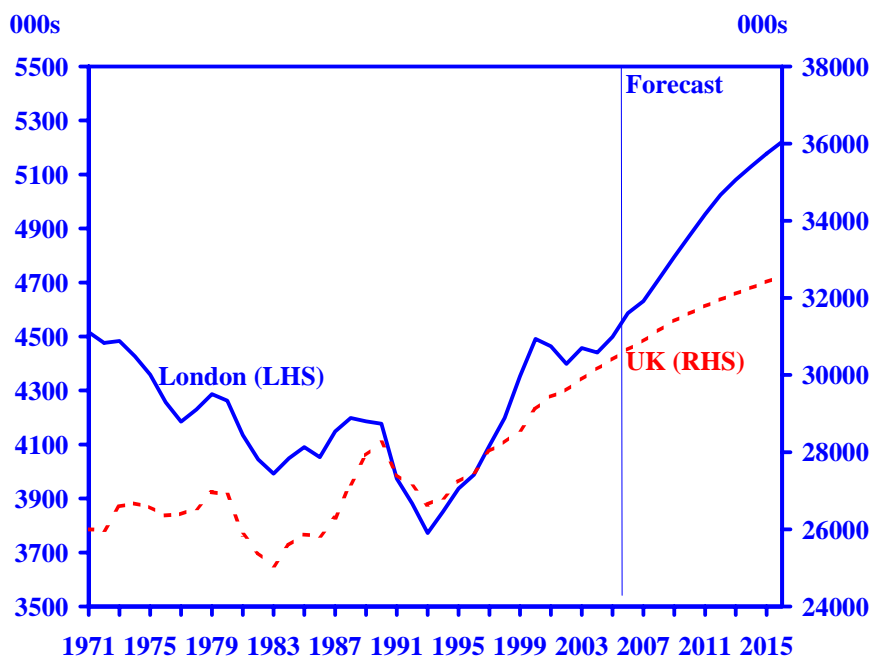
The disposal of London's waste may well prove problematic in the future as landfill sites are exhausted or become more costly. It is to be hoped that part of the solution lies in an increase in the rate at which Londoners recycle. It would be beneficial if the current initiatives to encourage households in flats to recycle, to increase the recycling of green waste and increase the number of materials collected from the kerbside are effective. If not, more innovative ideas, (for example, involving financial incentives) may need to be explored by policy-makers.

8. Conclusions - the long-term outlook for the London economy

There are, as ever, considerable uncertainties over what all the issues discussed in this report mean for the long-term outlook for London's economy. In our overall assessment, though, we remain of the view that London is well-placed to prosper over the next decade.⁷¹

To a large degree this reflects London's unique competitive position in the key exporting private service sectors that we expect to drive UK economic growth, and this favourable sectoral balance provides a strong stimulus to future jobs in London. It also reflects a degree of spare capacity in the London economy that remains after the post-2000 shakeout of jobs, despite the more rapid employment growth of the past two years. However, it also reflects London's continuing role as a magnet for international migration, which adds both to the labour pool available to London's employers and to the level of demand in the economy, with knock-on effects on employment opportunities.

Chart 8.1: Employment



Source: OEF

As a result, we expect London to create an extra 600,000 net jobs by 2016 (Chart 8.1). Perhaps half of the net increase in jobs will be in business services, with health & education, financial services and 'other services' expected to provide the next largest contribution to rising employment (Table 8.1). Perhaps inevitably, manufacturing employment is likely to decline further in London (as in the UK as a whole), although the job losses will be much lower than over the 1970s and 1980s given the much smaller size of the sector in London now. As a result of this growth, by 2016 London is projected to account for 16% of total UK employment and 20% of GDP, compared with 15% of employment and 19% of GDP today.

⁷¹ The medium-term forecasts here are derived from OEF's regular *Regional Economic Outlook* forecasting service, produced in association with Regional Forecasts Ltd.

Table 8.1 Long-term forecast for London

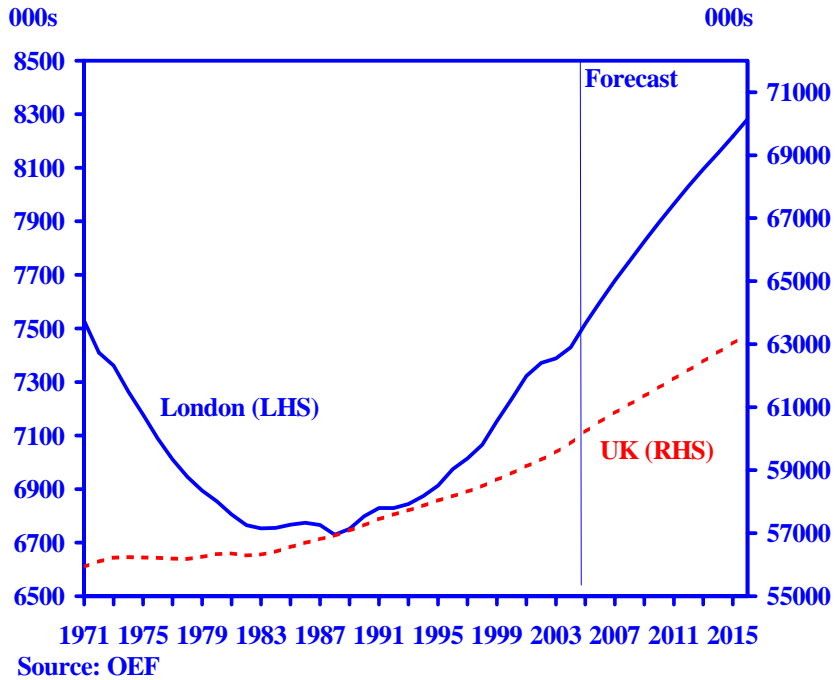
	2006	2009	2012	2016
Employment (000's)				
Primary	15	11	10	9
Manufacturing	230	206	183	160
Construction	206	242	279	292
Wholesale distribution	233	233	227	220
Retail distribution	385	388	395	396
Hotels & catering	302	310	328	344
Transport & communications	360	363	365	367
Financial services	355	378	391	405
Business services	1133	1246	1362	1495
Public admin.	237	231	231	230
Health & education	741	776	805	842
Other services	384	403	415	428
Total employment	4562	4759	4964	5152
Population	7600	7826	8028	8280
Total GDP(basic prices, £2003bn)	198.2	219.1	241.1	270.5
average annual % change	2003-06	2006-09	2009-12	2012-16
Total employment	0.8	1.4	1.4	0.9
Population	0.9	1.0	0.9	0.8
Total GDP(basic prices, £2003bn)	3.1	3.4	3.2	2.9

International migration has played an important part in London's economic development historically and has been a key factor behind recent population growth. Indeed, analysis of Census data⁷² shows that if no additional foreign-born people had come to live in London between 1991 and 2001 then London's population would have fallen, rather than the increase of nearly half a million actually seen. Our forecast shows a continuing significant strong impact on population from international migration, with net international migration of working-age people into the UK assumed to run at over 130,000 a year, and London accounting for a larger share of these than any other region. Partly as a result of this, our long-term forecast shows London's population continuing to grow at a similar rate to that seen over the past ten years, in marked contrast to the falling population seen during the 1970s and 1980s, approaching 8.3 million by 2016. Without this influx of people, there would be an impact both on the level of demand in London and the ability of employers to attract the staff they want in a variety of different occupations, including investment bankers and doctors as well as catering and hotel staff and office cleaners.

⁷² *Born Abroad: an immigration map of Britain*, BBC Sept 2005.
(http://news.bbc.co.uk/1/shared/spl/hi/uk/05/born_abroad/html/overview.stm).

Equally, London's success in meeting the challenges of rising population and employment cannot be taken for granted, and could be undermined by potential structural constraints, notably in transport, housing and utilities.

Chart 8.2: Population



Appendix A: Public Finance Calculation

a) Expenditure “for” rather than “in” a region

In a joint note by HM Treasury and ONS examining these methodologies it was acknowledged that there are benefits in using both measures of spending, and that the appropriate method depends partly on the type of spending being examined.

Looking at spending “in” a particular region based on the location of the government unit making the transaction is a useful statistical methodology when looking at the regional distribution of the output of government-supplied services and in particular the relevant employment and pay costs. It is also a useful way of looking at direct spending on intermediate purchases or investment goods and the impacts on the supply chain. Calculation of spending on the “in” basis also has the benefit of being relatively easy to calculate.

The second method identifies the spending on the basis of residence of the “counterpart” for transactions, i.e. identifying the location of the recipients of services or transfers that government expenditure finances irrespective of where this expenditure takes place.

This technique of calculating expenditure “for” a region is best applied for distributive transactions: the provision of public services to individuals and transfer payments. In this analysis we are primarily concerned with the benefits accrued by London as a region from public finances relative to payments. Using the allocation of public spending “for” the region is best suited to this.

b) Regional distribution of public expenditure

Calculation of public expenditure by region is based on Public Expenditure Statistical Analysis (PESA) 2006 which identifies expenditure on services where possible according to the region that benefits from spending, i.e. spending on a “for” basis. Around 82% of Total Managed Expenditure (TME) is allocated in this way, shown in Table A.1.

Some of the expenditure on services that is not allocated to regions in this source is best regarded as not affecting regions in any way, such as that identified as being “outside the UK” and specifically of benefit to non-UK residents.

The remainder of non-identifiable spending on services, totalling some £64.4 billion (13.1% of TME), refers to services provided by the government that are of benefit to the UK as a whole. This sum is dominated by Defence (45%), with significant shares accounted for by the Home Office (8%) and the Chancellor’s Departments and Central Exchequer Functions (37%). Such services are clearly of some benefit to all UK residents and we regard it as preferable to estimate a distribution across regions.

PESA 2006 attempts to allocate this other non-identifiable spending to regions, but on the basis of spending “in” particular regions. This technique gets around the problem of determining who benefits from such central government functions by looking at direct regional impacts in terms of pay costs.

Table A.1 Total identifiable expenditure on services by region (2004/05)			
	Identifiable Expenditure	Share of UK spending	
	(£ bn)	% Identifiable Services	% Total Expenditure
North East	18.2	4.5%	3.7%
North West	47.3	11.7%	9.6%
Yorks & Humber	32.1	7.9%	6.5%
East Midlands	25.1	6.2%	5.1%
West Midlands	33.6	8.3%	6.8%
Eastern	30.8	7.6%	6.3%
Greater London	56.0	13.9%	11.4%
South East	45.6	11.3%	9.3%
South West	30.0	7.4%	6.1%
Wales	21.4	5.3%	4.4%
Scotland	38.6	9.6%	7.9%
Northern Ireland	14.1	3.5%	2.9%
UK	392.7	97.3%	81.8%
Outside UK	11.1	2.7%	2.3%
Total identifiable	403.8	100.0%	82.2%
Non-identifiable	64.4		13.1%
Total expenditure on services	468.3		95.4%
Accounting adjustments	22.7		4.6%
Total managed expenditure	491.0		100.0%

Source: PESA 2006

However, of the total unallocated £64.4 billion, the pay cost components that are distributed on the “in” basis in PESA 2006 only sum to £16 billion (including payments outside UK). This leaves a further £44.4 billion in non-pay, non-identifiable costs. For example, less than 40% of the total non-identifiable Defence costs are pay costs that can be attributed to specific regions in this way. However, the remainder also benefits regions in the same way and the figures would be more meaningful if this were allocated across regions.

This additional spending, along with £22.7 billion of accounting adjustments, is allocated to regions here using three different techniques (shown in Table A.2). No single estimate is definitive and instead we present a range of possible expenditure values for each region.

First, aiming for consistency with identified spending on services in the previous table, we distribute the entire £87.1 billion according to the shares of identified spending on a “for” basis. Next, we use the additional information in PESA 2006 on non-identifiable spending on an “in” basis, using these shares to allocate to total. Finally, we share the £64.4 billion according to the regional population distribution, based upon the assumption that each member of society benefits equally from this spending on services.

Table A.2 Non-identifiable expenditure apportioned to regions (2004/05)				
	“for” basis	“in” basis	Population shares	Expenditure range
	(£ bn)	(£ bn)	(£ bn)	(£ bn)
North East	4.0	2.7	3.7	2.7 - 4
North West	10.5	4.9	9.9	4.9 - 10.5
Yorks & Humber	7.1	5.5	7.3	5.5 - 7.3
East Midlands	5.6	4.0	6.2	4 - 6.2
West Midlands	7.5	4.3	7.8	4.3 - 7.8
Eastern	6.8	7.7	8.0	6.8 - 8
Greater London	12.4	14.6	10.8	10.8 - 14.6
South East	10.1	17.7	11.8	10.1 - 17.7
South West	6.7	15.5	7.3	6.7 - 15.5
Wales	4.7	2.2	4.3	2.2 - 4.7
Scotland	8.6	5.5	7.4	5.5 - 8.6
Northern Ireland	3.1	2.4	2.5	2.4 - 3.1
UK	87.1	87.1	87.1	

Source: PESA 2006, OEF calculations

c) London's contribution to UK tax revenue

(i) Income Tax

Income tax data on a residence basis are derived from the HM Revenue and Customs (HMRC) Survey of Personal Incomes (SPI). In 2003/04 (the latest year for which data are available), London contributed 18.5% of total UK income tax revenue. This ratio can be applied to the UK total for 2004/05 from the budget report to give total residence-based income tax payments in the region of £42.7 billion.

The Annual Survey of Hours and Earnings (ASHE) gives the earnings distribution in the UK and regions on both a workplace and residence basis. From this and estimates of the differences in employment levels on the two different definitions (derived from the Labour Force Survey) we have calculated the number of earners within different income bands. Applying relevant tax rates to average income within these bands allow us to estimate the difference between income tax revenue for London on a residence and workplace basis, giving an estimate of workplace-based income tax payments from London of £28.6 billion.

(ii) National Insurance Contributions

Social security contributions as reported in the Budget for the UK as a whole give a smaller, more relevant figure. In this report we use reported UK budget data and split this using shares of the UK total calculated from average weekly expenditure data taken from the Expenditure and Food Survey (EFS). This only looks at the household contribution share, but the employers' contribution is expected to be symmetric. Using this, we estimate London's NICs payments in 2004/05 to have been £13.7 billion.

This calculation is also on a residence basis, and a similar adjustment to that for income tax using ASHE data can be performed to give national insurance contributions based on incomes earned in London. This suggests that the share of UK NICs rises to around 21% from 18% on a residence basis.

(iii) VAT

VAT represents around 16% of total tax receipts and should be carefully split across regions to reflect different regional spending patterns. Data on regional spending by category are only available up to 1999 and OEF regional consumer spending forecasts are used for later periods.

Consumer spending data by region reported by ONS and used as the basis for this calculation are derived from surveys of household spending. This share relates to the share of consumer spending and therefore the share of VAT on a residence basis: the amount of VAT paid by households that are based in London (15.6% of the total, or £11.4 billion).

Further calculation is undertaken based on shares of retail turnover in London reported by the Annual Business Inquiry (ABI). This share relates to the amount of consumer spending that takes place in London, incurring VAT, regardless of where the person spending is resident. This business-based estimate of VAT is larger than the residence-based calculation, at 18.1% of the total or £13.2 billion.

(iv) Council Tax

Actual figures are available for London's council tax revenues from Local Government Financial Statistics. In 2004/05 London contributed £2.9 billion of the UK total or 14.4% of the UK total.

(v) Vehicle Excise Duty

Driver and Vehicle Licensing Agency (DVLA) and Department for Transport (DfT) data are used to derive vehicle taxes based on average rates and the number of registered vehicles.

The number of registered cars and other vehicles are available for London and other regions from DfT. Rates for different types of vehicles are available from the DVLA. Applying these rates gives total revenue from this stream. As before, this is calculated as a share of the UK total, and applied to UK total revenue as reported in the Budget.

These data suggest that London only contributes around 9% to total vehicle excise duty. Tax receipts from this source for London were only £0.4 billion in 2004/05.

(vi) Corporation tax

Corporation tax is another large component of total UK tax receipts, which can be split across regions according to the number of firms within regions. The most straightforward method to calculate a region's contribution is to use the Annual Business Inquiry to calculate profits from both London's firms and the UK by subtracting purchasing and employment costs from turnover. London's percentage of the UK total is taken and applied to UK corporation tax take as reported in the Budget. This calculation suggests that London accounts for around 20.3% of total corporation tax payments.

(vii) Stamp duty

Stamp duty paid is reported for regions by HMRC. Data for 2004/05 show that the amount of duty paid in London has risen strongly over time. But in recent years, the share of UK stamp duty derived in London has fallen from over 30% to 23.3% in 2004/05, as house price rises elsewhere in the country have increased the proportion of houses liable to the higher rates of stamp duty.

(viii) Excise duties

The number of vehicle registrations are used to estimate London's contribution to fuel duty revenue, and the ONS' Expenditure and Food Survey (EFS) gives implied shares of UK spending on different types of goods accounted for by Londoners which is then applied to relevant tax receipts to estimate the share contributed by London.

(ix) Business rates

Payments from London businesses are taken from Local Government Financial Statistics.

(x) Other taxes and duties

There are a variety of other taxes and duties that are individually generally less important than the above, but nevertheless provide a significant sum in total to the UK exchequer and London's contribution to it. We have looked at these in rather more detail than in last year's report, and estimated London's share in each case based on a simple rule of thumb related to London's share of the UK's population, GVA, household income or similar aggregate (Table A.3)⁷³.

Table A.3 Other taxes and duties (2004/05)			
	London £bn	UK £bn	London (% of UK)
Capital gains taxes (UK)	0.4	2.3	16.0%
Inheritance tax (UK)	0.4	2.9	12.4%
Betting and gaming duties (UK)	0.2	1.4	14.8%
Air passenger duty (UK)	0.1	0.9	14.8%
Insurance premium (UK)	0.4	2.4	16.4%
Landfill tax (UK)	0.1	0.7	16.0%
Climate change levy (UK)	0.1	0.8	16.0%
Customs duties and agricultural levies (UK)	0.3	2.2	14.8%
Aggregates levy (UK)		0.3	
residence	0.05		16.0%
workplace	0.05		17.9%
Other taxes and royalties (UK)		11.7	
residence	1.9		16.0%
workplace	2.1		17.9%
Other receipts (UK)		24.8	
residence	4.0		16.0%
workplace	4.4		17.9%
Congestion charge	0.1	0.1	

Source: *HM Treasury Budget Report, OEF calculations*

⁷³ In this we have generally followed the approach adopted by GLA Economics in, for example, 'Calculating London's Tax Export', working paper 6, 2004 and 'Has London continued to export taxes in 2003/04?', Current issues note 5.

Bibliography

Beaverstock, J.V, Smith, R.G. and Taylor, P.J. 'A roster of world cities', published in *Cities* 16, pp.445-458 (1999).

BBC, Born Abroad: an immigration map of Britain, BBC Sept 2005.
(http://news.bbc.co.uk/1/shared/spl/hi/uk/05/born_abroad/html/overview.stm)

Brook Lyndhurst, Household waste behaviour in London 2005, GLA 2006

Cambridge Econometrics et al., 'Commuter flows in London and the wider South East 2001 to 2016/2021', Corporation of London et al., October 2005.

CBI Regional Trends Survey, August 2006.

Crewe, Professor Ivor, President, Universities UK, speech to Universities UK's Annual Conference in Keble College, Oxford, September 2005.

Cushman & Wakefield, 2006 European Cities Monitor.

DCLG, Housing in England 2004/05, October 2006.

DEFRA, Air quality indicator for sustainable development 2005 (final figures), Statistical Release, April 2006.

DEFRA, Sustainable development indicators in your pocket, 2006.

DEFRA, Key facts about inland water quality and use: Chemical river quality 1990-2005, August 2006.

DEFRA, Key facts about inland water quality and use: Biological river quality 1990-2005, August 2006.

Drivers Jonas, Market Monitor Central London Q1 and Q2 2006.

The Economist, An education in finance, May 18 2006.

Environmental Agency, Water resources for the future: A summary of the strategy for Thames region, March 2001.

Financial Services Skills Council and City of London Corporation, Graduate Skills and Recruitment in the City, September 2006.

GLA, Growing together: London and the UK economy, January 2005.

GLA Economics, The environmental effectiveness of London: Comparing London with other English regions, June 2005.

HM Treasury/National Statistics, Public Expenditure Statistical Analyses 2006.

HM Treasury Budget 2006.

HM Treasury, Productivity in the UK 6: Progress and new evidence, 2006

Institute of Higher Education, Shanghai Jiao Tong University, Top 500 World Universities 2006

Jones Lang LaSalle, Central London Market Report, 2006Q2.

Kim, Han E., Morse, Adair and Zingales, Luigi, Are Elite Universities Losing Their Competitive Edge?, NBER Working Paper No. 12245, May 2006.

King Sturge, Global Industrial and Office Rents Survey.

Learning & Skills Council, National Employers Skill Survey, 2005

London Business School, Global Entrepreneurship Monitor, United Kingdom 2005.

London Higher, Annual Review 2005-06.

London Higher, http://www.londonhigher.ac.uk/about_lh.htm.

Meen et al., 'Affordability Targets: Implications for Housing Supply', draft final report to ODPM, April 2005.

ODPM, Creating Sustainable Communities: Making it happen: Thames Gateway and the Growth Areas, 2003.

ODPM, The English Indices of Deprivation 2004 (revised), Office of the Deputy Prime Minister, April 2004.

OECD, Education at a Glance, 2006.

Office for National Statistics, Standard Occupational Classification 2000.

Office for National Statistics, Regional Trends 39, May 2006.

OFWAT, Leakage slightly down – companies warned against complacency, press notice 2006.

Oxford Economic Forecasting, The Economic Effects of Transport Delays on the City of London, the Corporation of London, July 2003.

Oxford Economic Forecasting, London's Linkages with the Rest of the UK, Corporation of London, May 2004.

Oxford Economic Forecasting, Time is Money: The economic effects of transport delays in Central London, GLA Economics, January 2005.

Oxford Economic Forecasting/Regional Forecasts, Regional Economic Outlook, Autumn 2006.

Thames Water Utilities Limited, Replacing London's Victorian water mains, (2006).

Thames Water Utilities Limited, Safeguarding water for future generations, Press release 14 September 2006.

Thames Water Utilities Limited, Regulatory Financial Statements for the year ended 31 March 2006.

Times on line, Top Universities 2007, <http://www.timesonline.co.uk/section/0,,716,00.html>

Transport for London, London Travel Report 2005.

Transport for London, Congestion Charging: The Fourth Annual Monitoring Report, June 2006.

Transport for London, TfL 5 year investment programme report – 4th Quarter, May 2006.

Transport for London, TfL operational and financial report – 4th Quarter, May 2006.

Triennial Central Bank Survey, Foreign exchange and derivatives market activity in 2004, March 2005.

UK Trade & Investment, UK Inward Investment 2005/2006.

UK Universities, The economic impact of UK higher education institutions, March 2006.

UNCTAD, World Investment Report 2006, United Nations.

Z/Yen Limited, The Competitive Position of London as a Global Financial Centre, the Corporation of London 2005

The City of London Corporation

The City of London is exceptional in many ways, not least in that it has a dedicated local authority committed to enhancing its status on the world stage. The smooth running of the City's business relies on the web of high quality services that the City of London Corporation provides.

Older than Parliament itself, the City of London Corporation has centuries of proven success in protecting the City's interests, whether it be policing and cleaning its streets or in identifying international opportunities for economic growth. It is also able to promote the City in a unique and powerful way through the Lord Mayor of London, a respected ambassador for financial services who takes the City's credentials to a remarkably wide and influential audience.

Alongside its promotion of the business community, the City of London Corporation has a host of responsibilities which extend far beyond the City boundaries. It runs the internationally renowned Barbican Arts Centre; it is the port health authority for the whole of the Thames estuary; it manages a portfolio of property throughout the capital, and it owns and protects 10,000 acres of open space in and around it.

The City of London Corporation, however, never loses sight of its primary role – the sustained and expert promotion of the 'City', a byword for strength and stability, innovation and flexibility – and it seeks to perpetuate the City's position as a global business leader into the new century.

