GLAECONOMICS

Economic Evidence Base – October 2009 version

to support the public consultation drafts of the London Plan, the Transport Strategy and the Economic Development Strategy

Transport for London

LONDON DEVELOPMENT AGENCY

MAYOR OF LONDON

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GLA Economics provides expert advice and analysis on London's economy and the economic issues facing the capital. Data and analysis from GLA Economics form a basis for the policy and investment decisions facing the Mayor of London and the GLA group. The unit is funded by the Greater London Authority (GLA), Transport for London (TfL) and the London Development Agency (LDA).

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Contents

Figures and tables

Executive summary

On many measures London is a very successful economy. London accounts for over one-fifth of the GVA of the UK economy and one-third of the UK's exports of services. It has a larger economy than many European countries and over the past decade or so London has grown faster than the UK economy. London has a higher level of income per head than any other UK region.

London's success is based on its competitive strengths across a range of factors. For business these factors include, amongst others, access to qualified staff, access to markets and a competitive business environment that encourages innovation. People are attracted to London by the variety of career opportunities, the diversity and openness to different cultures, as well as the vast array of leisure and cultural activities.

The concentration of businesses and people in London, particularly in Central London, puts upward pressure on the price of land and drives businesses to become more productive and people to become more skilled. By locating close to one another businesses benefit from agglomeration economies which enable them to be more productive than when they are more spread out. This, together with London's openness to trade and the extra competition that brings, has resulted in London's economy shifting away from more land hungry uses like manufacturing towards less land intensive service uses. As a result, London is now one of the world's leading centres for international business services and clearly ranks as the world's leading centre in a number of areas of international financial intermediation.

To remain competitive London needs to manage a number of risks to its attractiveness to both businesses and people.

One significant global risk is climate change. As a result of past greenhouse gas emissions some level of climate change is now inevitable. Unless emissions are reduced significantly from their current levels more dramatic changes to our climate may become unavoidable with considerable economic and social impacts. Whilst resolving this issue will require difficult international agreements, it is likely that, over time, economic activity will need to become much more carbon efficient and planning for this could provide London with new economic opportunities. As well as mitigating the effects of climate change, London needs to adapt to the change in the climate that is already occurring.

As a result of the recent financial crisis and economic downturn there are likely to be changes to regulation and a significant deterioration in the UK's public finances. Both these changes could reduce the attractiveness of London as a place to do business when compared to other cities. In addition, issues such as crowding and congestion on London's transport and the availability and cost of both staff and office space could also impact on London's attractiveness as a place to do business. Similarly, the attractiveness of London as a place for people to live and work could reduce if issues affecting the quality of life in London (like the cost of living, crime and safety and London's environment) are not managed effectively.

And for all its success London has some significant socio-economic issues. As well as containing a high share of the UK's most prosperous individuals, London is also home to a high share of the UK's poorest individuals. Part of the reason for London having a high share of the UK's poorest individuals is because London has a higher proportion of its population out of work than the UK as a whole. This is also a factor behind London's high rate of child poverty. After accounting for housing costs – itself a significant issue for London – London has the highest rate of child poverty in the country. Child poverty can also impact on individuals' future chances of progressing in education and, as a result, their future labour market prospects.

Introduction

This document aims to provide an economic evidence base to support the public consultation drafts of the three Mayoral strategies currently being revised (the London Plan, the Economic Development Strategy and the Transport Strategy). Its purpose is to provide an understanding of the economic forces impacting on London and some of the main issues facing London.

This document is the product of considerable analysis across the GLA family. It builds on, and has moved on, from the preliminary economic evidence base published in May 2009. The analysis will be further refined and improved in the coming months, with a final version likely to be published next year.

The provision of a good quality economic evidence base should result in better strategies and ultimately more effective interventions by ensuring:

- that the main issues facing London are tackled;
- that policy is developed effectively, addressing clear market failure or equity issues; or
- where, for whatever reason, policy is to go against the market, the implications of this, in terms of the size and nature of policy intervention required, are understood.

Chapter 1 provides an overview of the economic forces that impact on London and that have led to London's current industrial structure. Chapter 2 looks at how agglomeration economies together with the economic forces set out in Chapter 1 have influenced the spread of economic activity across London. Chapter 2 also looks at how transport has influenced the spread of economic activity and the consequential housing and further transport needs. Chapter 3 looks at the current success of London's economy and the factors that attract businesses and people to London. Chapter 4 considers the likely impact on London's economy of the recent financial crisis and the current economic downturn. Chapters 5 through 7 look at some of the issues facing London in the future. Chapter 5 looks at the issue of climate change and how mitigating climate change could potentially bring economic opportunities to London's economy. The chapter also looks at how London will need to adapt to climate change. Chapter 6 looks at some of the risks to London's attractiveness to businesses and people. It particularly looks at threats to London's business environment and the risks of further deterioration in London's quality of life. Chapter 7 then looks at some of the main socio-economic issues facing London – considering worklessness, child poverty and educational attainment amongst others. Chapter 8 concludes with the main factors that require consideration when intervening in the economy, highlighting that public sector intervention has risks as well as potential benefits.

Chapter 1: Trade and London's economic specialisation

Growth in an economy's income per head depends on the ability to increase productivity. Openness to trade, through various channels, helps improve productivity. Openness to trade, and the competition that brings, results in places specialising in different things over time. As a result of these competitive forces, economic activity in London is currently concentrated in financial and business services as well as many cultural activities. Many of London's services have a strong international focus – particularly within the financial services sector. Although Europe and North America account for around three-quarters of the UK's exports of services, new emerging markets such as China are growing rapidly (and are forecast to continue to grow). As a result, the import requirements of emerging markets are likely to play an increased role in London's exports in the future.

This chapter looks at the global economic forces that impact on London's economy and what implications they have for the types of activity carried out in London. It also looks briefly at what current trends suggest about future trade activity.

Growth in an economy's income per head depends very much on the ability to raise productivity ie, the economy's ability to produce more for a given level of resource. Openness to trade – both exports and imports - strengthens productivity. Indeed, both economic theory and experience show that economies which trade more tend to grow faster[1].

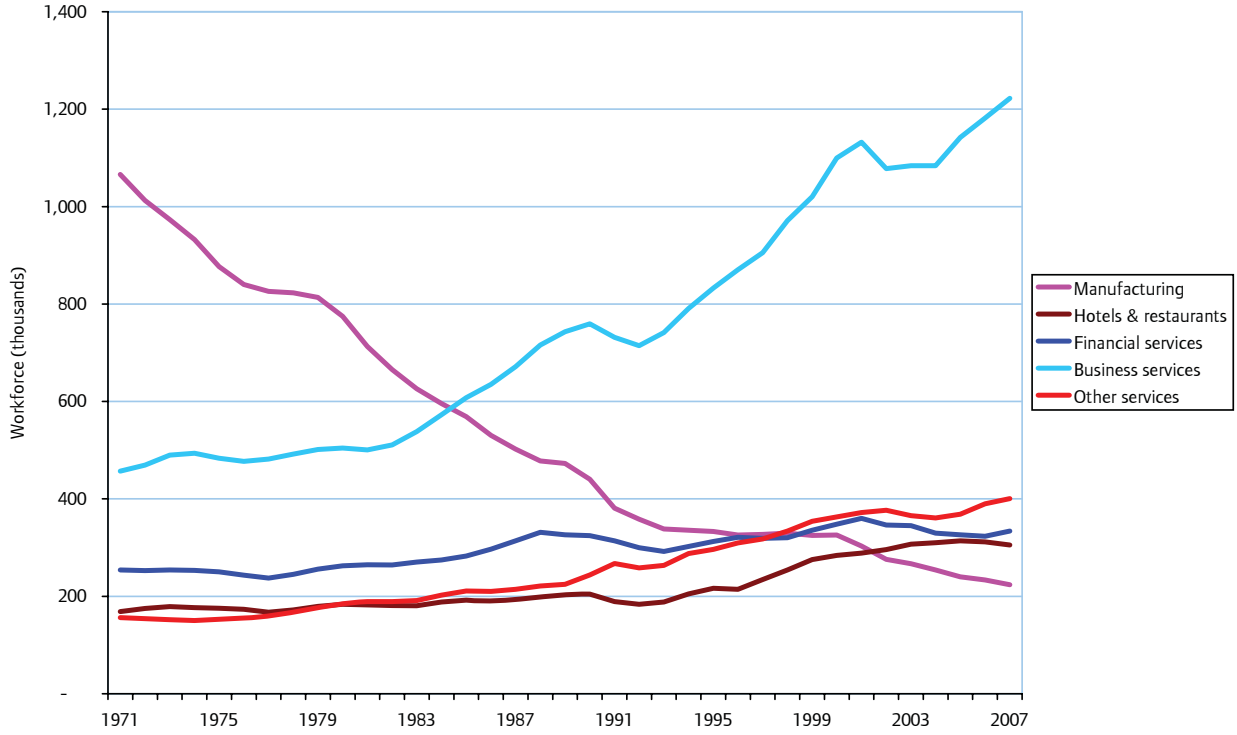
One way trade encourages greater productivity is through the exploitation of economies of scale. At its most basic, trade increases the size of markets to which producers can sell. This is important because the bigger the market the more businesses and firms can take advantage of economies of scale and so operate at a more efficient size, producing goods and services at lower cost.

Openness to trade can also increase productivity by allowing different countries and/or regions to concentrate on different areas of production, focusing on their respective comparative advantage[2]. Comparative advantage relates to the cost of producing one good relative to the cost of producing another good and implies that 'absolute advantage', ie, differences in absolute costs are not necessarily critical. The implication is that areas – like individual elements within the labour force – should concentrate on what they do best. This means that various types of industrial or business activity are economically viable in developed countries and cities with relatively high costs in spite of the fact that land and labour may be cheaper in many emerging economies such as India and China. Sometimes these geographic specialisations experience a degree of 'lock-in' whereby historical or institutional factors which reflect past trade patterns produce agglomerations of activity which become ingrained even though the original economic motive for the location may be no more.

Openness to trade increases the returns to innovation on account of increased market size and also enables the economy to benefit from access to new technology (by importing new technology from other places). Perhaps most importantly, openness to trade brings greater competition which encourages firms to be as efficient as possible.

This drive to higher productivity through competition, innovation and openness to trade has contributed to structural change in the UK economy (as elsewhere in the world), encouraging domestic resources to shift from less productive to more productive uses. As a result of such economic forces over the past three decades or so, London has seen a significant shift away from manufacturing towards services. This is shown in Figure 1.1 which shows that manufacturing employment in London fell from over 1 million jobs in 1971 to around 225,000 jobs now. In contrast, employment in the broad category of business services increased from under ½ million in 1971 to over 1.2 million now. Over the same period there have also been increases in employment in hotels and restaurants, other services and, to a lesser extent, financial services.

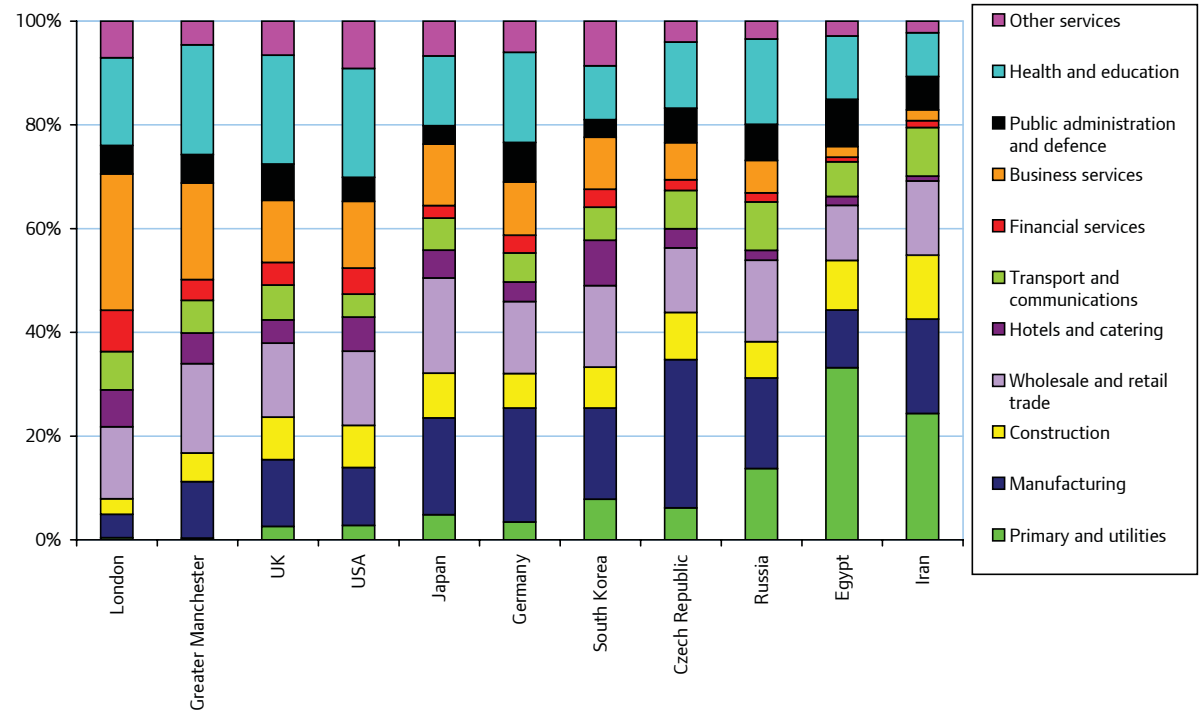
Figure 1.1: Employment in London by sector over time



Source: Experian Business Strategies

As a result of the competition that openness to trade brings and the specialisation it drives, different countries can exhibit different employment structures. Figure 1.2 shows that the UK's employment composition is different from not just that of Iran or Egypt but also developed nations such as Japan or Germany which have a stronger manufacturing focus. London itself is even more concentrated in the financial and business services sectors than the UK and other developed countries[3]. Even within the most economically-advanced G7 economies, different countries have, at least slightly, different concentrations of economic activity[4].

Figure 1.2: Industrial composition of London, Manchester and the UK compared to other countries (2006/07)



Source: International Labour Organisation and ONS Annual Business Inquiry (Crown Copyright)

Note: Latest data for each country/region is used which is either 2006 or 2007.

Table 1.1 shows the relative export specialisation of each of the G7 nations in individual service sectors. Cells with an index of less than one (shaded blue) indicate that that country's exports are not specialised in that sector relative to the G7 patterns. Cells above unity (shaded orange and red) show export specialisation. It can be seen from this that currently the UK is specialised in a number of service activities: financial services, insurance and computer & information services. In contrast, the US is specialised in royalties / licence fees, personal cultural and recreational services and government. It can also be seen from Table 1.1 that the UK is particularly unspecialised – at least relative to the G7 nations – in the construction sector.

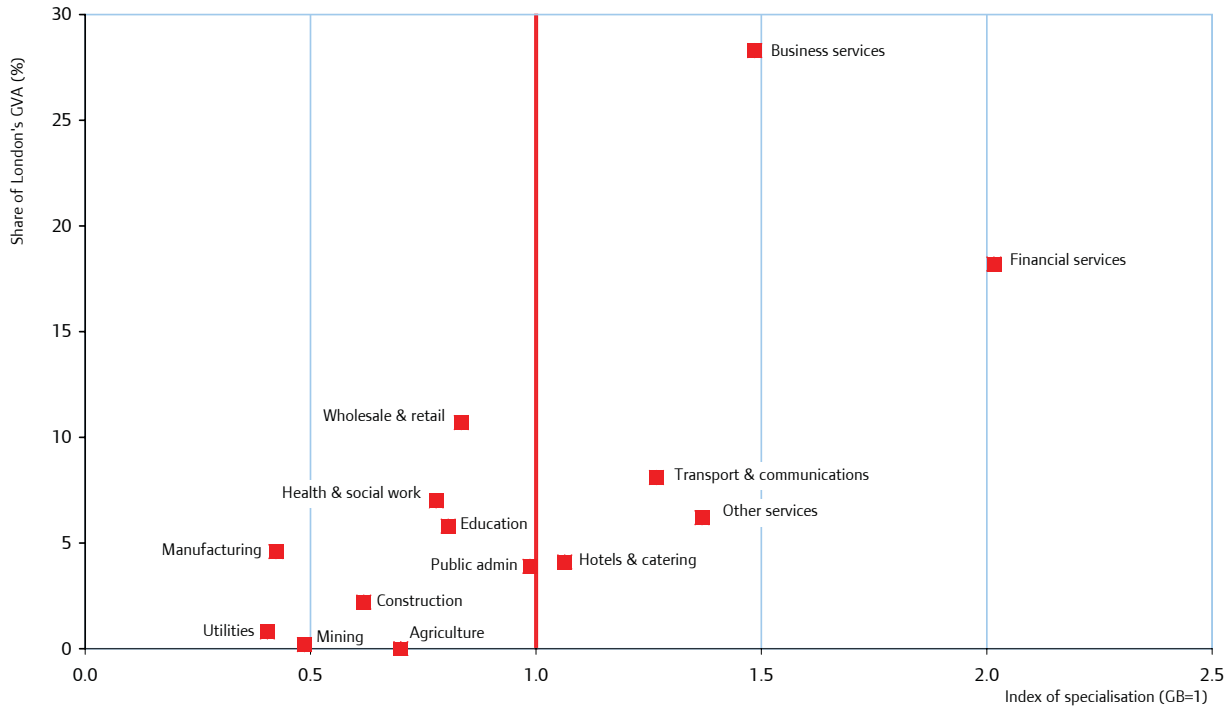
Table 1.1: Revealed Comparative Advantage in exports of services against the G7 advanced economies (2003)

	Canada	France	Germany	Italy	Japan	UK	US
Transport	0.6	1.2	0.8	0.7	1.2	1.2	1.1
Travel	0.6	1.4	0.7	1.5	0.3	0.9	1.4
Communications	1.1	1.2	0.7	1.1	0.3	1.5	1.2
Construction	0.1	1.3	1.7	1.2	1.8	0.1	0.6
Insurance	1.4	0.7	1.1	0.5	0.1	3.2	0.7
Financial	0.3	0.2	0.4	0.5	0.5	3.8	1.4
Computer & information	1.2	0.5	1.3	0.2	0.3	2.6	0.9
Royalties & licence fees	0.4	0.4	0.2	0.1	1.2	1.1	2.3
Other business services	0.6	1	0.7	1.1	0.6	1.8	1.2
Personal, cultural & recreational services	1.5	1.1	0.3	0.5	0.1	1.3	2
Government	0.4	0.2	1.1	0.4	0.4	0.9	2.1

Source: Productivity in the UK 6: Progress and new evidence. HM Treasury (2006)

Figure 1.3 looks in more detail at the current industrial structure of London's economy which has resulted from the forces of competition, innovation and openness to trade set out earlier. If London reflected the same employment proportions as Great Britain as a whole then all the sectors shown would fall on the vertical red line in Figure 1.3. The chart shows that economic activity in London is concentrated in financial services, businesses services and – to a lesser extent – other services and transport and communications.

Figure 1.3: London's broad sectors: Index of Specialisation[5] (relative to Great Britain) and share of London's total output (2007)



Source: Annual Business Inquiry – ONS Crown Copyright; UK Regional Accounts – ONS Crown Copyright

These broad sector headings hide a range of different economic activity and differing degrees of specialisation within a particular sector. When examined at a more disaggregated level, as shown in Table 1.2, it can be seen that London specialises in such things as securities broking/fund management, media activities – London is strong on 'cultural services' – and advertising for example. Its employment is not concentrated on sectors such as manufacturing, the primary industries and freight transport.

Table 1.2: London's industrial structure and main specialisations, 2007

Sector	London Employee Jobs	Share of Total London Employee Jobs	London Share of GB Employee Jobs	Index of Special-isation
Total London Economy	**4,078,725**	**100.0%**	**15%**	**1.00**
Financial Services	**325,813**	**8.0%**	**31%**	**2.47**
of which				
Security broking and fund management	*49,526*	*1.2%*	*74%*	*15.91*
Activities auxiliary to financial intermediation (banking)	*26,470*	*0.6%*	*33%*	*2.67*
Financial intermediation (banking), except insurance and pension funding	*181,885*	*4.5%*	*31%*	*2.48*
Activities auxiliary to insurance and pension funding	*38,530*	*0.9%*	*28%*	*2.13*
Non-life insurance	*21,773*	*0.5%*	*21%*	*1.43*
Business Services	**1,071,228**	**26.3%**	**23%**	**1.63**
of which				
Advertising	*35,150*	*0.9%*	*42%*	*4.03*
Market research and public opinion polling	*24,233*	*0.6%*	*42%*	*3.92*
Legal activities	*94,479*	*2.3%*	*32%*	*2.57*
Business and management consultancy activities	*96,904*	*2.4%*	*30%*	*2.39*
Accounting, book-keeping and auditing activities; tax consultancy	*66,041*	*1.6%*	*29%*	*2.20*
Investigation and security activities	*42,336*	*1.0%*	*25%*	*1.82*
Other business activities (not elsewhere classified)	*94,435*	*2.3%*	*24%*	*1.77*
Industrial cleaning	*107,908*	*2.6%*	*24%*	*1.74*
Real estate activities	*94,630*	*2.3%*	*21%*	*1.48*
Computer and related activities	*112,579*	*2.8%*	*21%*	*1.45*
Labour recruitment and provision of personnel	*162,222*	*4.0%*	*20%*	*1.41*
Other Services	**290,905**	**7.1%**	**21%**	**1.47**
of which				
Radio and television activities	*39,277*	*1.0%*	*57%*	*7.44*
Motion picture and video activities	*20,117*	*0.5%*	*47%*	*4.92*
Activities of business, employers and professional organisation	*15,309*	*0.4%*	*45%*	*4.45*
Other entertainment activities (theatre/arts)	*33,921*	*0.8%*	*34%*	*2.89*
Activities of religious organisations	*13,388*	*0.3%*	*26%*	*1.94*
Gambling and betting activities	*20,534*	*0.5%*	*21%*	*1.43*
Transport and Communications	**302,750**	**7.4%**	**19%**	**1.33**
of which				
Scheduled air transport	*43,819*	*1.1%*	*60%*	*8.21*
Other scheduled passenger land transport (underground, bus etc)	*42,156*	*1.0%*	*29%*	*2.22*
Other supporting transport activities (for both air and land transport)	*38,980*	*1.0%*	*27%*	*2.06*
Transport via railways (national rail & freight)	*13,745*	*0.3%*	*25%*	*1.87*
Activities of travel agencies and tour operators;	*24,284*	*0.6%*	*24%*	*1.72*
Activities of other transport agencies	*13,989*	*0.3%*	*23%*	*1.68*
Telecommunications	*44,256*	*1.1%*	*22%*	*1.53*

Sector	London Employee Jobs	Share of Total London Employee Jobs	London Share of GB Employee Jobs	Index of Special-isation
Hotels and restaurants	**291,008**	**7.1%**	**16%**	**1.08**
of which				
Canteens and Catering	*55,006*	*1.3%*	*23%*	*1.66*
Restaurants	*132,267*	*3.2%*	*21%*	*1.46*
Public administration	**224,744**	**5.5%**	**15%**	**0.98**
of which				
Public security, law and order activities	*56,253*	*1.4%*	*20%*	*1.40*
Wholesale and Retail	**564,990**	**13.9%**	**13%**	**0.81**
Education	**302,304**	**7.4%**	**12%**	**0.78**
Health and social work	**385,590**	**9.5%**	**12%**	**0.75**
Construction	**122,322**	**3.0%**	**9%**	**0.58**
Manufacturing	**182,966**	**4.5%**	**6%**	**0.38**
of which				
Publishing	*54,137*	*1.3%*	*37%*	*3.24*
Mining, Utilities and Agriculture	**14,105**	**0.3%**	**3%**	**0.19**

Source: Annual Business Inquiry. Note: Employee Jobs only, excludes self-employed. The table shows selected areas of specialisation in different broad sector categories; it does not represent a comprehensive list of economic activities within each broad sector.

Box 1.1: London's areas of specialisation

Financial services

Banking

There were 250 branches and subsidiaries of foreign banks in London in March 2008, more than any other centre worldwide. A third of these banks were from the euro area. Around half of European investment banking activity is conducted in London. Four fifths of European hedge-fund assets were managed out of the UK in 2008 and the vast majority of this was managed from London.

Insurance

London is the world's largest international insurance market, with gross premium income of £24.5bn in 2007. It is the main skill centre for world reinsurance.

Foreign exchange

The London foreign exchange market is the largest in the world, with average daily turnover of $1,679bn in October 2008. This represented 35 per cent of global turnover, more than New York and Tokyo combined. Foreign exchange trading has nearly trebled in value since 2001.

Fund management

London is one of the two largest fund management centres; New York being the other. London is the leader in the management of overseas clients' non-domestic portfolios. London is also one of the leading centres for private equity and is an important centre in the sovereign wealth market as a clearing house and a location from where some of these funds are managed. London along with New York, Singapore and

Hong Kong is one of the main centres for onshore investment of private wealth. London is Europe's leading centre for hedge funds. At end-2008 four-fifths of European-based hedge funds' assets were managed out of London.

Securities markets

London has a higher number of foreign-listed companies than any other exchange. The London Stock Exchange is one of the leading centres for global foreign equity trading and international IPOs. London accounts for 70 per cent of trading in the international bond market.

Derivatives

London is the biggest market in the world for derivatives traded over-the-counter. It is also the second largest after Chicago for exchange traded futures and options. London is the main centre for Eurex trading, with 46 per cent of Eurex turnover based in the UK in 2007. Liffe is the world's leading exchange for euro short-term interest rate derivatives and equity options. London Metal Exchange is the biggest non-ferrous metals exchange in the world.

Carbon markets

London is central to the EU Emissions Trading Scheme (EU ETS) as European Climate Exchange contracts, traded on the ICE Futures Europe exchange in London, made up 91 per cent of futures trading on the EU ETS in 2008.

Bullion market

London is the world's most liquid spot market for gold and for gold lending and the global clearing centre for worldwide gold trading. London is Europe's largest centre for commodities trading and accounts for around 15 per cent of global trade in commodities.

Islamic Finance

London is the leading Western centre for Islamic finance, with six firms that are fully Sharia compliant and over 20 banks in total supplying Islamic financial services.

Business services

Maritime services

London offers the most comprehensive range of specialist maritime services in the world, covering shipbroking, legal services, finance, insurance, ship classification, dispute resolution, publishing and research.

Accountancy

Around 66,000 people are employed in London in accounting and related services. The sector is dominated by four firms although most of the major firms have offices in the city. The services that accounting firms offer include auditing, tax planning, corporate finance and business recovery services.

Legal services

London is one of the two leading centres for international legal services, the other being New York. Based on revenue three of the top five law firms in the world are international law firms based in London. London is also a leading centre for international dispute resolution.

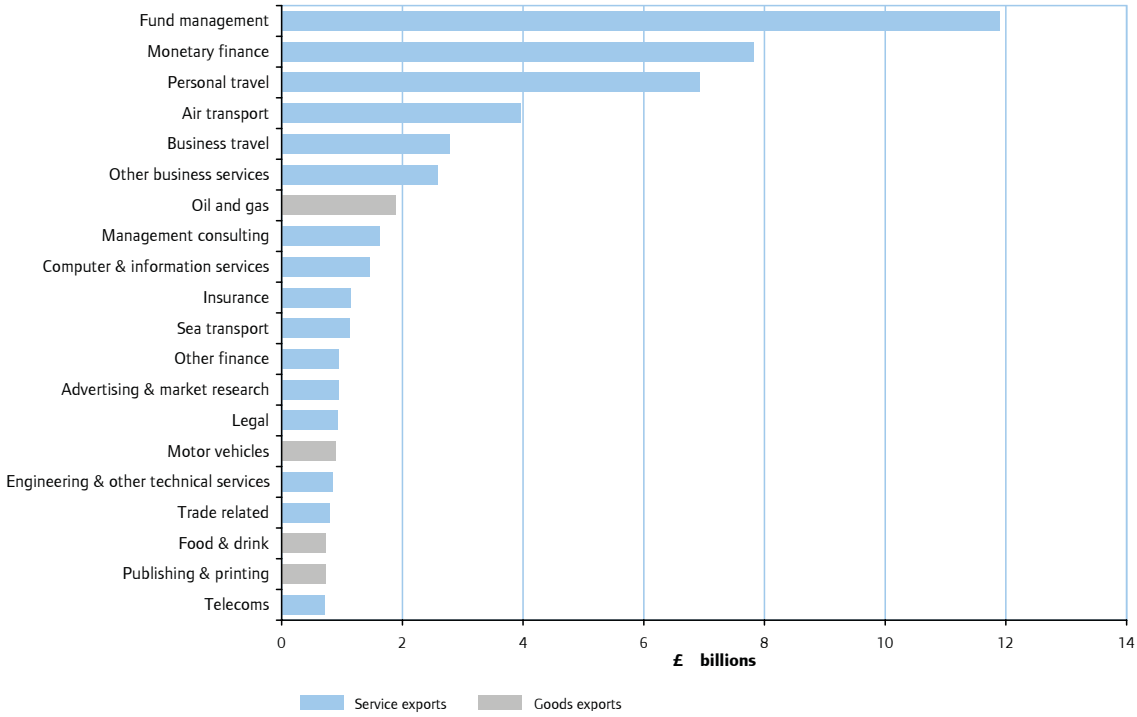
Creative and cultural industries

London has a competitive advantage in many of the creative sectors such as TV /radio and advertising. The television industry is open to the global market with total UK exports accounting for £740 million in 2006. According to the World Advertising Research Centre the UK ranked first across European countries in expenditure on advertising.

Sources: International Financial Services London, GLA Economics

As a result of competition and the need for businesses to focus resources in the most productive activities it is perhaps unsurprising that many of London's current areas of specialisation are areas of 'revealed comparative advantage' for the UK relative to other G7 countries (as illustrated in Table 1.1). This implies that London has strong international trading links. Indeed, GLA Economics estimates that London's total exports of goods and services totalled £58.7bn in 2007 with London accounting for one third of all UK exports of services. Figure 1.4 shows the estimated value of London's exports in 2007. London's main exports of services are fund management, monetary finance and other financial and business services products, management consultancy, computer and information services as well as business and leisure tourism (personal travel and air transport)[6].

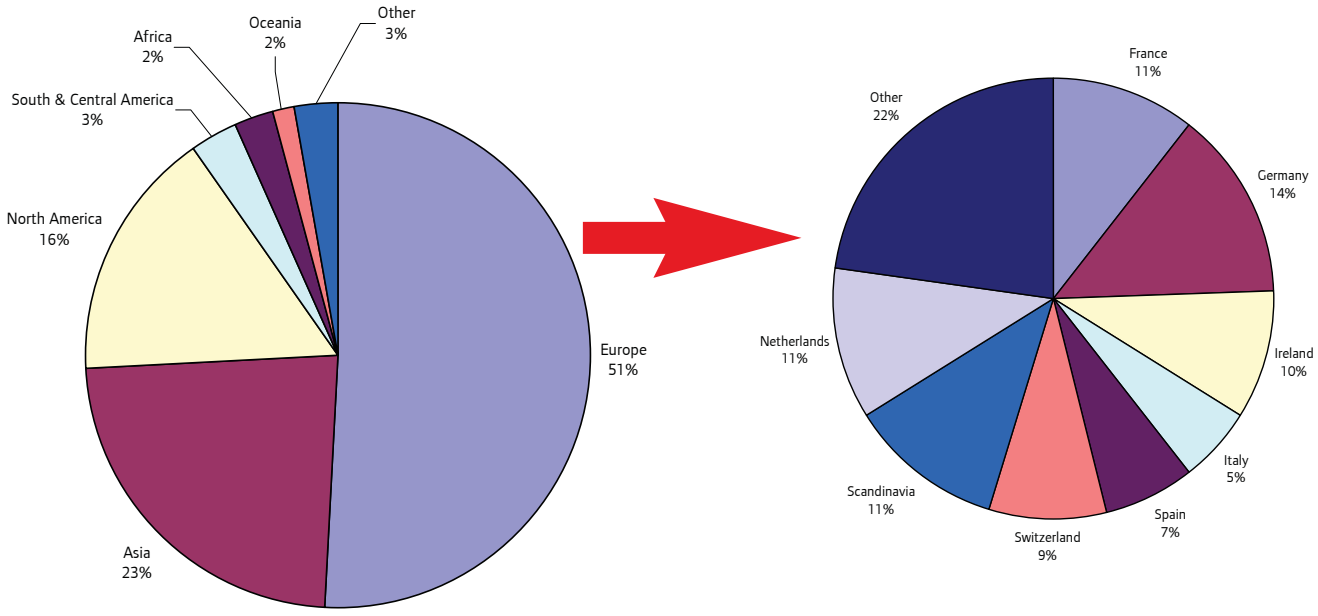
Figure 1.4: Estimated values of London's main exports of goods and services in 2007



Source: GLA Economics

Almost three-quarters of all UK exports of services are destined for Europe and North America as shown in Figure 1.5. However, the UK and London's export markets are likely to change over time.

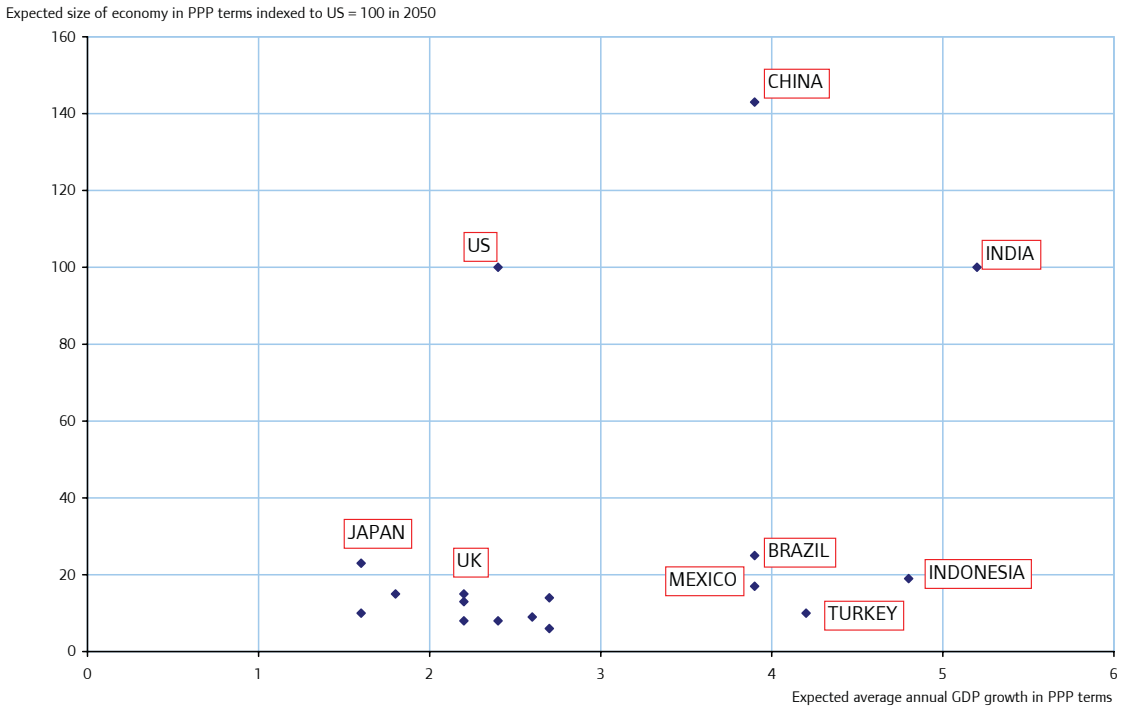
Figure 1.5: UK exports of services by destination (2007)



Source: ONS Pink Book – Crown Copyright and UNCTAD

Over the last two decades far higher rates of annual output growth have been achieved in China and India than in the developed economies of North America, the European Union or Japan. This rapid growth is expected to continue – not just in China and India – but in other BRIC countries (ie, Russia and Brazil) and in smaller economies such as Indonesia, Turkey and Mexico. By 2050, China is expected to be the largest economy in the world and – at least in purchasing power terms – India will also be a similar size to the United States. These three economies are expected to be far larger than any others as shown by the relative positions on the vertical scale in Figure 1.6. When examined in per capita terms, China and India will remain relatively undeveloped even by 2050 with the UK, Japan and the US still expected to have far higher per capita incomes. The fact that per capita incomes in China and India will remain relatively low could limit demand for service imports. Nevertheless, the sheer scale, and growth, of these economies mean they become increasingly important global markets.

Figure 1.6: Expected size of global economies by 2050 and their expected average annual GDP growth



Source: PriceWaterhouseCoopers for the United Nations (2008)

London's competition-driven specialisation has important spatial implications for the city as, within a market economy, different land uses compete for access to the centre of the city. This issue is covered in the next chapter.

Chapter 2: The spatial nature of London's economy

The largest and most productive centre of employment in London is in Central London where the benefits of agglomeration are highest. Central London provides businesses with many advantages in accessing labour and product markets and is a preferred location for business. While the most specialised businesses are located in Central London, those in London's outer boroughs tend, on average, to be more focused on the needs of London's residents, 60 per cent of whom live in Outer London.

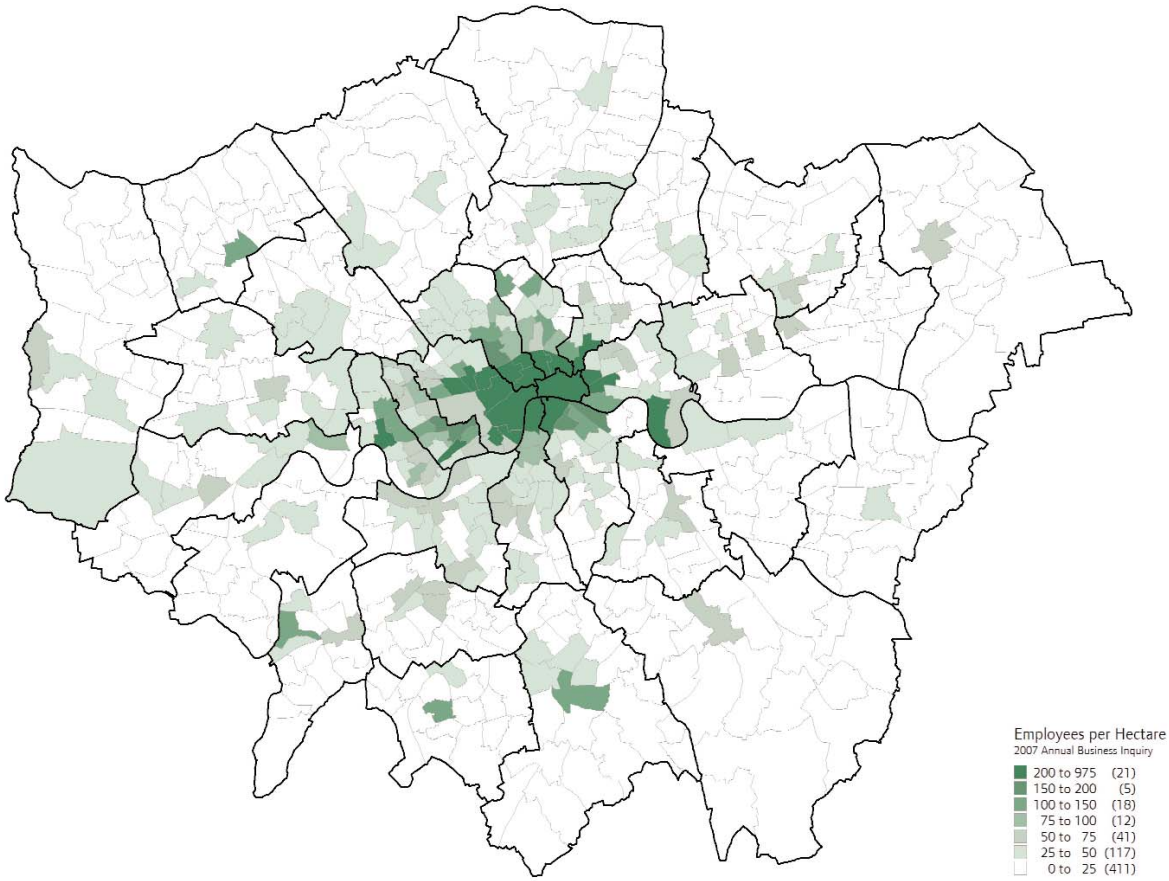
The development of London's radial public transport network brought about a reduction in transport costs which enabled the growth of the centre of London as an employment centre. The resulting difference in the location of employment and housing that has occurred as a result of business agglomeration reinforces the need to travel and results in the many challenges for London's road and rail transport networks. Global competitive forces together with the influence of agglomeration economies mean that much of London's future employment growth is likely to take place in the centre of London whereas much of the capacity for residential growth exists in East London. It is important that future housing growth is delivered in locations that have access to the many employment opportunities on offer in London, particularly in Central London.

This chapter considers the spatial nature of London's economy. It looks at the impact of agglomeration economies on the location decision of businesses and what the location of economic activity looks like across London. It then considers the nature of transport in London – particularly as it links with London's economy – and it also looks at the interaction of London's economy with the housing market and the impact that has on housing in London.

London's economic geography

Today's economic geography is the result of several hundred years of trade and agglomeration at work. Around one-third of London's jobs are located in Central London. As shown in Figure 2.1, employment density is high in the inner boroughs while employment in outer boroughs is more widely distributed. Heathrow Airport, Croydon, Bromley and Kingston are amongst the existing concentrations of employment in Outer London.

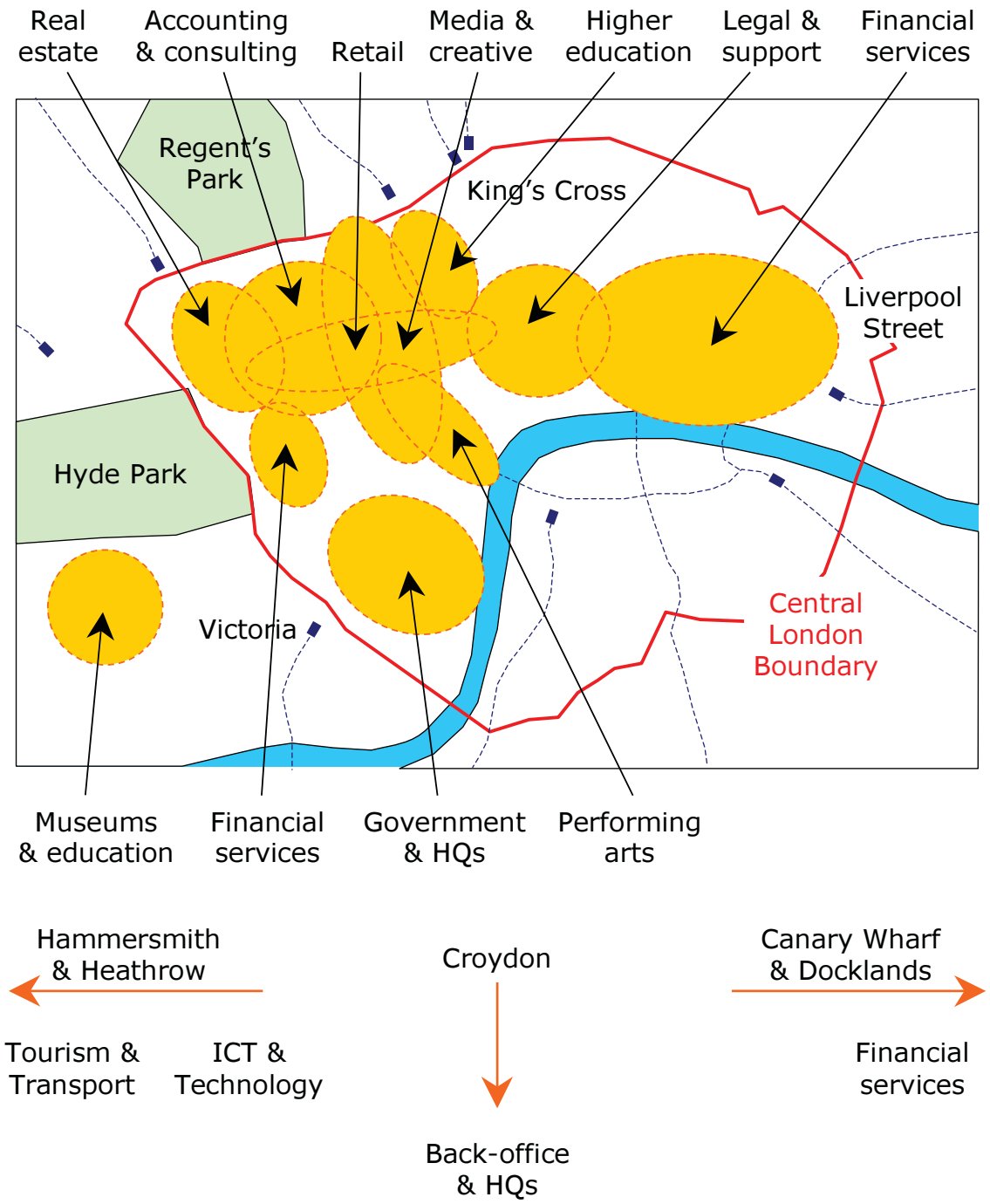
Figure 2.1: Employment density in London



Source: Annual Business Inquiry, 2007

Many of London's specialisms are located in distinct parts of Central London (see Figure 2.2). This is because businesses tend to locate near to similar businesses where they benefit from agglomeration economies.

Figure 2.2: Sector location within Central London



Source: Prime Minister's Strategy Unit, 2004

Agglomeration economies are positive externalities that firms benefit from when they locate in large groups. By locating close to one another, businesses build a common labour pool, gain knowledge from one another and benefit from economies of scale. This enables firms to be more productive when located in large clusters than when businesses are far from one another. Such benefits have a degree of circular causality with existing spatial concentration resulting in forces that encourage further spatial concentration[7]. The productivity benefits of high employment density, within industries, across geography and over time, are found in cities across the world[8].

There are two forms of agglomeration economies: localisation economies, where firms in a particular industry gain from clustering together; and urbanisation economies, where firms benefit simply from the presence of many other firms in a large economy.

Localisation economies occur, for example, when insurers find benefits in locating together and near to legal services for support on contractual issues for instance or when the wealth management arms of banks locate in the same area and share the services of nearby fund management companies. But other activities like labour recruitment and advertising agencies, for example, benefit from urbanisation economies because they are attracted to large urban centres like London that put them close to a very large number of suppliers and customers.

Businesses in urban centres share a large and often highly skilled pool of labour. The presence of so many businesses pulls in more labour, which makes cities like London an even more attractive place for firms to locate. Agglomeration produces benefits within the labour market because of the number and variety of firms that offer a wide range of employment opportunities. With so many jobs on offer, especially the number of specialist jobs, it is more likely people will find a job that makes the most of their skills.

Knowledge spillovers from other firms, whether in the same industry or in others, occur in large cities. Direct business interactions, fluid labour markets, and close formal and informal networks spread ideas around cities. This helps businesses keep up-to-date with ever-changing markets and technology so they remain competitive.

Finally, the proximity of a large number of suppliers and customers in an urban area create economies of scale in input and output markets, adding to the benefits of agglomeration. There are very few service activities that are not represented to some extent in London, which means most firms can gain from complementary businesses that bring about economies of scale. The proximity of so many competing businesses leads to more effective competition and puts pressure on all businesses to maximise the efficient use of resources. Additionally, the variety of service activity in London limits the exposure of the city to any structural change in the economy when compared to single-industry towns.

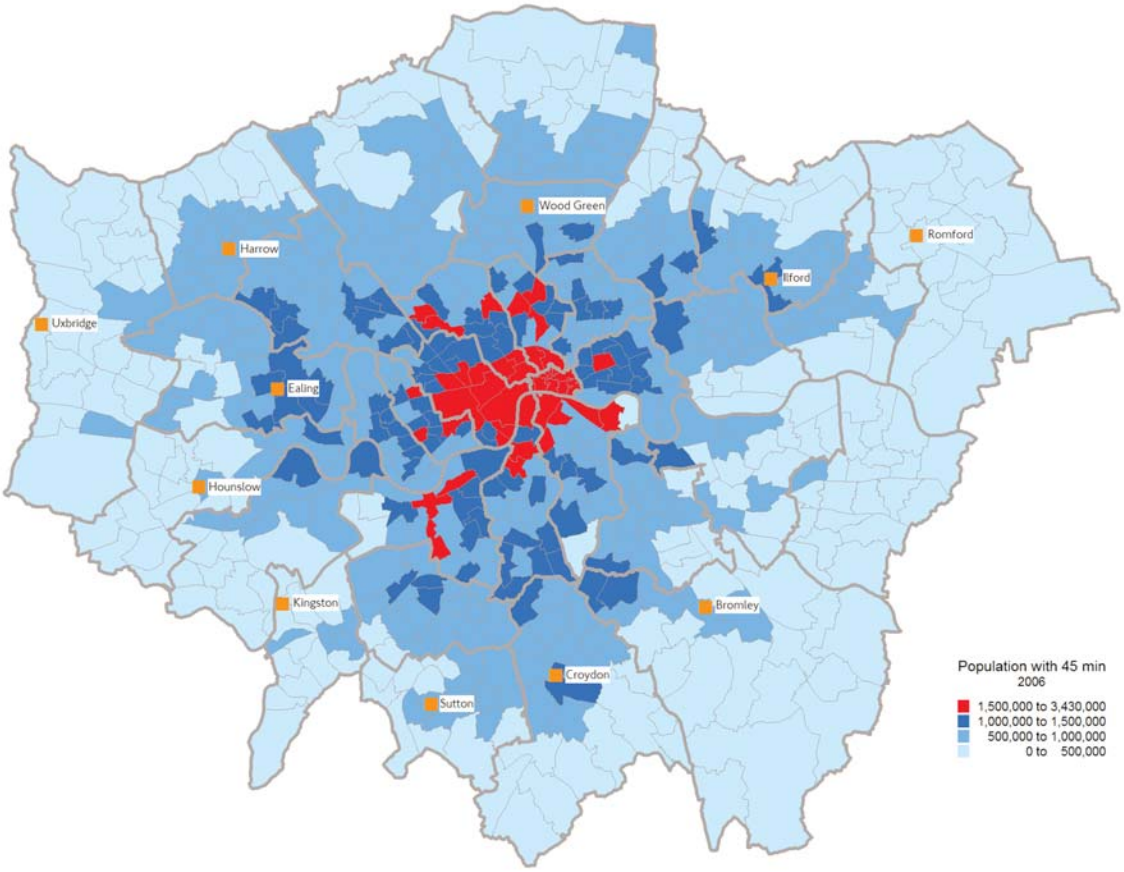
Together these agglomeration effects support the development of economic activity by providing firms with access to a deep and highly skilled labour force, a range of complementary input and output markets and the benefits of spillover effects such as the rapid transfer of innovation.

The importance of Central London

A key factor affecting agglomeration economies is distance so certain parts of London are more favoured by businesses because they provide better access to input or output markets.

The development of London's radial public transport network has enabled the growth of Central London by reducing the cost of accessibility to a significant proportion of the region's population. Figure 2.3 shows that much of Central London can be reached on public transport within 45 minutes (minimum journey time) by over 1.5 million people. This shows that the potential workforce for Central London is much greater than that for other parts of London. Indeed a similar picture is portrayed if the number of jobs accessible to residents within 45 minutes is considered (see Mayor's Transport Strategy, Figure 77). It also suggests that the access that businesses have to markets (either other businesses or people) is greater in Central London than elsewhere in London.

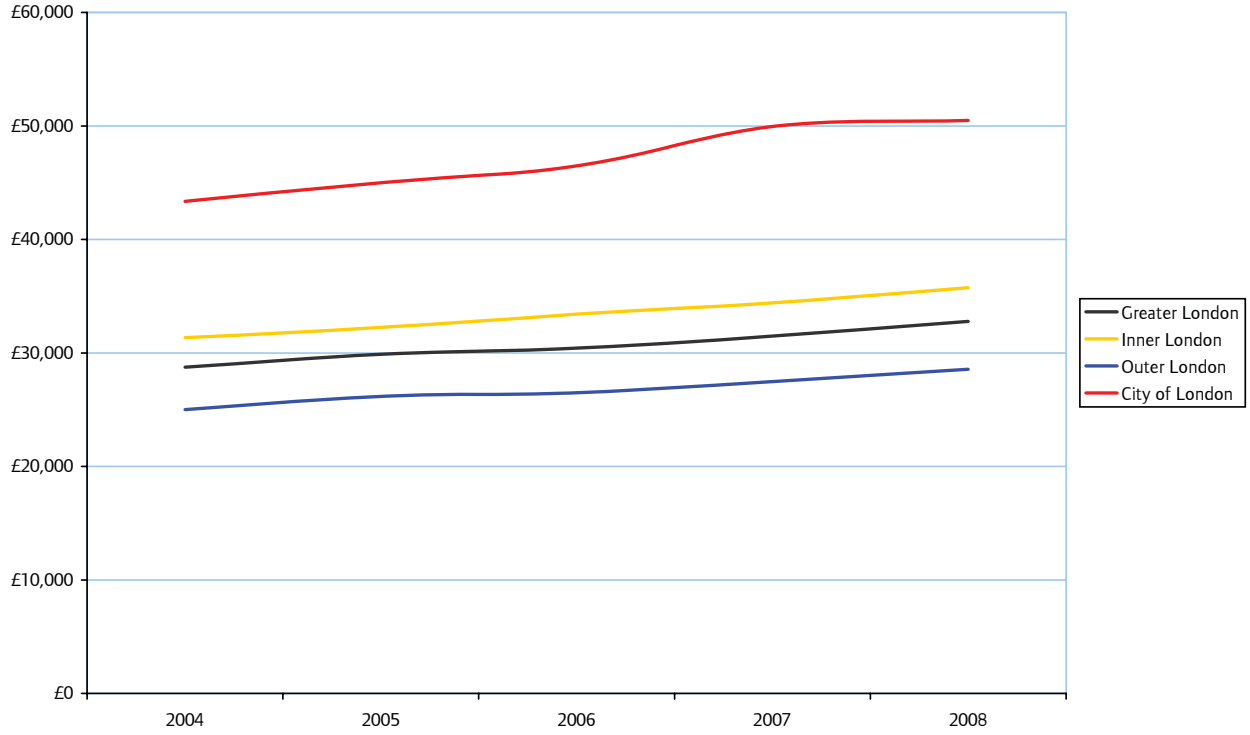
Figure 2.3: Population accessibility by public transport



Source: TfL 2009

As a result, Central London is a prime location for businesses and there is very high competition for space there. Indeed it is this competition for limited space that drives up land values and acts, alongside congestion and other diseconomies of spatial concentration, as a check on further concentration[9]. As in most cities, land prices are highest in the centre and generally decline with distance from the centre, reflecting the appeal of central locations when compared to peripheral ones. Firms that benefit most from agglomeration are most willing and able to pay for offices in Central London and so the most productive jobs are located in the centre. This is reflected in both productivity and wages earned. Figure 2.4 shows average annual earnings by place of work in London, noting the local authority with the highest average earnings is in the very centre (City of London).

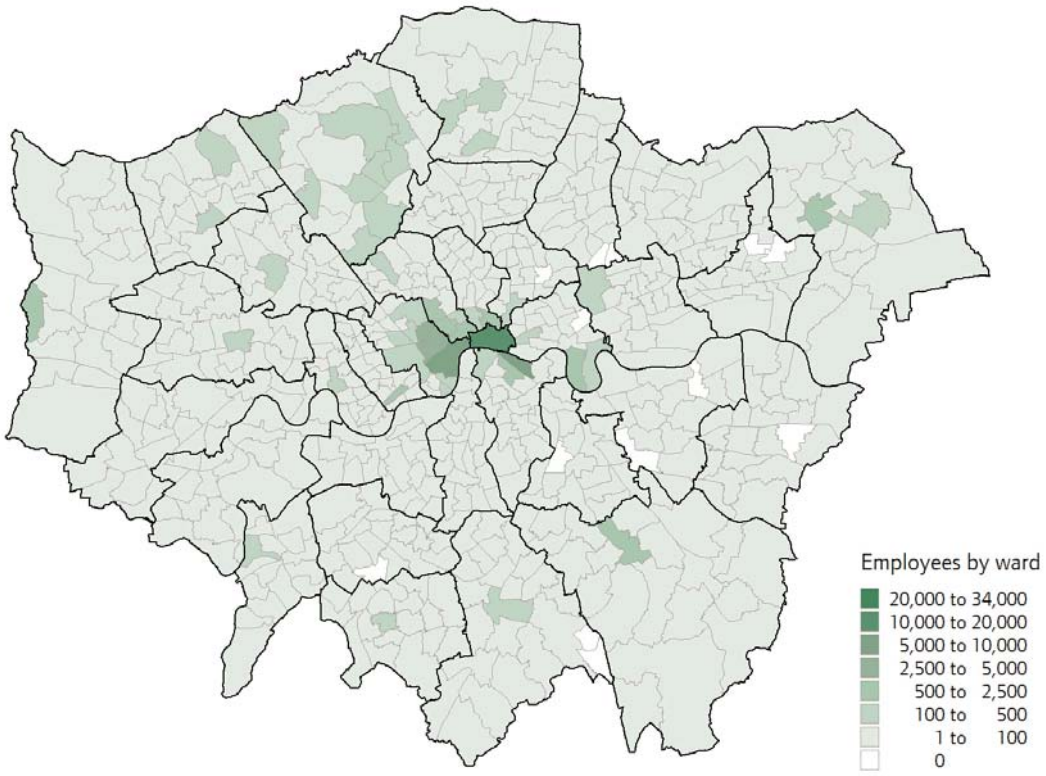
Figure 2.4: Median annual earnings by workplace location (full-time employees only)



Source: Annual Survey of Hours and Earnings (2008)

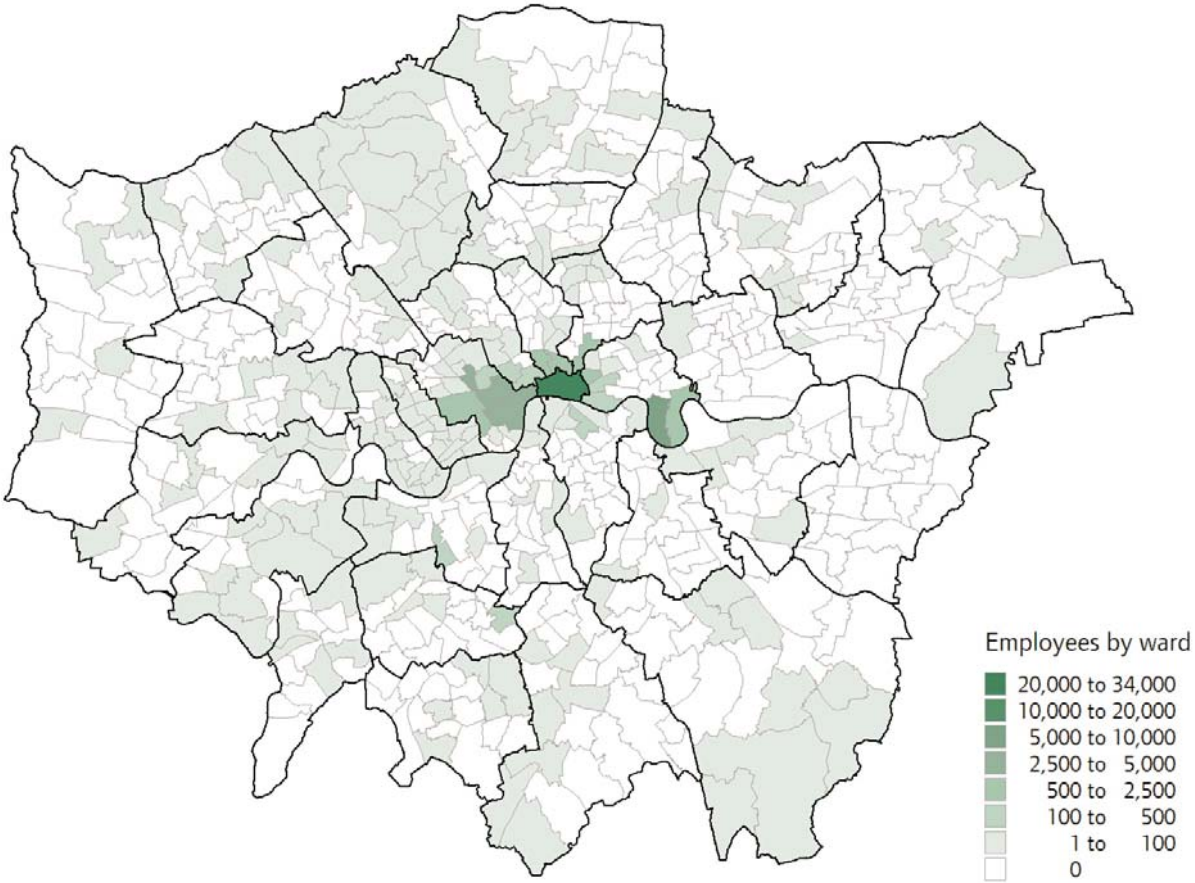
London's specialised services such as financial services, accountancy, management consultancy and legal services are amongst the most productive, globally competitive activities and tend to locate in Central London. Figures 2.5 to 2.7 show the concentration of employment within accounting, security broking and fund management, and legal across London. In each, the majority of jobs are located in Central London, suggesting that these activities are highly productive and benefit most from agglomeration economies.

Figure 2.5: Location of employment in accounting



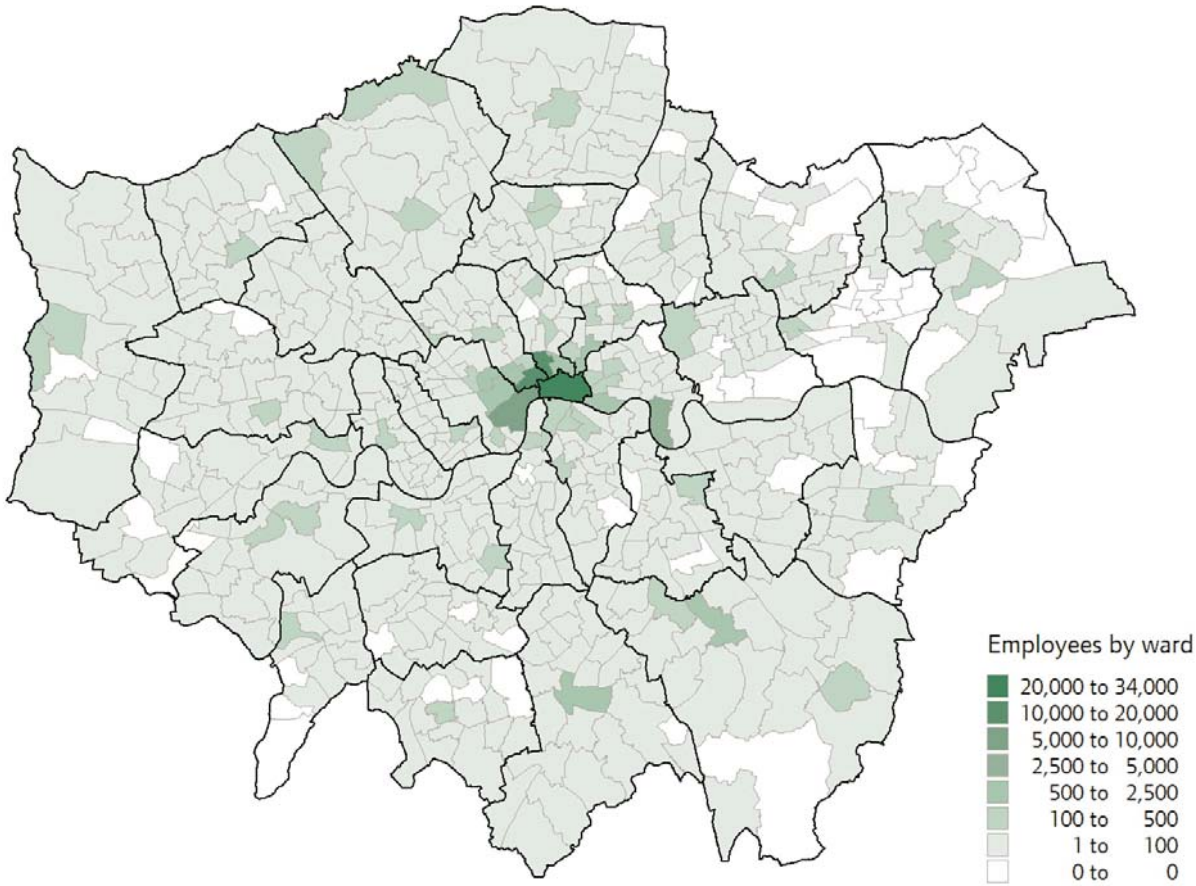
Source: Annual Business Inquiry, 2007

Figure 2.6: Location of employment in security broking and fund management



Source: Annual Business Inquiry, 2007

Figure 2.7: Location of employment in legal services

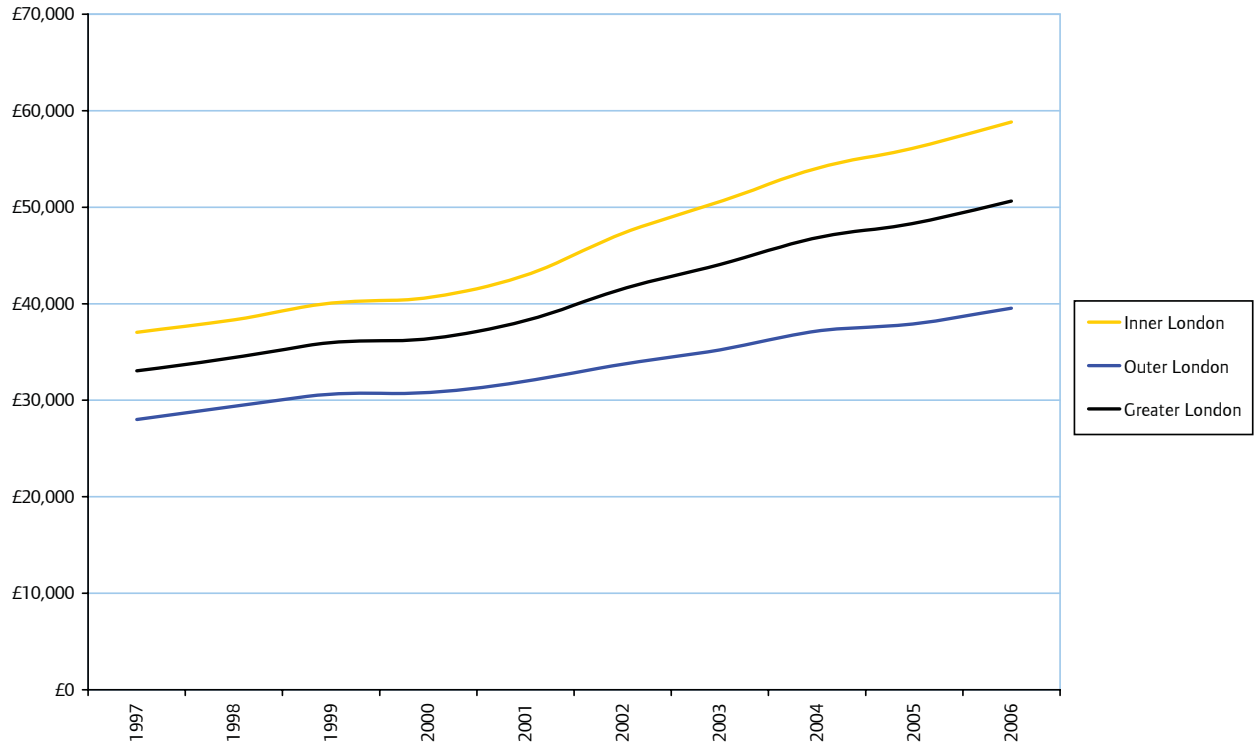


Source: Annual Business Inquiry, 2007

The role of Outer London

Less productive firms cannot compete for space in Central London given its cost. Where agglomeration benefits do not amount to enough to compensate for higher rents for instance in activities that are more space intensive, firms locate elsewhere, either in Outer London or other towns and cities in the wider region. Figure 2.8 shows the relative productivity of employees in Inner London and Outer London, which shows a similar relationship to wages earned.

Figure 2.8: Annual output (GVA) per employee

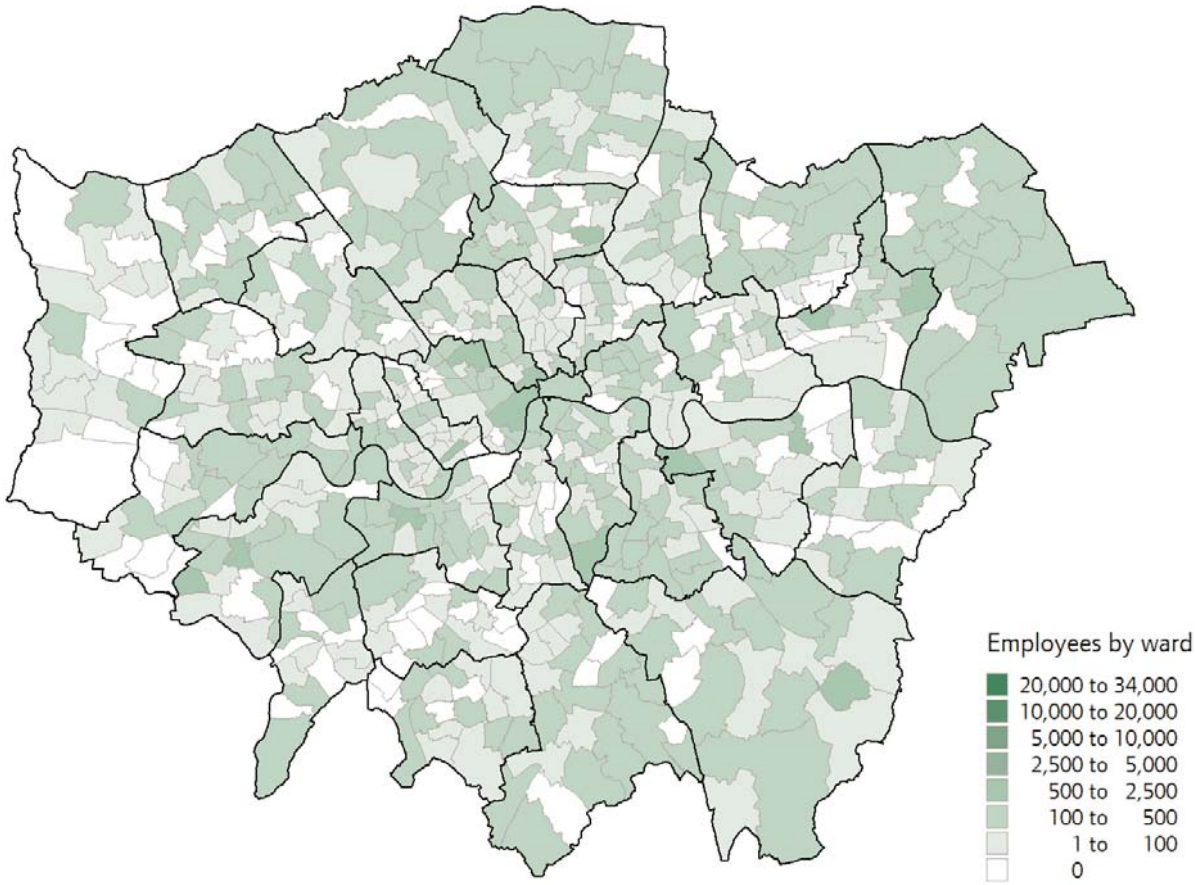


Source: ONS and Experian Business Strategies

Whilst the most specialised economic activities are largely concentrated within Central London, economic activity outside Central London, on average, tends to be more widely spread and more supportive of an area's immediate population and to some extent of businesses in Central London. To this end the proportion of jobs associated with serving the population (like retail or health and education for example) and jobs in what might be referred to as 'support business services' are higher in Outer London than in Inner London (see Figure 2.12).

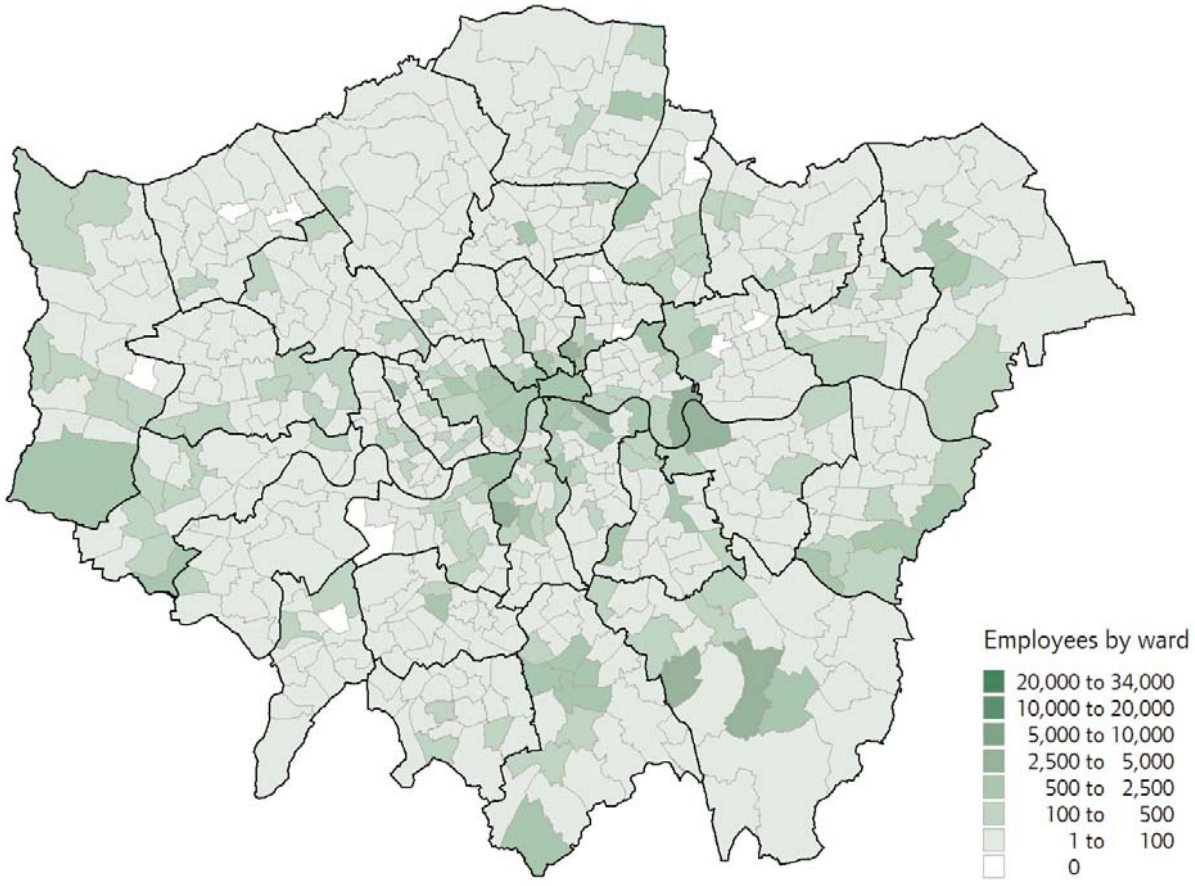
The types of business that might provide a more supportive role to other businesses include those involved in catering, cleaning, logistics and security. This illustrates that less productive businesses tend to locate outside Central London but remain as close to their customers as practicable. Figures 2.9 to 2.11 provide examples of other activities that do not tend to be concentrated solely in Central London and are more widely spread across London.

Figure 2.9: Location of employment in secondary education



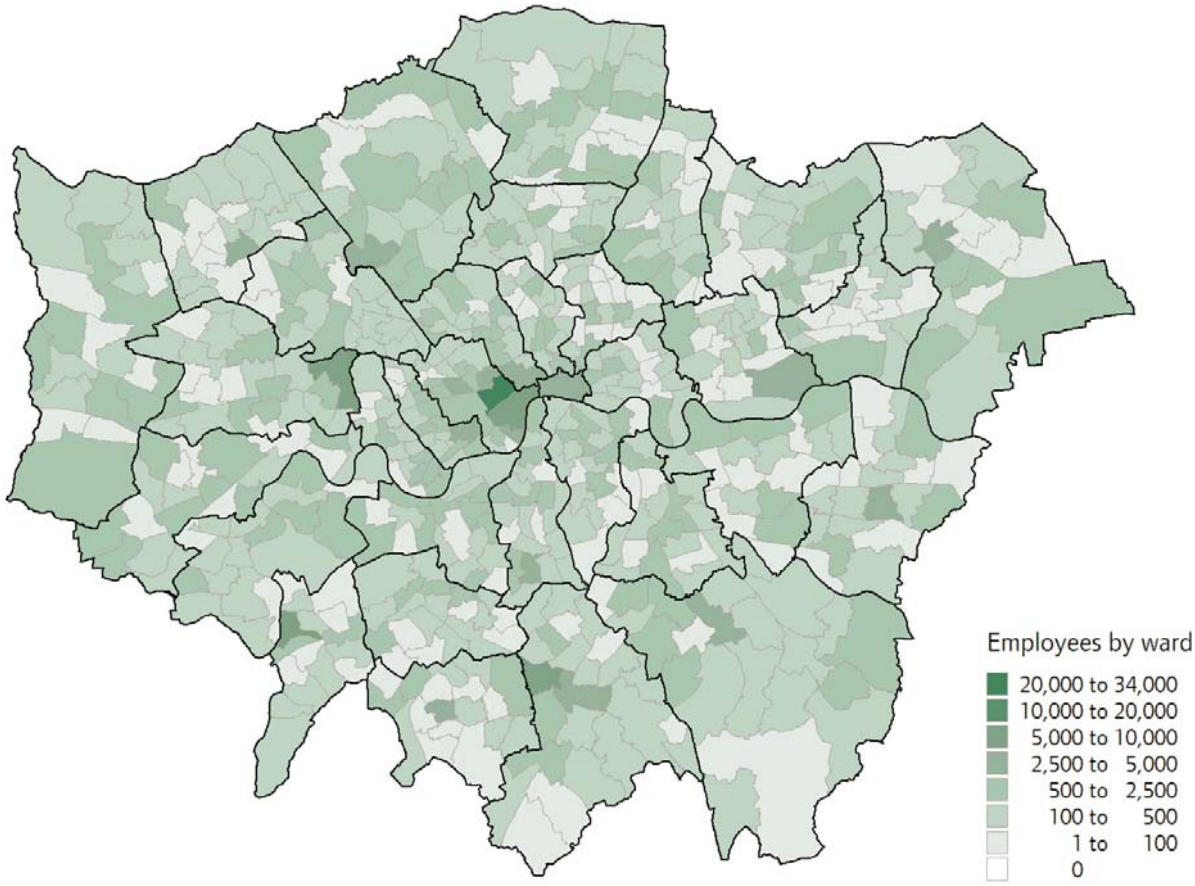
Source: Annual Business Inquiry, 2007

Figure 2.10: Location of employment in industrial cleaning



Source: Annual Business Inquiry, 2007

Figure 2.11: Location of employment in non-food retail

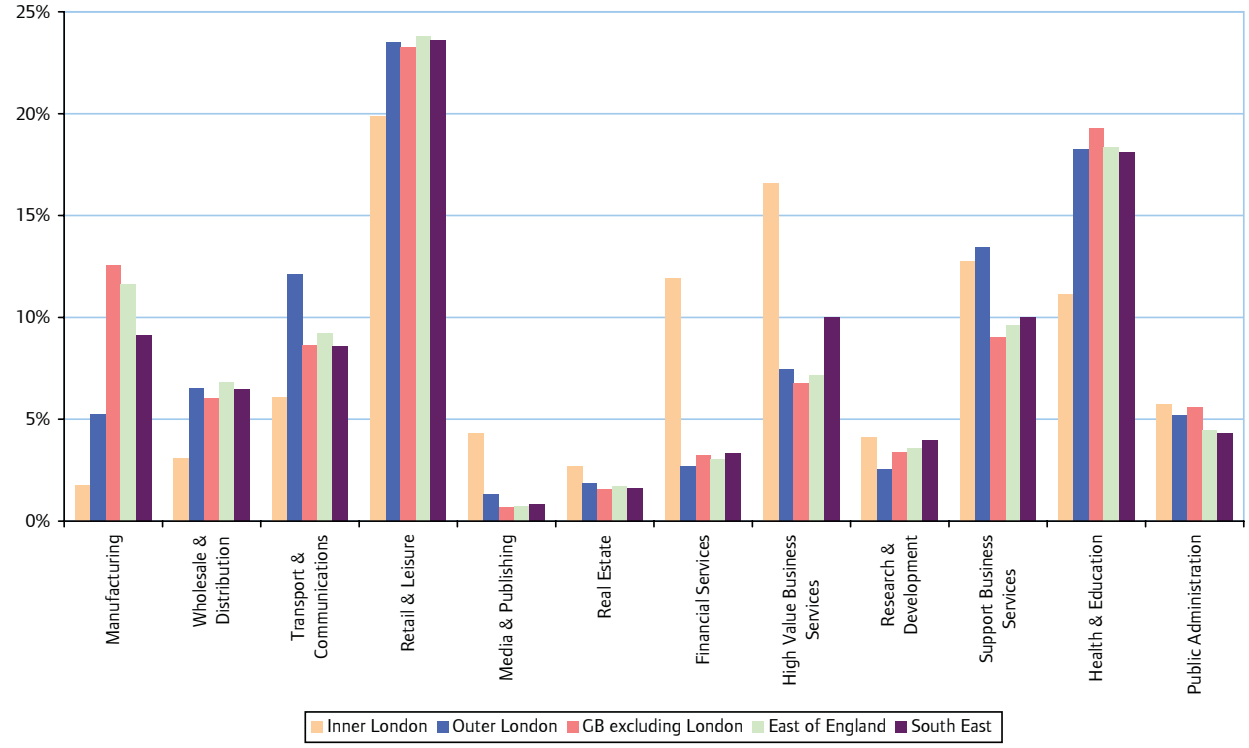


Source: Annual Business Inquiry, 2007

Businesses or organisations that serve the end customer directly usually locate close to customers. These businesses and organisations, like dry cleaners, hairdressers, schools and hospitals are located across London but make up a larger part of the economy in Outer London than elsewhere. This is because 60 per cent of London's 7.2 million residents live in the outer boroughs, making it a prime location for businesses producing local services.

Mainly as a result of the larger size of the population living in Outer London, a significant proportion of London's jobs are spread across Outer London as a whole: 42 per cent of London's jobs are in the outer boroughs. Figure 2.12 shows that the distribution of jobs by sector in London's outer boroughs more closely resembles that of the rest of Great Britain (and the East and South East regions) than Inner London (which is more clearly specialised in high value business services, financial services and media and publishing). Health and education account for 18 per cent of jobs in Outer London and 23 per cent of employment is in retail and leisure. This compares to 11 and 20 per cent, respectively, of jobs in Inner London.

Figure 2.12: Percentage of employment by category

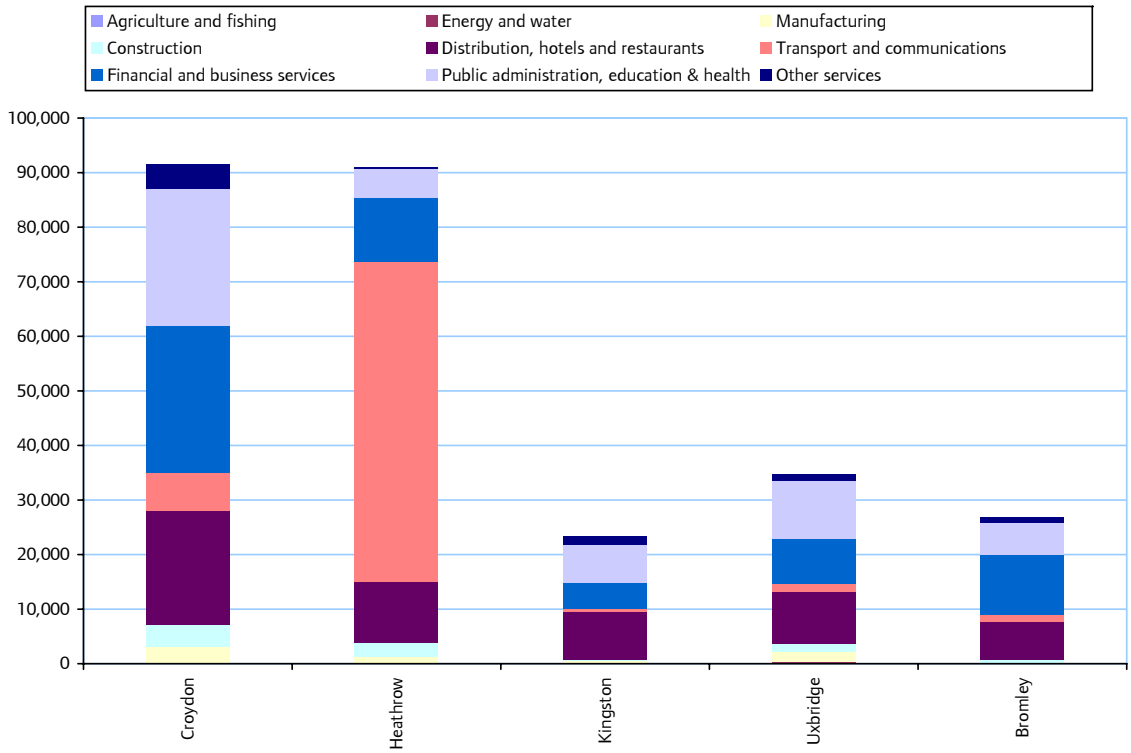


Source: ABI 2007

As noted, and shown in Figure 2.1, much of the employment in Outer London tends not to be tightly concentrated in small areas but tends to be more spread out. Data from the 2007 Annual Business Inquiry shows that the two largest Outer London areas of employment in absolute terms are Croydon (with 92,000 employees) and Heathrow and its immediate surrounds (with 91,000 employees). To put this in context, the City of London (which is, in terms of land mass, less than a sixth of the size of Croydon) accounts for over 300,000 employees. Other metropolitan centres (as defined in the London Plan) in Outer London with larger levels of employment than most of the rest of Outer London include Uxbridge (around 35,000 employees), Bromley (27,000 employees) and Kingston (23,000 employees). Most other metropolitan and major centres in Outer London have fewer than 20,000 employee jobs.

Figure 2.13 shows employee jobs by broad industrial groups in the aforementioned areas of employment in Outer London.

Figure 2.13: Employees in selected Outer London areas of employment by broad industrial group



Source: ABI 2007

The majority of employment in Croydon is split across three broad economic sectors. Financial and business services currently employ around 27,000 people, of which around one-fifth work in financial intermediation with the rest in business services. Public administration, education and health activities provide 25,000 jobs, with public administration accounting for around 12,000 of this total. The broad distribution, hotels and restaurants sector employs a further 21,000 and around three-quarters of these jobs are in retail and wholesale activities.

Transport and communications services provide almost two-thirds of the employment in and around Heathrow (around 59,000 jobs), reflecting airport and related activities. Business services in the Heathrow area employ 11,000 people. The distribution, hotels and restaurants sector employs 11,000 people with hotels and restaurants providing 8,000 of these jobs and retail and wholesale 3,000.

In Uxbridge, public administration, education and health services account for around 10,500 jobs with education and health services providing around 8,500 of these jobs (split roughly equally between education and health services). The other largest sources of employment in Uxbridge are the distribution, hotels and restaurants sector (just over 9,000 jobs) with retail and wholesale activities accounting for 8,000 of these jobs and financial and business services (just over 8,000 jobs) with business services accounting for 7,000 of these jobs.

In Bromley, financial and business services accounts for 11,000 employees, with around half of these jobs in financial services. Distribution, hotels and restaurants account for almost 6,000 jobs with retail and wholesale activities employing over 5,000 of these jobs, reflecting Bromley's role as a shopping destination. Public administration, education and health provide just under 6,000 jobs.

In Kingston, distribution, hotels and restaurants account for almost 9,000 jobs with retail and wholesale the largest sector of employment providing around 7,000 of these jobs. Other economic activities in this area of employment are public administration, education and health (almost 7,000 jobs) and financial and business services with around 5,000 jobs (of which business services accounts for 4,000).

Housing and transport

The location of employment opportunities across London, as well as the transport system which provides access to such employment opportunities, plays an active role in shaping the physical growth of the region, especially through the housing market. Housing and commercial uses compete for land in a similar way to how different types of employment outbid one another for land. Highly productive employment tends to crowd out residential development. The transport network facilitated the growth of employment centres and now serves as a link between employment and residential locations.

Agglomeration economies bring very large benefits to firms and cause great concentrations of employment in very small areas. Since businesses prefer to be clustered together and significant economic benefits derive from such concentration, other land uses like housing tend to locate further out. In general, the closer housing is to the centre the more expensive it will be. As a result, there is a large reliance on high volume transport networks to accommodate flows of people in and out of Central London. Maintaining and managing the capacity of such networks in the face of economic and population growth is a significant challenge for London.

Travel in London

The previous section illustrated the importance of the transport network in facilitating the economic growth of London's centre and its importance in linking people to jobs. This section summarises travel within London. It shows the volumes and timing of travel in London and the transport challenges this creates for the region. More information and data on transport in London can be found in TfL's 'Travel in London' report. Inter-city and international travel is discussed in Chapter 3.

There are 24 million trips made in, to or from London on an average day. However, the purpose of these trips, their location and length, and time of day in which they occur pose different challenges to London's transport network.

Table 2.1 shows the number of trips taken by London residents (so excluding those living outside London) in a typical week by geographic area and purpose. Commuting to work is a significant driver of traffic demand in London and a cause of the 'morning peak' when transport capacity is at its tightest. This is because people tend to travel to work at the same time and to a limited number of destinations, notably Central London, so a very significant volume of traffic occurs over a relatively short period.

Table 2.1: London residents' trips by functional sector (Central, Inner, Outer) of origin and destination, by trip purpose, 2007/08, 7-day week

	Trip purpose							
	Trips per day (000s)	Commuting	Other work	Education	Shopping / personal business	Leisure	Other	All purposes
Within Central London	742	20%	8%	2%	32%	32%	6%	100%
Within Inner London	4,481	11%	5%	9%	35%	26%	14%	100%
Between Central and Inner London	1,247	33%	11%	7%	23%	20%	6%	100%
Within Outer London	8,449	11%	4%	9%	35%	25%	17%	100%
Between Central and Outer London	718	51%	15%	3%	11%	17%	3%	100%
Between Inner and Outer London	1,732	22%	11%	6%	20%	31%	9%	100%
Between Greater London and rest of GB	1,046	16%	14%	4%	18%	40%	8%	100%
All areas	18,414	16%	6%	8%	31%	26%	13%	100%

Source: TfL, Travel in London 2009

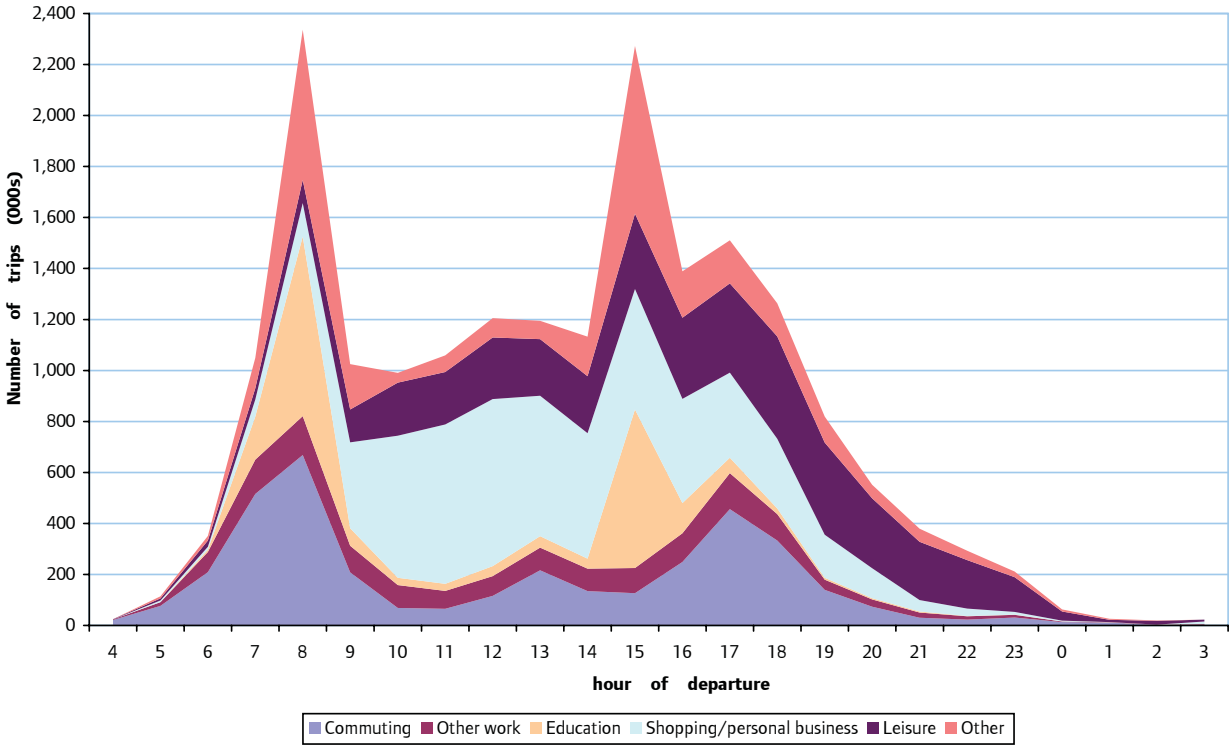
Commuting journeys to Central London tend to be long and more likely to be by public transport than car. This means commuting to Central London is particularly important in understanding the challenges to the transport network in accommodating future employment growth.

As noted earlier, Central London is the largest employment centre and an important destination for London's transport network. Central London benefits from a high capacity radial rail network serving London and the South East that has developed over the last century. The network influences the location decision of businesses that want to maximise access to markets and residents who need access to jobs. Indeed, Figure 2.3 illustrates that a significant number of people can access Central London using public transport. This illustrates the attractiveness of Central London to business. In 2007 more than 1.1 million trips were made to Central London during the morning peak (between 7am and 10am), 79 per cent of the non-walk trips were by rail and/or tube.

It is unlikely peak demand will drop in the long-run even with employers offering flexibility in working hours and the chance to work from home. This is because, in spite of the technological advances of the past few decades enabling more remote working, a disproportionate amount of employment remains located in the centre of London. The benefits of agglomeration act to discourage employment being spread across London and in fact make it more likely that more capacity on radial services will be needed.

Nevertheless, commuting accounts for only 16 per cent of weekly trips in London. Whilst they are not as concentrated in terms of timing, many more trips are made for shopping/personal business and leisure than for commuting, 31 and 26 per cent respectively. The timing of these different trips on a typical weekday is shown in Figure 2.14.

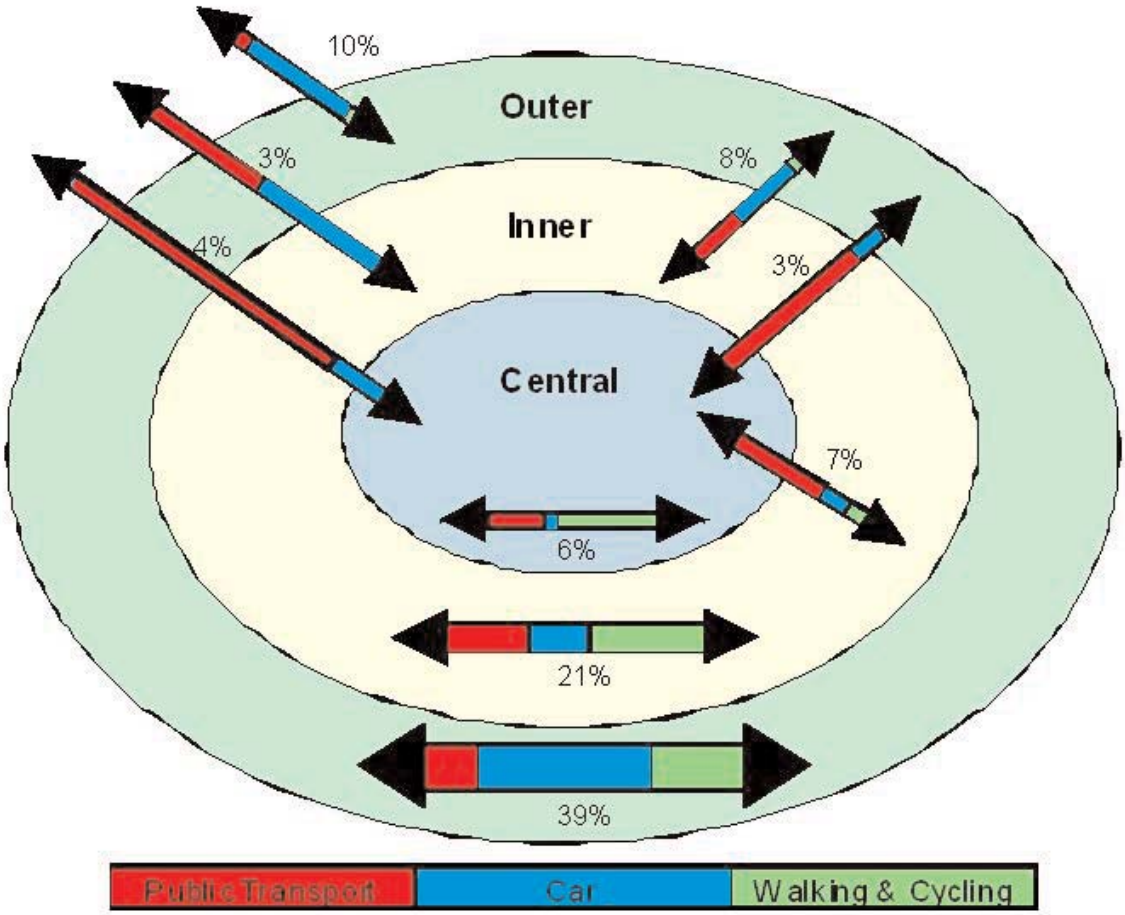
Figure 2.14: London resident trips by journey purpose by hour of departure, weekdays (London Travel Demand Survey (LTDS) 2007/08)



Source: TfL 2009

The largest number of trips is made in the morning peak (between 7am and 10am) when commuting and school trips coincide. A second peak occurs in the afternoon (between 3pm and 7pm) when schools finish and then when people begin going home from work. During the rest of the day shopping and leisure trips dominate.

Figure 2.15: Proportion of daily trips and mode used within and between areas of London (LTDS 2005-08 daily average)



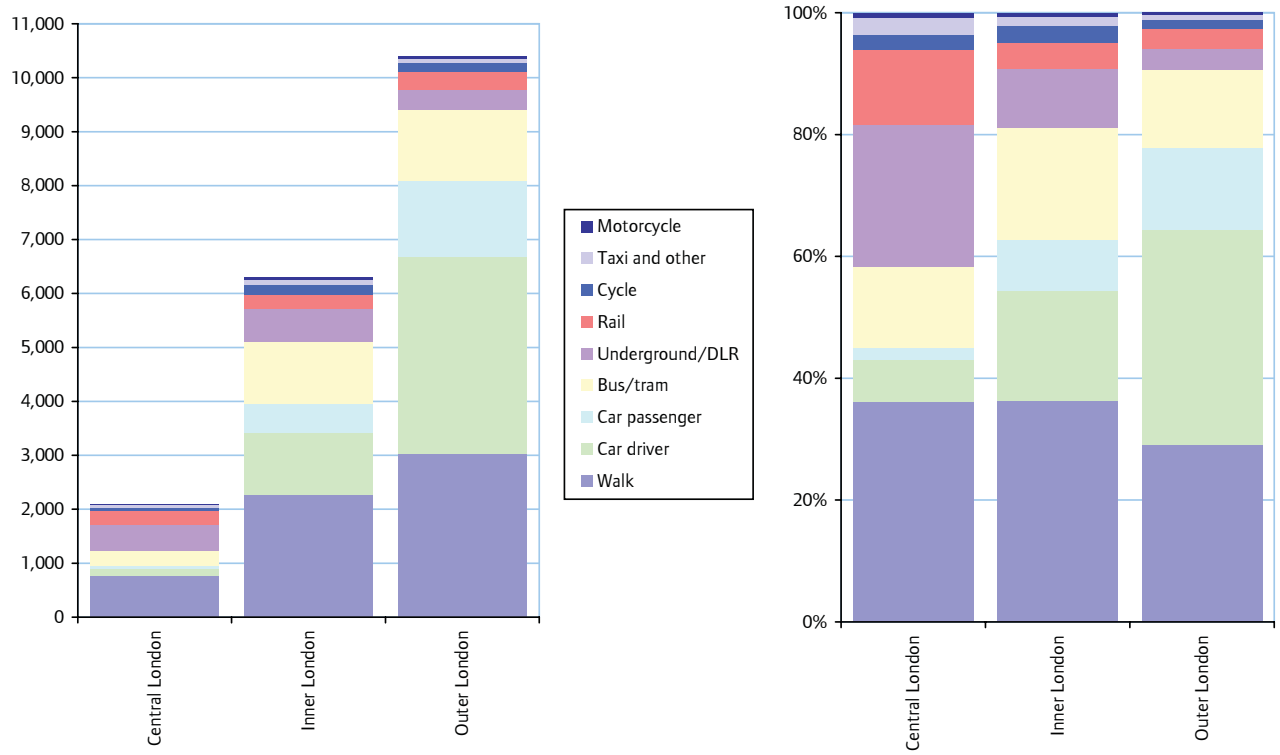
Note: Percentages are the daily 2005-2008 average proportion of all trips made to from or within London. Figures include trips by London and non-London residents and exclude freight.

Source: TfL 2009

The movement within and between different parts of London and the transport mode used is shown in Figure 2.15. Despite the high level of commuting to employment in Central London, nearly two-fifths of all trips in London start and end in Outer London. There is a notable difference between the modes used for journeys involving Central London, where public transport is much more likely to be used than private car, as shown in Figure 2.16.

Travel demand in London has been growing and is expected to continue to do so. Total distance travelled in London increased by an estimated 6 per cent between 2000 and 2007, while trips increased by 5 per cent, alongside growth in employment (up 3 per cent since 2000) and population (up 3 per cent since 2001). Future population and employment growth is expected to increase travel demand in the future.

Figure 2.16: Number of London resident weekday trips and mode share by area of trip origin (thousands) (LTDS 2007/08)



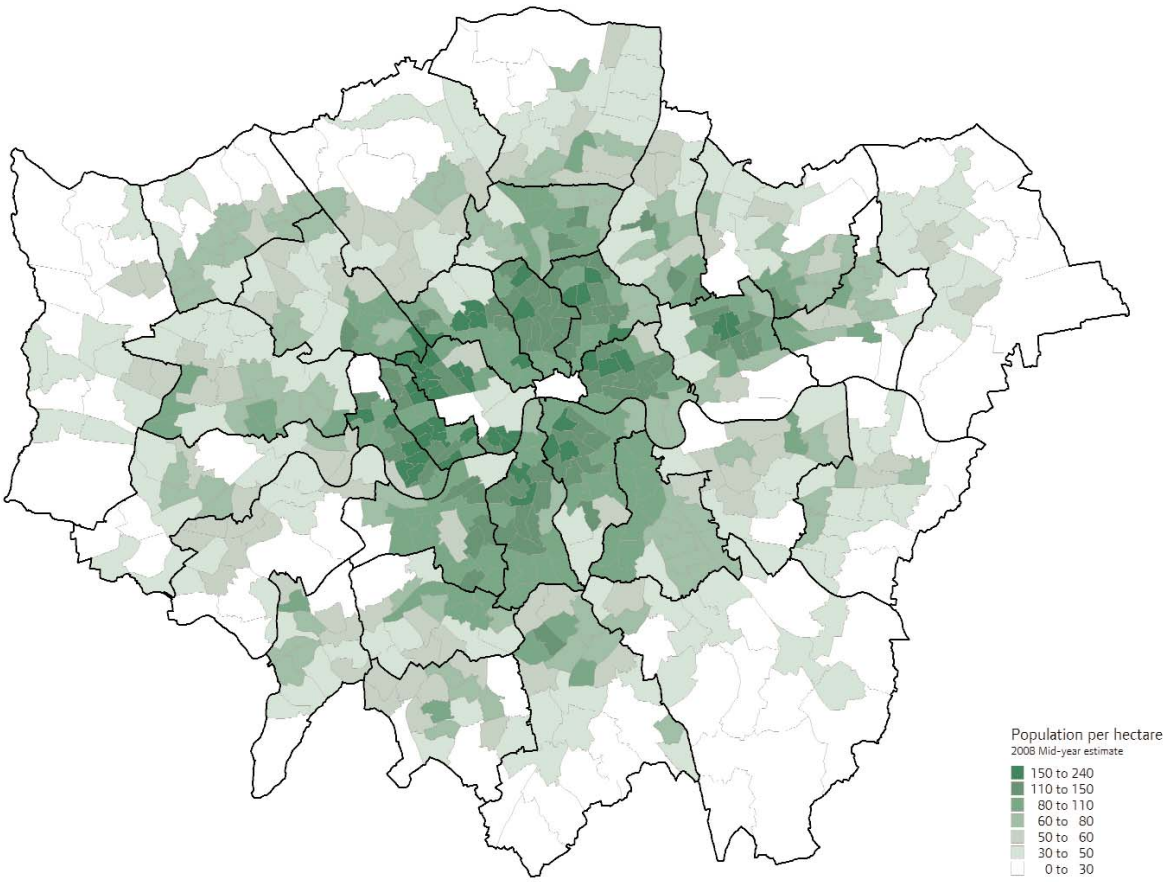
Source: TfL 2009

Housing in London

The opportunities offered in London's economy create a demand for people to come to London. This creates a high level of demand for housing in and around London.

London's residential population is most dense in Inner London where proximity to employment is highest and historical building patterns are most dense (see Figure 2.17). As with employment, housing density and, in general, house prices, drop with distance from the centre.

Figure 2.17: Population density in London

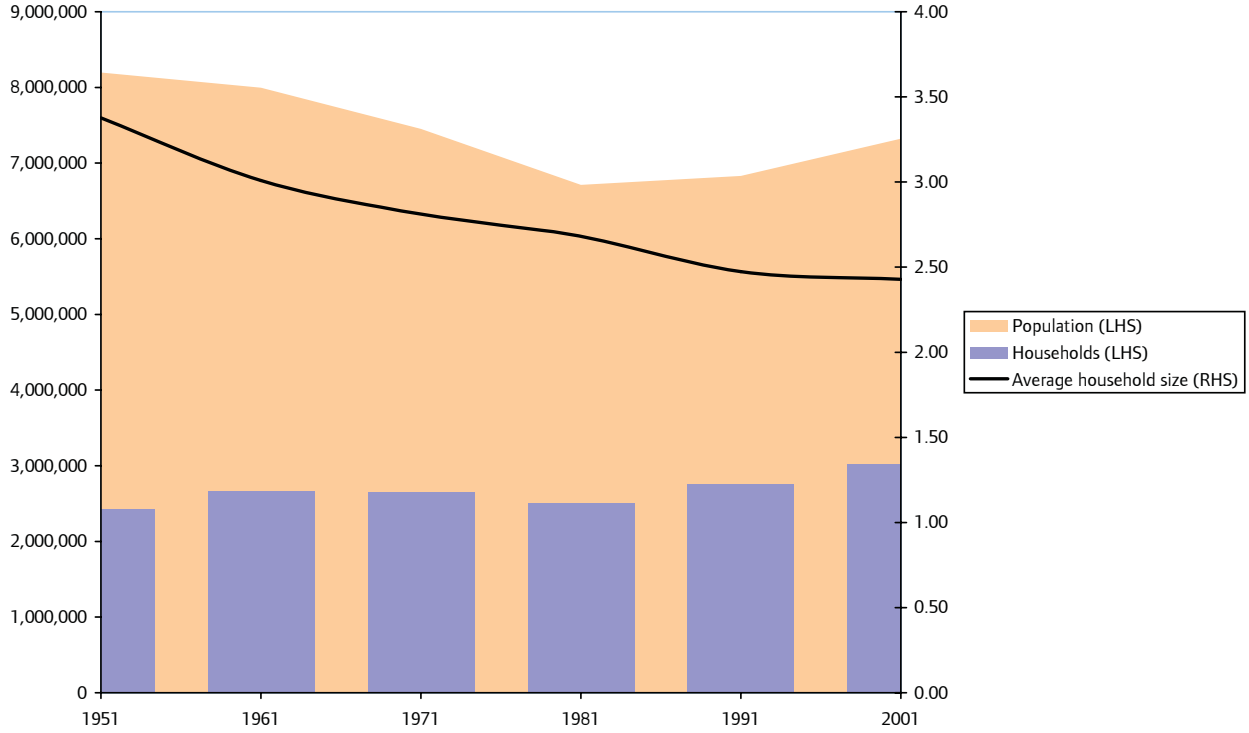


Source: DMAG mid-year estimate, 2008

Population has been growing in London alongside an increase in the number of jobs for more than two decades. At the same time there is a longstanding trend of decreasing household sizes, as shown in Figure 2.18. As a result, the number of households in London has increased at a faster rate than the population, pushing up demand for new housing units (and raising house prices – see Figure 2.19).

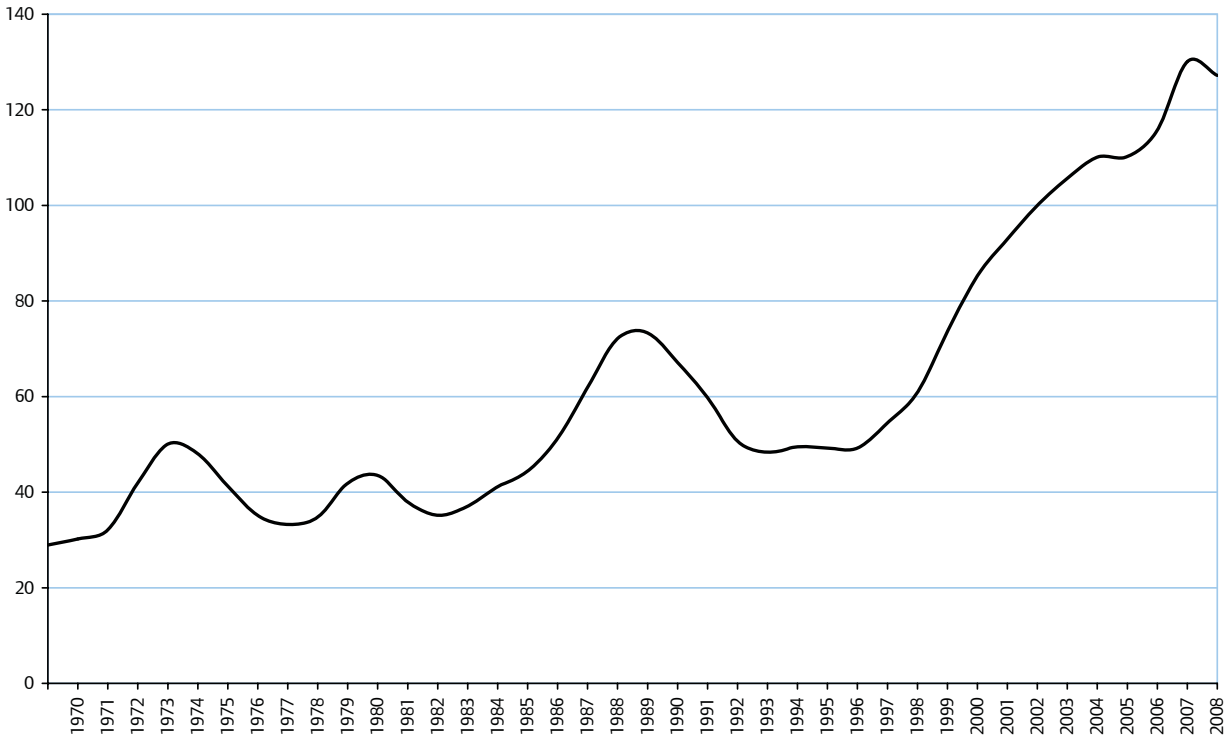
This trend will continue with population projected to increase from 7.6 million in 2007 to 8.9 million in 2031 (an increase of 1.3 million)[10]. This will mean more demand for housing, so new building typologies at higher densities and more housing are likely to be required if prices are to be affordable to workers in London.

Figure 2.18: Population and household size trends in London



Source: Housing in London: The evidence base for the London Housing Strategy, Figure 1.1.1

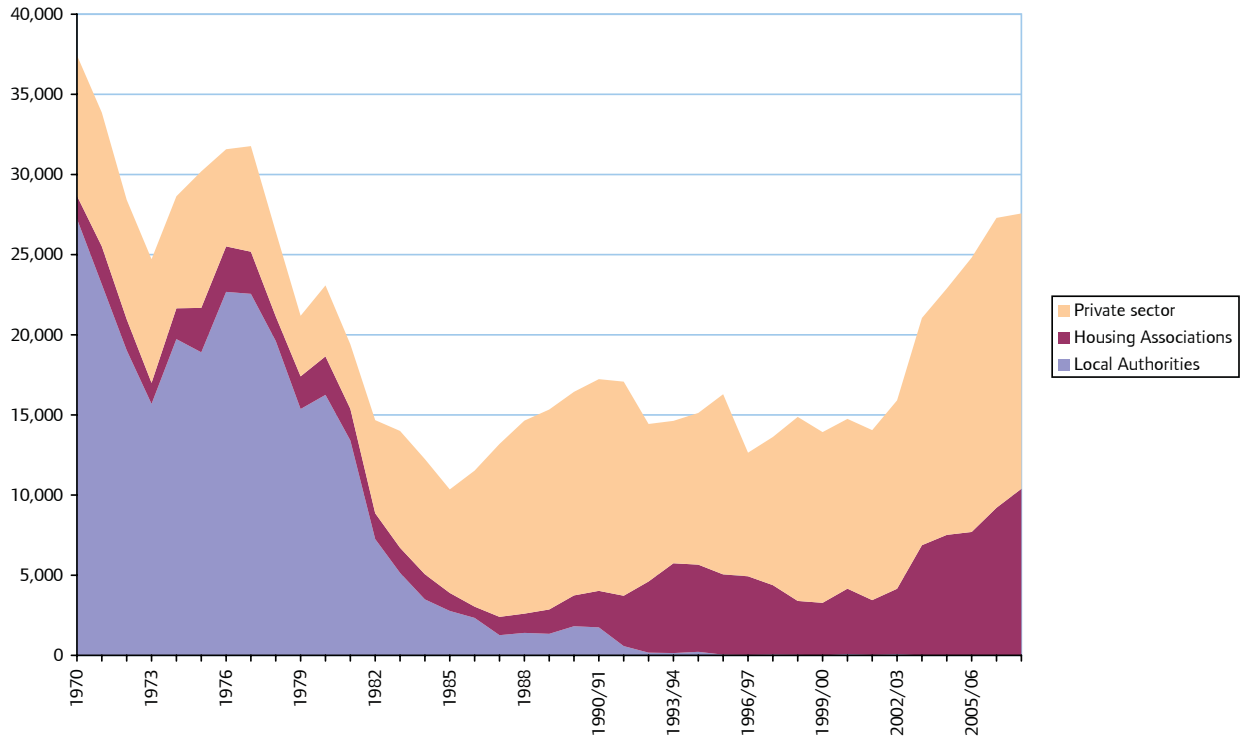
Figure 2.19: Index of mix-adjusted house prices in London, 1969-2008 (in 2008 prices), 2002 = 100



Source: CLG

The latest population projections suggest an extra 32,400 households per year between 2006 and 2031[11]. Figure 2.20, which shows the number of new dwellings completed each year from 1970 to 2007/08 by market segment, illustrates that this is above the rate of new home building for the past 30 years or so. Figure 2.20 also shows that house building has increased in the recent past before levelling off in 2007/08. It is expected completions will continue to slow in the near future in response to the significant drop in house prices. This poses a challenge for London, as a shortage of new homes has been a persistent problem.

Figure 2.20: Annual supply of new homes in London, 1970 to 2007/08



Source: Housing in London: The evidence base for the London Housing Strategy, Figure 1.1.5 updated by GLA.

Indeed, the National Housing and Planning Advice Unit (NHPAU) suggests that in the absence of a large increase in housing supply, the fundamental drivers of long term housing demand, such as population growth, mean that even a large short-term fall in house prices will not prevent housing becoming progressively less affordable over the next two decades[12].

The capacity for future housing growth is primarily located in parts of East London where there is a significant amount of redundant employment land. It is important that any housing developments are linked to areas with employment opportunities which, as shown earlier, means particularly Central London.

Chapter 3: London's attractiveness to business and people

London has been one of the leading global centres for commerce and trade since the Middle Ages. While the world has changed, the factors that have been important in drawing businesses and people to London have not changed significantly.

For business these factors include, amongst others, London's openness to trade and links to international markets, the skills and diversity of its workforce and its internationally competitive business environment. People are attracted to the city for reasons including the variety of career opportunities, the openness to different cultures, as well as the vast array of leisure and cultural offerings.

In this chapter, an illustration of London's economic success is provided before considering the factors that have been critical in attracting businesses and people to London to facilitate such economic success. These factors include the quality of the labour force; the nature of the business environment; and access to markets. Following this, a consideration of the types of people attracted to London and the factors that have drawn them to the city is provided. These factors include: high wages and career opportunities; cultural diversity; entertainment offerings; an abundance of green spaces; and educational institutions.

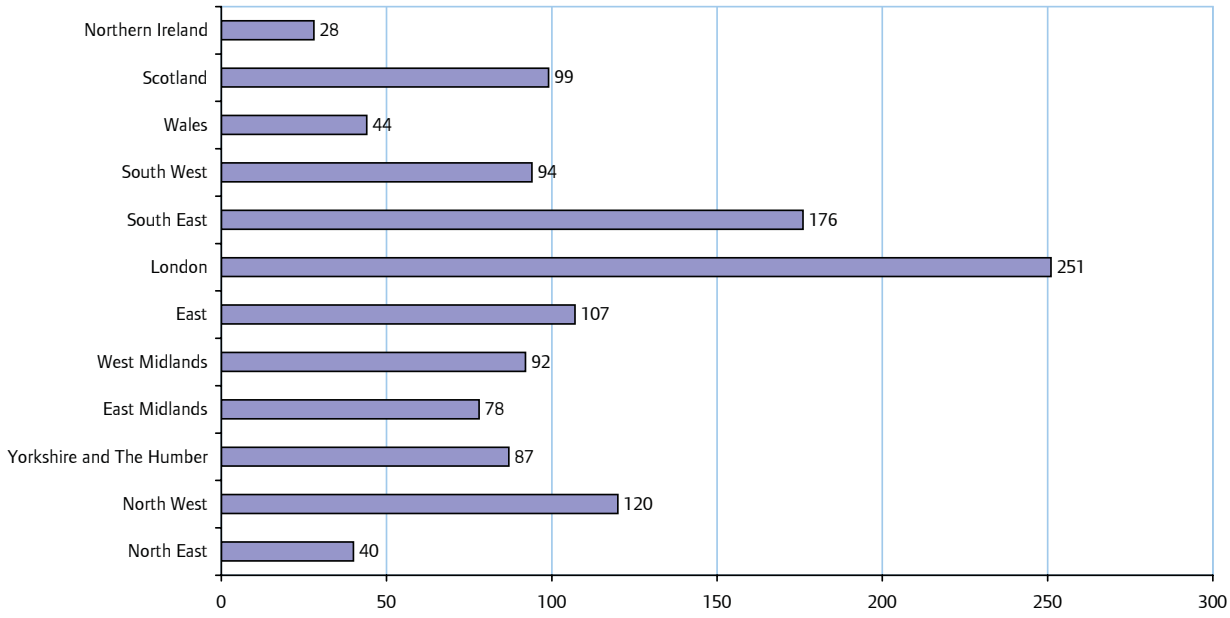
London's success as a location for business and economic activity

London has long been recognised as a leading world city[13]. Like New York, Paris and Tokyo, London is a centre of power and influence that affects both the national and global economy. This position as a global centre plays an important role in sustaining and attracting businesses and people to the city.

Economic growth

London is important as a centre for business activity, with total economic activity (Gross Value Added - GVA) being substantially higher than any other UK region. This reflects both the absolute number of people working in London and their productivity relative to the rest of the country. According to the most recent figures from the Office for National Statistics, London accounts for over 20 per cent of total UK GVA, the largest proportion of value added of any UK region[14]. GVA on a workplace basis measures the total economic value added produced in a region. This includes value added produced by those who do not actually live in the region, which for London is significant due to commuting. In 2007 London's GVA on a workplace basis was over £250 billion[15] (see Figure 3.1).

Figure 3.1: Workplace GVA in current basic prices: by region, 2007 (provisional)



Source: GLA (2009) Focus on London (data from Office for National Statistics)

Table 3.1 illustrates that the annual (nominal) increase in London's GVA over the ten-year period to 2007 was 6.3 per cent compared with 5.3 per cent for the UK and was the highest regional increase over this period. This measure illustrates the capital's importance to the generation of economic activity in the UK.

Table 3.1: Growth of headline workplace-based GVA[16] at current basic prices by region

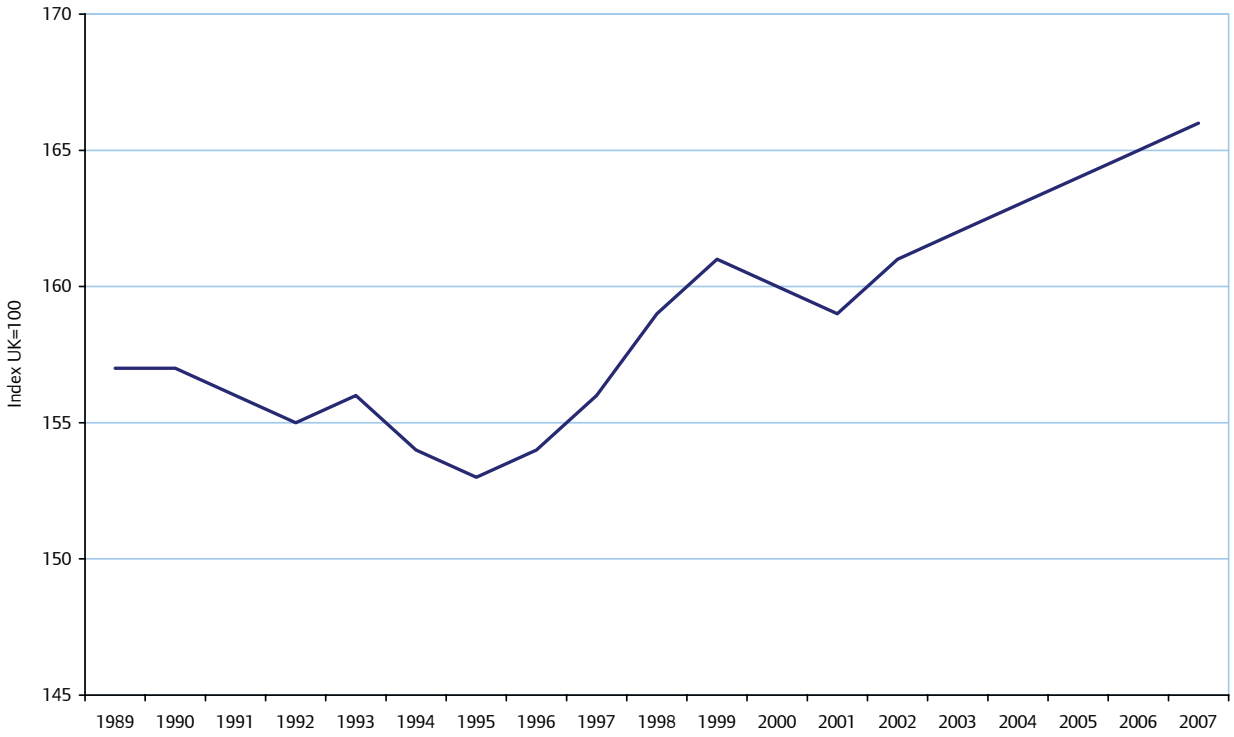
Percentages

	Percentage increase			
	GVA[1]		GVA per head[1]	
		Average		Average
	2006-2007[2]	1997-2007[2]	2006-2007[2]	1997-2007[2]
North East	5.2	4.6	4.8	4.6
North West	5.9	4.8	5.8	4.7
Yorkshire & The Humber	5.5	4.8	4.8	4.3
East Midlands	5.9	5.1	5.0	4.4
West Midlands	5.6	4.3	5.3	4.1
East	6.4	5.6	5.4	4.8
London	6.7	6.3	6.1	5.5
South East	6.2	5.7	5.3	5.1
South West	5.8	5.4	4.7	4.7
Wales	5.1	4.4	4.6	4.1
Scotland	5.5	4.8	5.0	4.7
Northern Ireland	6.2	5.6	5.1	5.1
UK[3]	6.0	5.3	5.3	4.8

Note: The headline regional GVA series have been calculated using a five-year moving average
1 The difference between the increases in GVA and GVA per head is is due to population change
2 Provisional
3 UK less Extra-regio and statistical discrepancy
Source: Office for National Statistics

From Figure 3.2 we can see that London's gross value added per capita over the years has been above the national average. This disparity between London and the UK overall has widened in the past two decades, with particularly strong growth since 2001.

Figure 3.2: Workplace headline[17] GVA (per capita) in current basic prices in London 1989-2007[18]



Source: Office for National Statistics

When looking at the size of economies, London ranks highly when compared to other European countries as shown in Table 3.2[19]. Using purchasing power parities[20] to measure the size of European economies, London moved from being ranked 10th in 1995 to 9th in 2006.

Table 3.2: Rankings by size of economy (European economies, Purchasing Power Parities, 1995-2006)

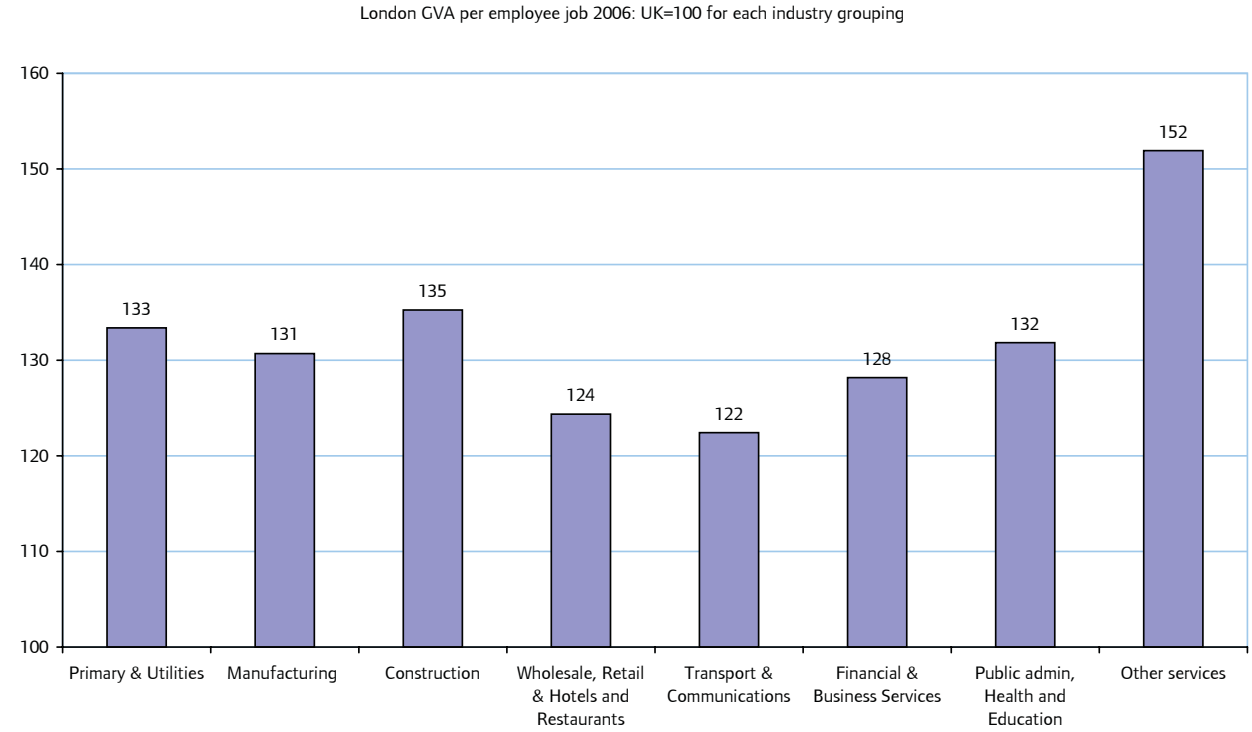
Ranking	Size of economy (output)	
	1995	2006
1	Germany	Germany
2	France	UK
3	Italy	France
4	UK	Italy
5	Spain	Spain
6	Netherlands	Turkey
7	Turkey	Netherlands
8	Poland	Poland
9	Belgium	London
10	London	Belgium
11	Sweden	Sweden
12	Switzerland	Greece
13	Austria	Austria
14	Greece	Switzerland
15	Czech Republic	Norway
16	Portugal	(Romania)
17	Denmark	Portugal
18	Norway	Czech Republic
19	Finland	Denmark
20	Hungary	Hungary

Source: GLA Economics based on Eurostat data

London's productivity

London's highly skilled labour force contributes to London being more productive than the rest of the UK across almost all sectors of the economy. As shown in Figure 3.3, GVA per employee in London is well above the UK level[21].

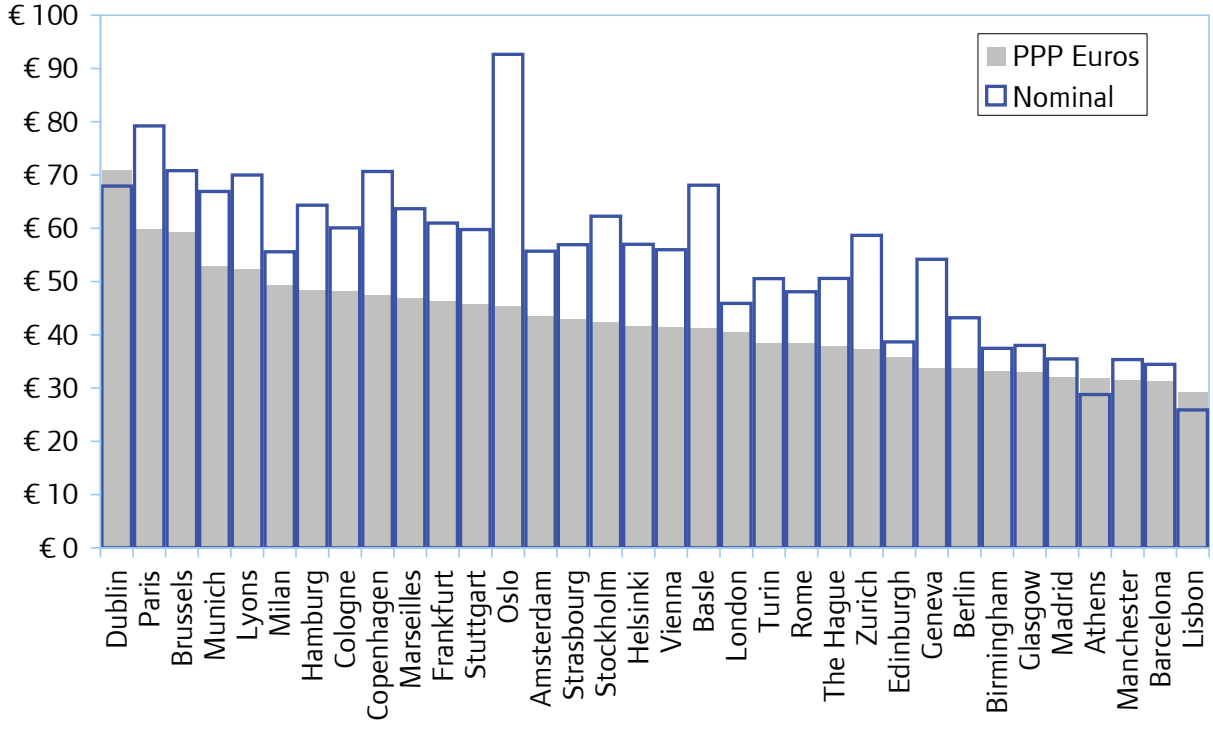
Figure 3.3: London's productivity in comparison to the UK average, 2006



Source: Regional Accounts and Employee Jobs (ONS Crown Copyright)

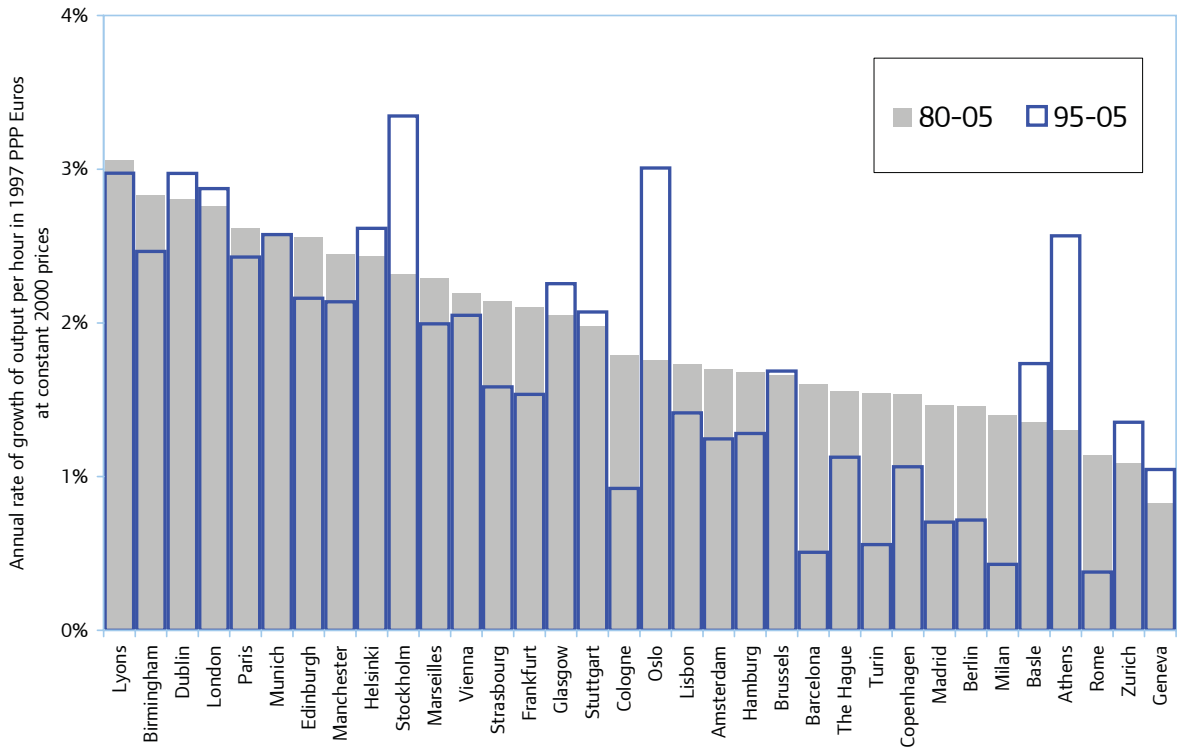
Productivity comparisons across cities, like all comparisons across cities, are problematic. However, whilst the figures should be treated with a degree of caution (in part because of their sensitivity to the definition of boundaries) data from the GLA's interim metro area dataset[22] suggests that absolute productivity levels in London are around average for European cities (see Figure 3.4)[23]. More recent, but provisional data, suggest that this absolute productivity picture understates London's absolute level of productivity[24]. Figure 3.5 illustrates that London has had strong levels of productivity growth particularly when compared to other European cities over the past 20 years.

Figure 3.4: Productivity comparisons for European cities (per hour, 2005)



Source: BAK Basel and GLA Economics

Figure 3.5: Real productivity growth across European cities

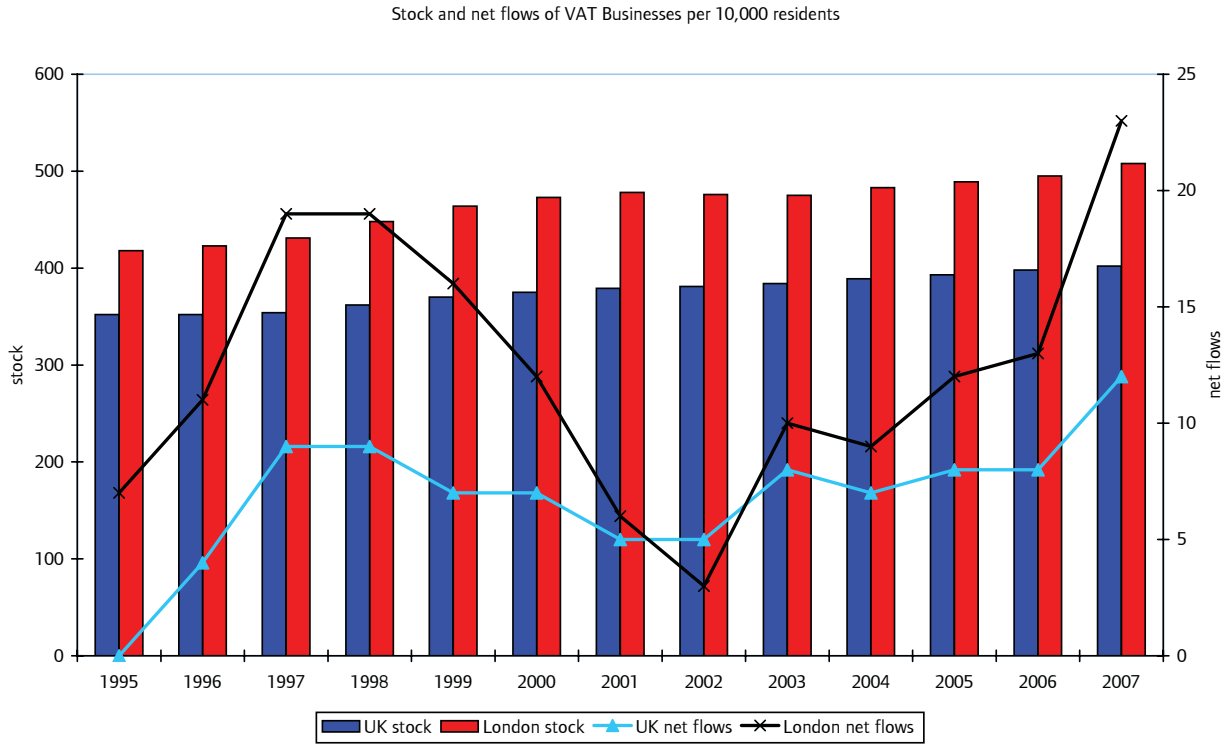


Source: BAK Basel and GLA Economics

Business start-ups

Another practical means of assessing how attractive London is as a place to do business is the rate at which businesses start-up. When London is compared to the UK on the basis of resident population, London supports more businesses per head of population. London's net start-up rate (ie, start-ups net of closures) has outperformed the UK average since 1995 in all but one year (see Figure 3.6). The steady growth in London's stock of businesses would suggest that there are benefits to establishing as a business in London.

Figure 3.6: Business start-ups in London and the UK



Source: BERR (2008)

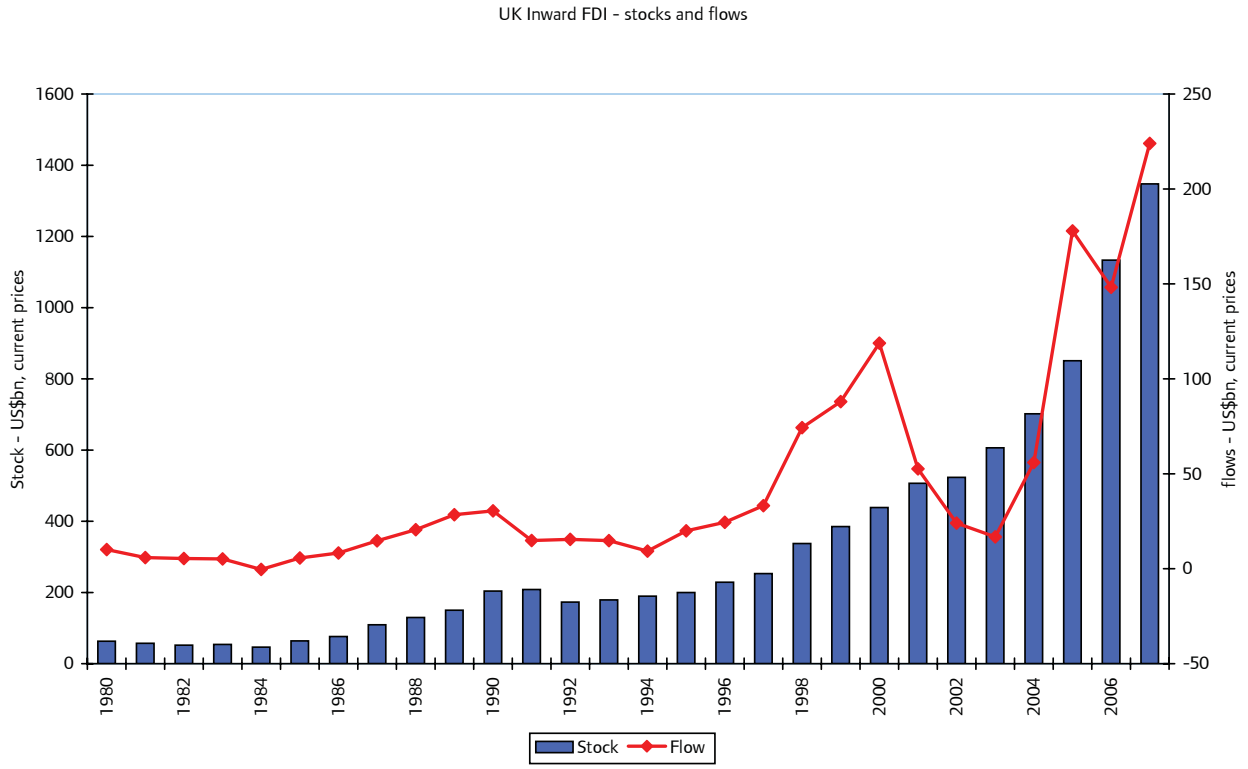
Foreign Direct Investment

London's attractiveness as a place to invest is illustrated and further supported by the stock and flows of foreign direct investment (FDI) the UK receives, much of which is invested in London. This type of investment can both create new jobs and improve the productivity of domestic firms[25]. Both the stock and flows of FDI into the UK have increased significantly since 1980 (Figure 3.7). This has allowed the UK to maintain its share of both world and EU 15 FDI stocks and flows despite the increased competition for globally mobile capital[26].

In a recent survey[27] it was found that the UK retained its position as the most attractive destination for inward investment in Europe in 2008. It was also found that London retained its position as the most attractive city for inward investment in Europe in 2008 for the seventh year in a row.

Data from the European Investment Monitor[28] provides some insights regarding London's role in attracting Foreign Direct Investment to the UK. London's share of all UK FDI projects between 1997 and 2008 is 30 per cent.

Figure 3.7: Inward Foreign Direct Investment into the UK



Source: UNCTAD, 2009

Survey of cities

Various studies and surveys find that London is a leading global centre. In 2008, the GaWC (Globalisation and World Cities)[29] found that London was the leading global city, closely followed by New York based primarily on an international comparison of the presence of 'global' advanced producer services firms (such as financial institutions, accountancy, legal and advertising firms). Other surveys such as the Global Financial Centres Index[30] consistently ranks London as the world's leading financial centre, while Cushman and Wakefield[31] consistently rank London as the most attractive city in Europe in which to locate a business (a summary of international comparisons is provided in Appendix 1.1)[32].

Factors attracting businesses to London

As noted in Chapter 2 London is a successful place to do business due to the agglomeration benefits it brings namely the advantages in accessing qualified labour, access to markets, its external transport links and internal transport system. The evidence provided in this Chapter illustrates London's ability to rank highly as a successful global economy. The factors that have been found to attract businesses to London are outlined in the remainder of this Chapter.

The Cushman and Wakefield[33] survey provides a clear summary of the factors that business leaders state as driving their decisions about business location. These factors are set out in Table 3.3 which suggest that London is ranked highly in those factors that businesses believe to be most important, namely:

- Availability of high quality staff;
- A favourable business environment (taxes and regulation);
- Access to markets; and,
- Internal and external transport links.

Table 3.3: Attractiveness of London to business

	2008	2007	2006	2005	2008 Leader
Availability of qualified staff	1	1	1	1	London
Easy access to markets	1	1	1	1	London
Quality of telecommunications	1	1	1	1	London
External transport links	1	1	1	1	London
Cost of staff	29	25	16	22	Warsaw
Climate for doing business	5	2	5	6	Dublin
Language spoken	1	1	1	1	London
Office space - value for money	24	18	29	24	Leeds
Internal transport	1	1	1	2	London
Availability of office space	5	2	1	3	Berlin
Quality of life	14	11	7	13	Barcelona
Freedom from pollution	27	29	26	27	Oslo

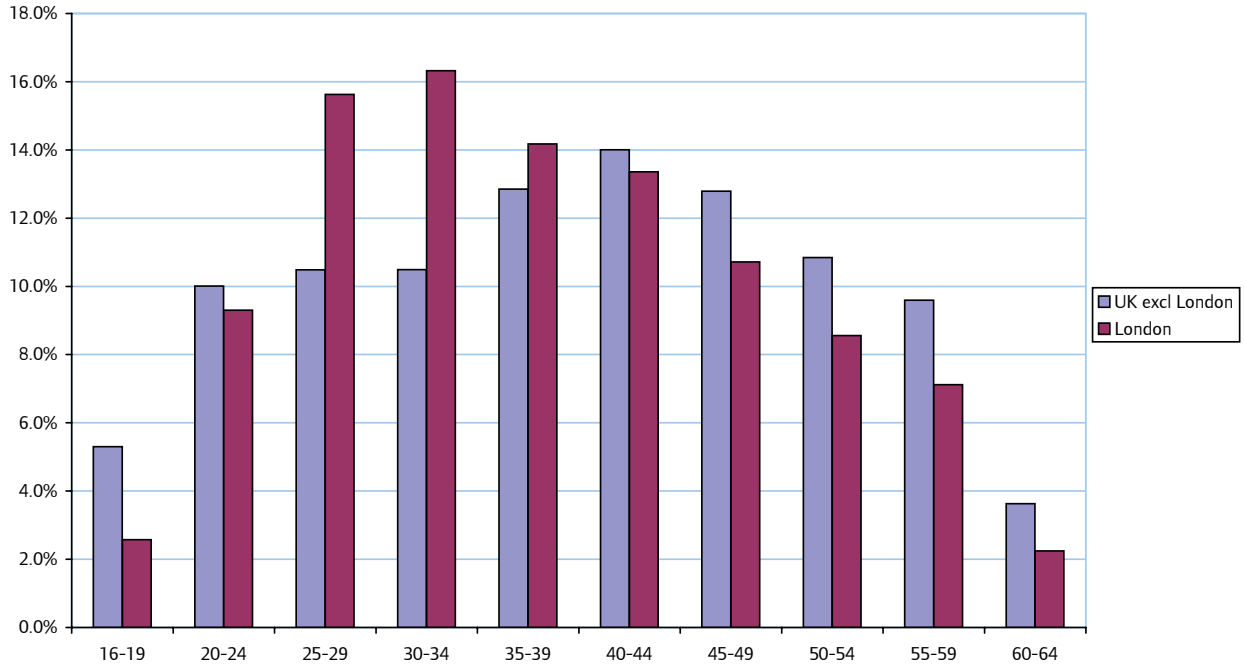
Source: European Cities Monitor, Cushman & Wakefield (2006-2008)

Availability of highly skilled staff

Many international comparisons rank London as either first or in the top handful of locations for its skilled labour force. Compared to the rest of the UK, London's workforce is younger, more highly skilled and more productive.

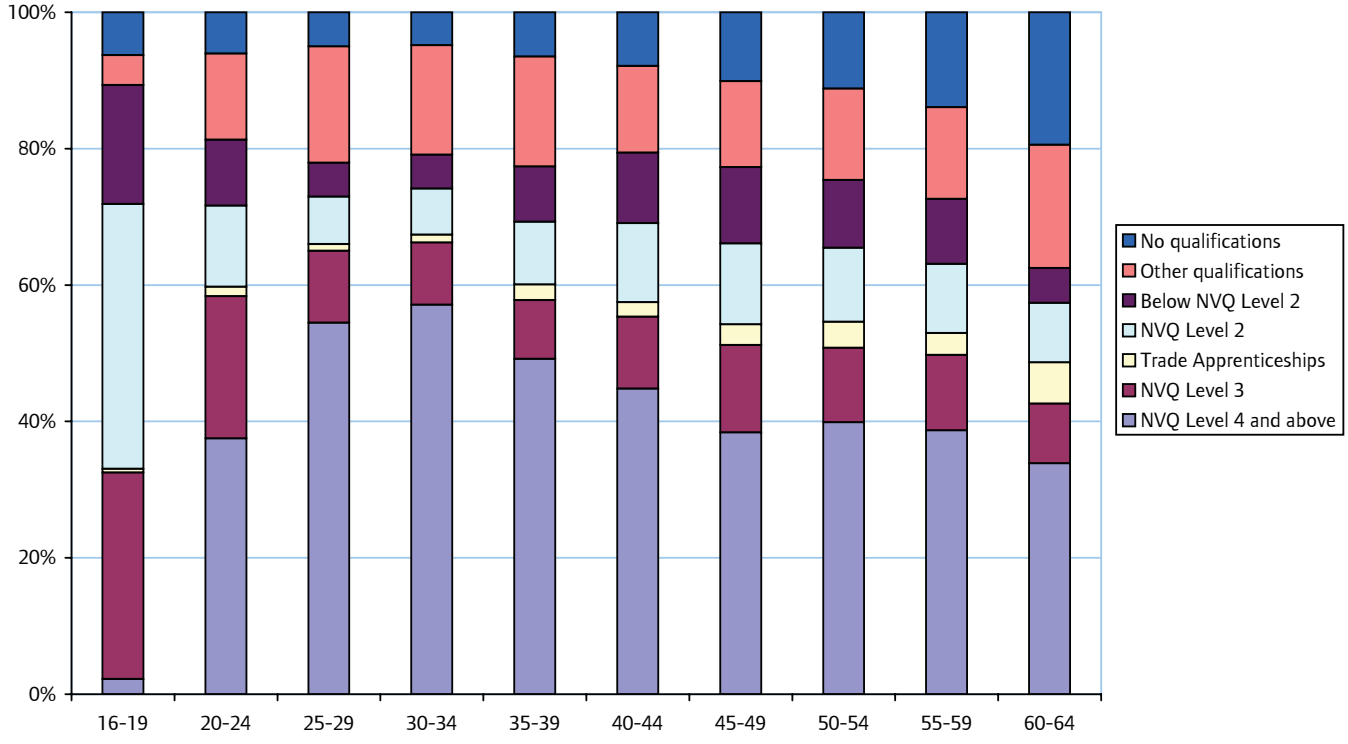
Figure 3.8 shows that when compared to the rest of the UK, London has a significantly higher proportion of its employed residential population aged between 25 and 39 than the rest of the UK. A high proportion of these London residents hold qualifications equivalent to NVQ level 4 or higher (ie, degree level or higher). Indeed, Figure 3.9 shows that over 50 per cent of 25-34 year olds in employment are qualified to degree level or higher.

Figure 3.8: Residents in employment by age group, 2007



Source: APS 2007 (ONS Crown copyright)

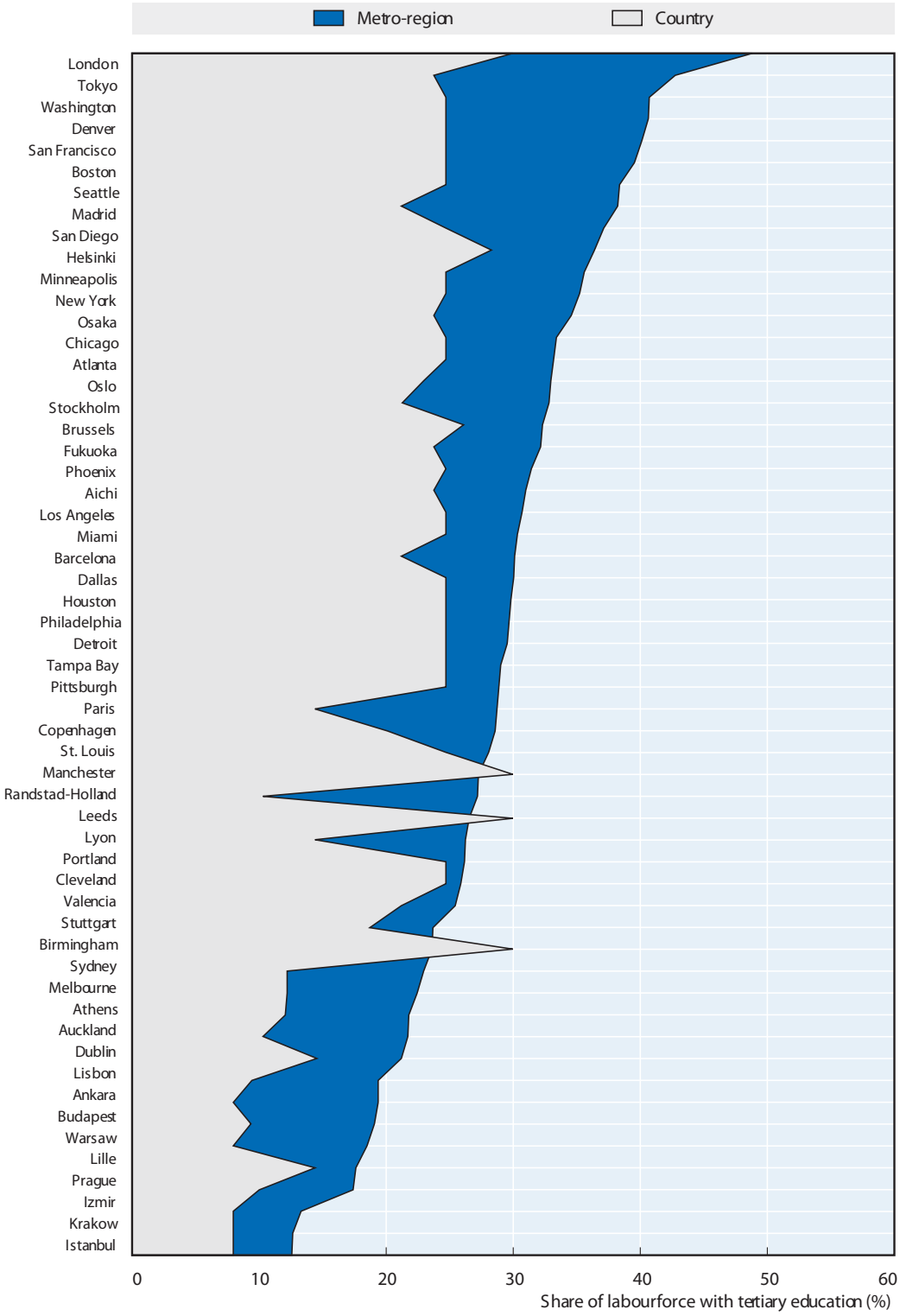
Figure 3.9: Qualifications of London residents in employment, by age, 2007



Source: APS 2007 (ONS Crown copyright)

The skill level of London's working age residential population is also high when compared to other international cities. As shown in Figure 3.10 the OCED[34] estimates that the percentage of London's working age population holding tertiary qualifications is greater than any other global city. It shows that whilst the UK has about 30 per cent of its population having tertiary qualifications the figure is nearly 50 per cent in London.

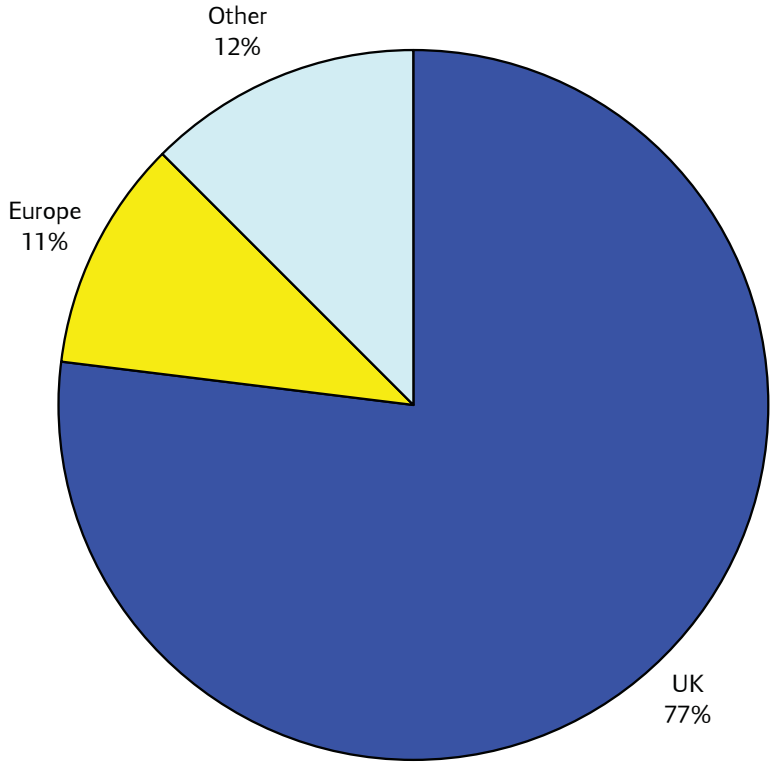
Figure 3.10: Per cent of the working population with tertiary education (urban areas and national averages), 2006



Source: OECD, 2006

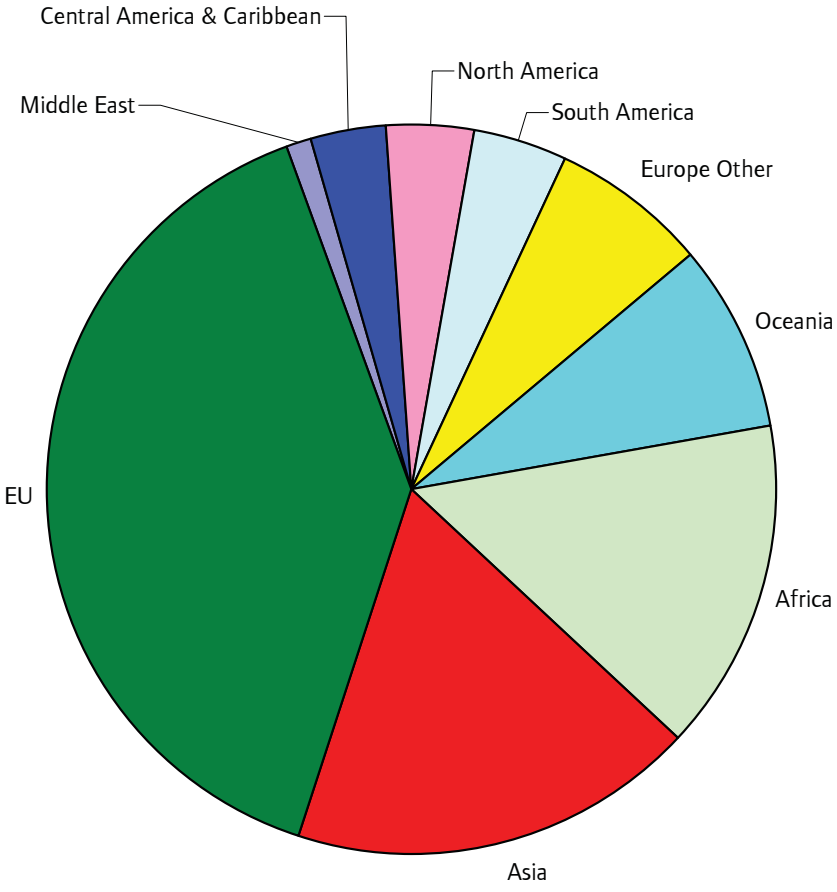
International migrants make up a significant proportion of London's workforce. Figure 3.11 shows that approximately 23 per cent of those employed in London are non-UK nationals. Figure 3.12 shows that almost 40 per cent of these non-UK nationals are from EU countries, while nationals of Asia, Africa and Oceania account for 18, 14, and 8 per cent of the migrant workforce respectively.

Figure 3.11: Percentage of employed London residents by nationality, 2007



Source: APS 2007 (ONS Crown Copyright)

Figure 3.12: Regions of origin for employed non-UK national residents, 2007

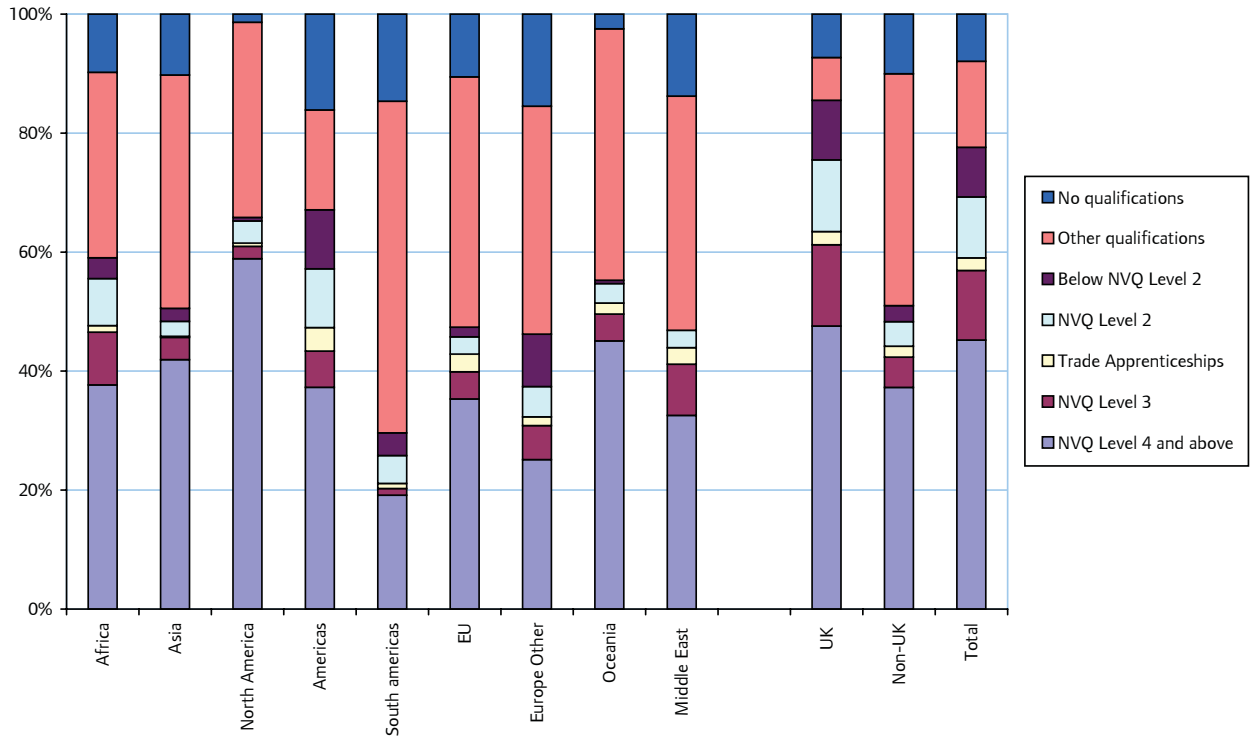


Source: APS 2007 (ONS Crown Copyright)

Figure 3.13 shows that many of these non-UK nationals are also highly skilled. However, the full extent of skills that non-UK nationals bring to the London workforce is somewhat hidden when UK national vocational qualification levels are used as the means of comparison. This is because many vocational qualifications obtained internationally do not translate easily into NVQ levels. This results in significant proportions of non-UK nationals being classified as having 'other qualifications'. Approximately 40 per cent of non-UK nationals living and working in London are categorised as holding 'other qualifications'. This compares to just over 7 per cent of UK nationals.

However, 'other qualifications' should not be taken to mean low skills. When the LSE[35] compared migrants to the local population based on years of schooling, it found that migrants from both rich and poor countries had generally spent longer in education than UK-born London residents aged between 25 and 44.

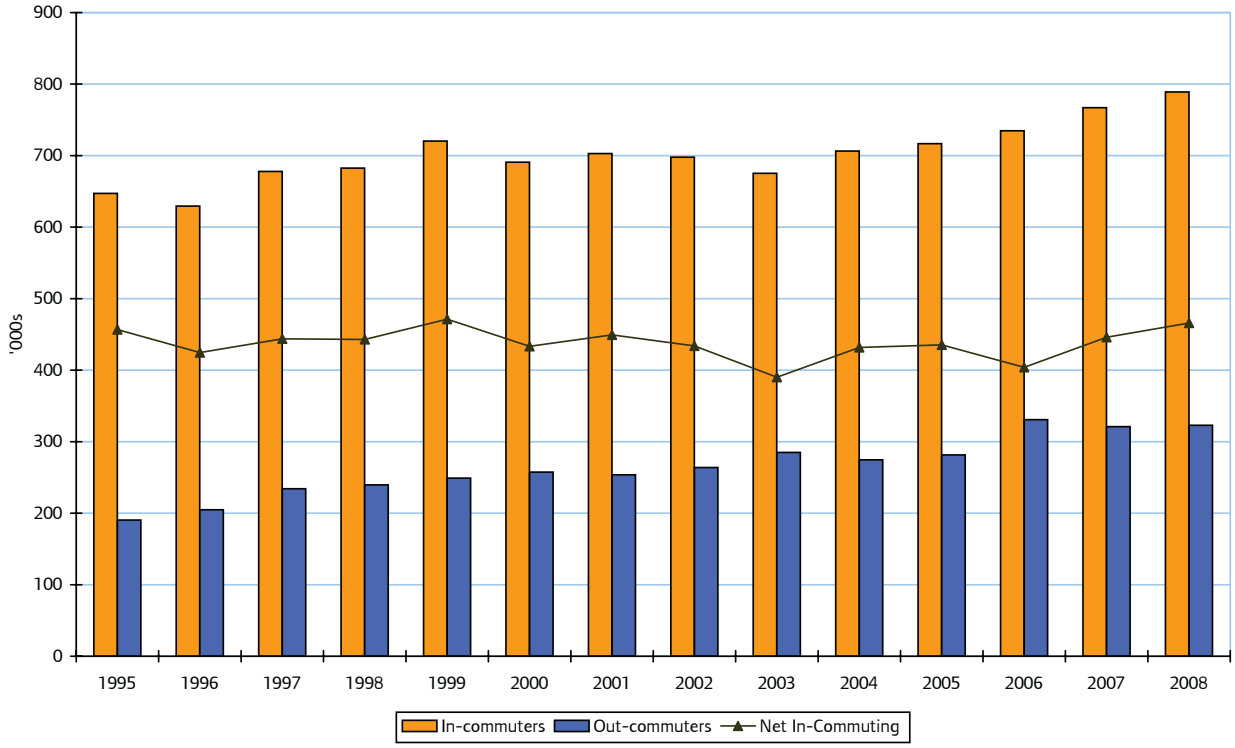
Figure 3.13: Workers by region of nationality and equivalent qualification level, 2007



Source: APS 2007 (ONS Crown Copyright)

London's workforce is also boosted by a significant number of commuters into the city. Figure 3.14 shows that over the last decade or so there have been roughly 700,000 workers that commute into London each day. However, around 300,000 London residents work in locations outside London's boundaries. As Figure 3.14 shows, net commuter numbers have remained broadly steady since 1995. Overall, inward commuters do not necessarily increase the skill level of the London workforce as they tend to have similar qualifications as employed London residents. However, commuters do tend to be more concentrated in some industries. For example, the financial services sector has the highest proportion of its jobs filled by commuters at close to 30 per cent.

Figure 3.14: Commuting levels into and out of London 1995-2008



Source: LFS

Higher education and research institutes

As well as a world class labour force London also offers business access to world class higher education and research facilities. Twenty-five per cent of all UK researchers are employed in London and the city has five of the UK's top ten research universities (Imperial, UCL, London School of Economics, King's College and St George's Hospital Medical School).

In 2007, *The Times Higher Education Supplement* ranked Imperial 5th, UCL 9th, King's College 24th and the London School of Economics 59th in its list of the world's best universities. These ratings are supported by the Shanghai Index 2008, which ranked Imperial, UCL and King's College in their Top 100 universities. Similarly, PwC[36] found that London has more universities in the top 500 universities than any other city.

London is also known globally for its business education, with the London Business School rated as the top business school in Europe by Business Week. Cass Business School the business school of City University London (Europe's largest finance school) is also a highly rated business school.

The UK is the world's second most popular destination for foreign students. According to Study London, in 2007/08, there were 93,000 overseas students at London's 42 universities and higher education institutions.

International students not only add to the diversity and culture of London's universities, they provide additional highly skilled workers to London's workforce, and have a significant positive impact on the economy through their spending on UK goods and services.

In addition, students that go on to stay in London and move into the work force tend to generate a net benefit for the Exchequer as they generate more tax revenue than is required to pay for the public services they use[37].

London's business environment

Traditionally, London has provided businesses with an attractive, and internationally competitive, taxation and regulatory environment. This is supported by international surveys, such as the Global Financial Centres Index which rates London's business environment as the best of all international financial centres, and the Cushman and Wakefield survey in which London ranks towards the top (though not at the top) on the climate for doing business.

London's business environment is enhanced by the independence of the legal system, and stability of its political environment. This allows businesses to have confidence that their actions (for example in making investment decisions) will not be unfairly or unduly affected by the Government or other parties.

Further to this, London has a natural advantage over most other cities in Europe as a base for establishing an internationally oriented business due to the fact that English has established itself as the international language for doing business and is the first language of most of London's workforce.

Taxation

As shown in Table 3.4, to date, the UK has maintained an internationally competitive tax regime. Analysis by Owens[38] finds that the tax rates most important to business[39] have generally been below OECD and EU 15 averages in the UK. In relation to London's attractiveness to business, it is useful to consider the figures for the average effective tax rate (AETR) on corporations and the tax wedge. The AETR measures the wedge between the pre-tax rate of return on investment earned by a company and the post-tax rate of return[40]. This measure, as illustrated in Table 3.4, shows that the UK has provided a very competitive environment for firms to invest in (behind only Ireland and Sweden).

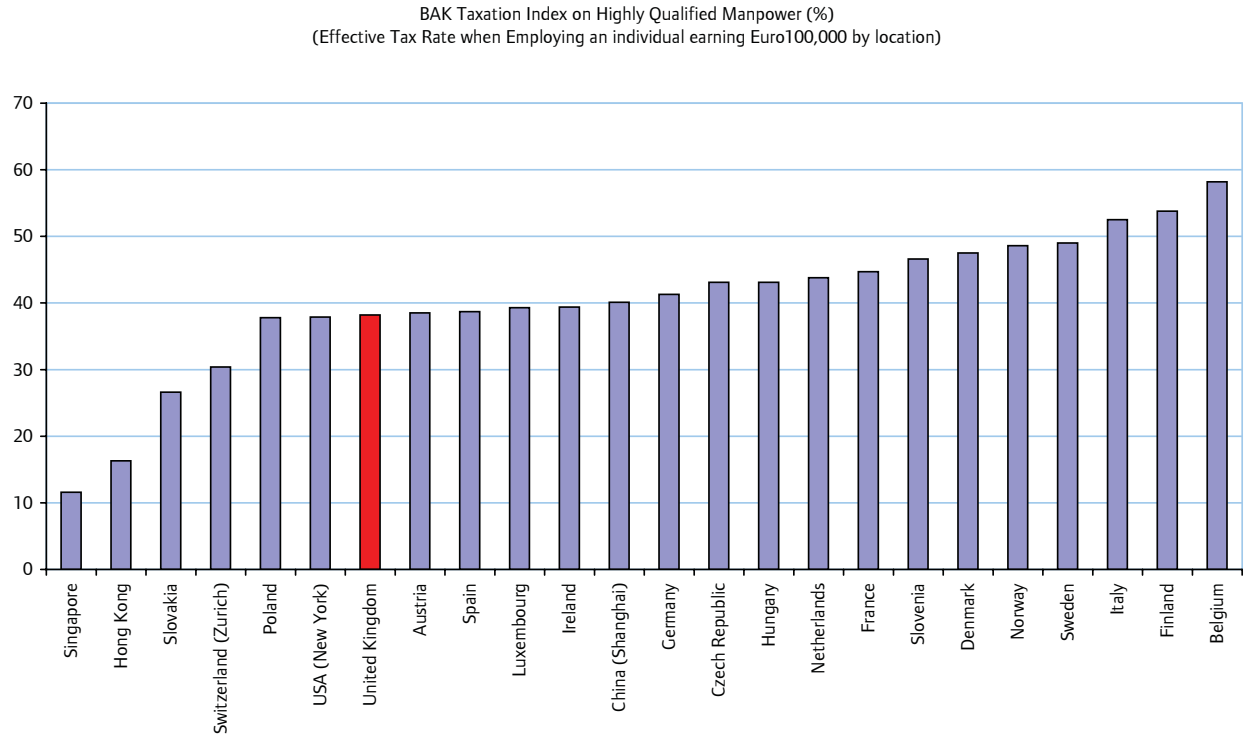
Table 3.4: Tax comparison for selected OECD countries

	Top Personal Income Tax Rate 2007	Top Corporate Income Tax Rate 2008	Average Effective (Corporate) Tax Rate 2005	Tax Wedge 2007	VAT 2007
Australia	46.5	30.0	26.2	27.7	10.0
Belgium	53.5	34.0	26.4	55.5	21.0
Canada	46.4	33.5	28.4	31.3	6.0
France	47.8	34.4	25.4	49.2	19.6
Germany	47.5	30.2	31.5	52.2	19.0
Ireland	41.0	12.5	10.9	22.3	21.0
Italy	44.9	27.5	26.0	45.9	20.0
Japan	50.0	39.5	31.7	29.3	5.0
Luxembourg	38.9	30.4	..	37.5	15.0
Netherlands	52.0	25.5	25.1	44.0	19.0
Norway	40.0	28.0	24.2	37.5	25.0
Spain	43.0	30.0	26.1	38.9	16.0
Sweden	56.5	28.0	20.9	45.4	25.0
Switzerland	42.1	21.2	25.1	29.6	7.6
United Kingdom[41]	40.0	28.0	23.9	34.1	17.5
United States	41.4	39.3	29.0	30.0	..
OECD Average	42.6	26.6	..	37.7	17.7
EU15	47.2	27.2	..	42.5	20.0

Source: Owens 2008

The tax wedge measures the difference between pre-tax and post tax earnings of the individual. It is an estimate of how much more the firm has to pay an individual employee (after all personal tax deductions and taxes on the employer) to provide the individual with 100 per cent of the average annual wage. The UK tax wedge of 34.1 per cent in 2007 was below the OECD and EU 15 averages. As shown in Figure 3.15, BAK Basel[42] also found that the UK's tax-wedge for high earners is also competitive by international standards.

Figure 3.15: The tax wedge for high income earners, 2007



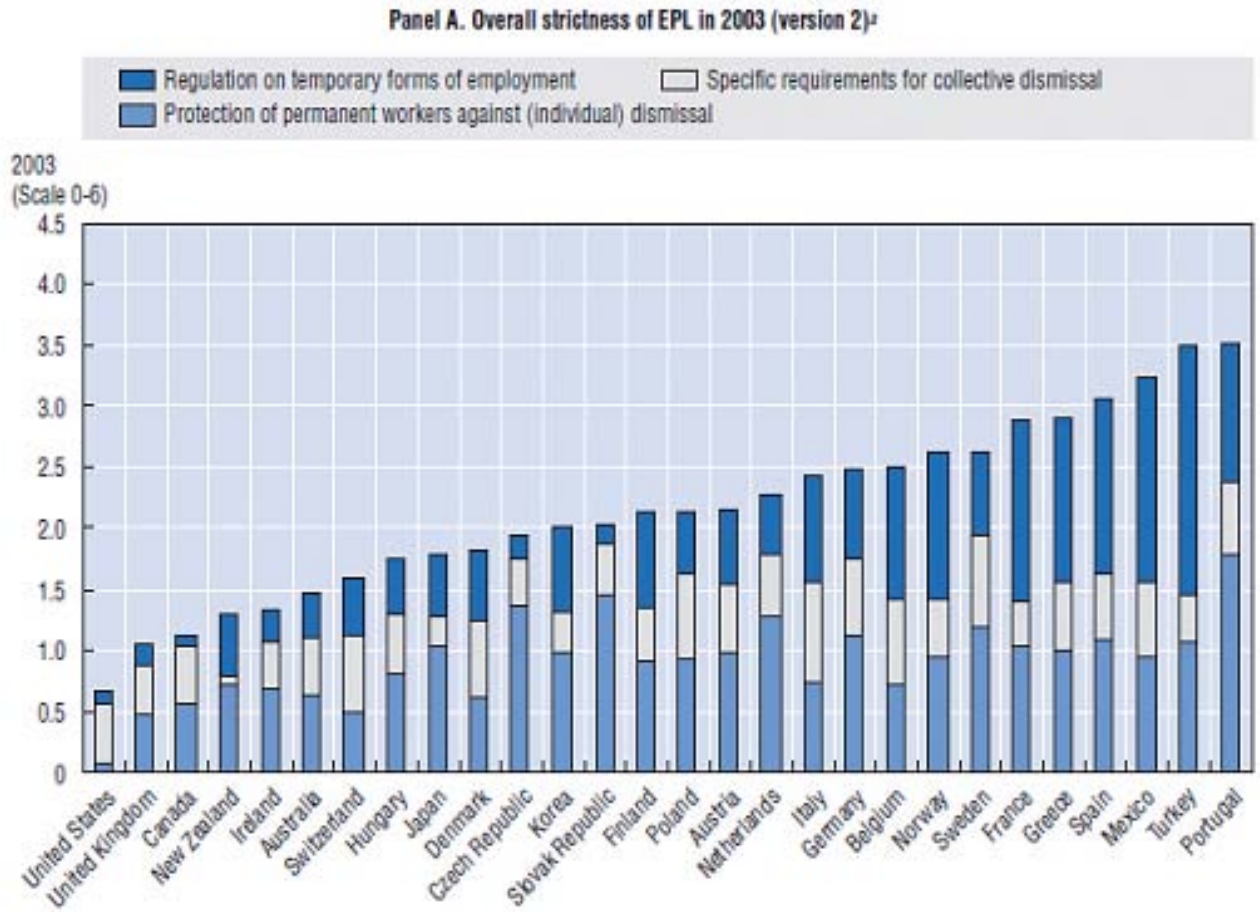
Source: BAK Basel 2007

Based on OECD[43] analysis of taxation and FDI, it is possible that the UK's relatively low tax wedge might be an important factor in its success in attracting FDI to the country.

Regulation

London (and the UK more generally) provides businesses with a high degree of flexibility regarding employment decisions. An OECD[44] comparison found the UK's employment protection legislation to be the least stringent of any EU nation, rating the arrangements as less than half as strict as that faced by businesses employing people in Germany, France and Spain (see Figure 3.16). The perception of London and the UK as having a relatively straightforward regulation regime has also helped the capital grow in the past[45].

Figure 3.16: Strictness of employment protection legislation, 2003



Source: OECD 2004

The OECD[46] also found that greater flexibility in relation to employment arrangements was associated with higher levels of employment and reduced levels of long-term unemployment on a permanent basis.

Access to markets

London is one of the largest cities in Europe[47]. London's large domestic population provides both a deep source of labour and demand for goods and services produced here. Further, 99 per cent of the world's business activity takes place in locations in time zones that overlap with London's working day (more than any other city in the world).

The Corporation of London estimates that London accounted for 54 per cent of 'city-type' activity in the European Union in 2003[48]. The depth of the markets and business activity in London is further supported by London's position as a leader or significant global player in many important financial services markets.

As previously noted, London has the greatest presence of international service sector firms of any other world city[49]. London is also the base for the Headquarters of 73 of the world's 2000 largest firms (equal second with New York, but behind Tokyo)[50]. These strong linkages to the rest of the world mean that firms located in London have access to networks that can assist them in doing business in a range of international markets across various business sectors.

Transport networks

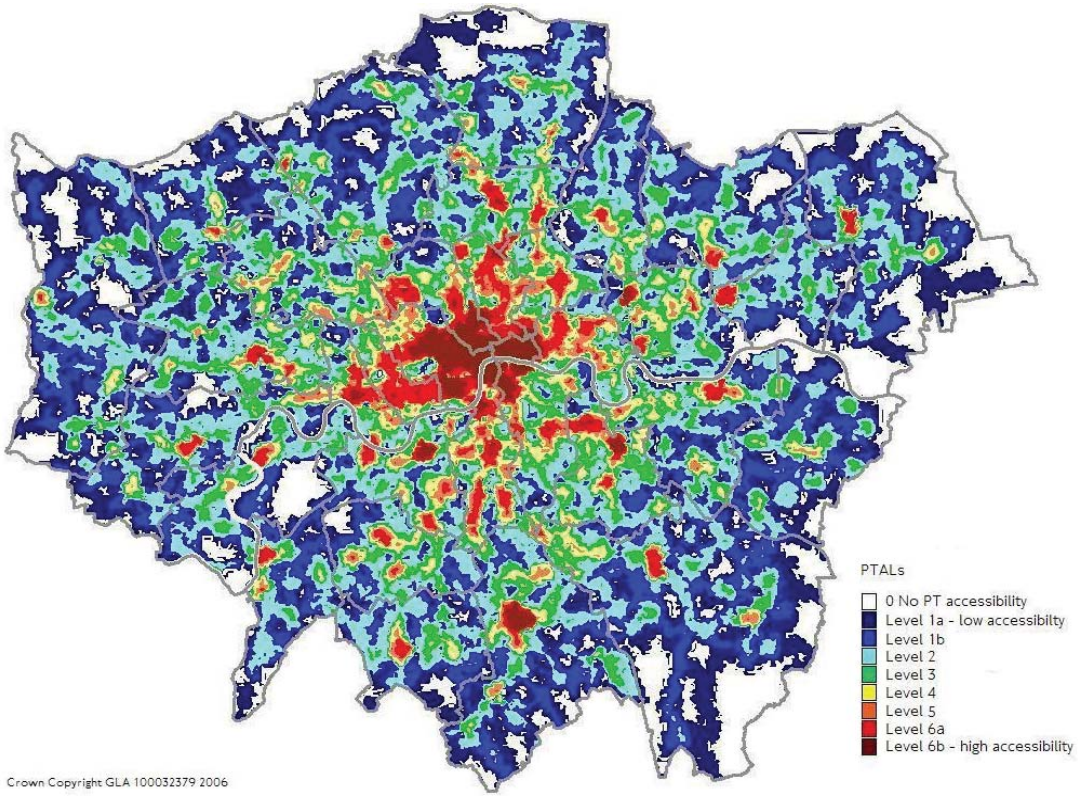
London offers businesses an extensive transport network for both domestic and international travel. International travel infrastructure increases the number of markets that can be easily accessed from London, while domestic transport links within and around the city increase the size of the labour pool businesses can gain access to.

London has five international airports, three of which are among the 25 most busy in Europe[51] [52]. In 2008, the five airports catered for approximately 137 million passengers, of which Heathrow accounted for 49 per cent[53].

High speed rail services connect London to mainland Europe — in 2008 over 9 million passengers travelled to Europe by train[54]. As with air travel, this rail link opens up markets that can be accessed from Central London.

Within London, there is an extensive public transport system across the city. Figure 3.17 shows that almost all of Greater London is covered by some form of public transport. Public transport accessibility is greatest in Central London, which reflects the radial nature of the network. As seen in the previous chapter (Figure 2.3), the extensive network means that over 1.5 million people are within 45 minutes of much of the centre of London (using minimum journey time by public transport). Likewise, Londoners are within 45 minutes minimum public transport journey time of many jobs. As the funded transport capacity increases come on line over the next ten years, the number of jobs that residents can reach within 45 minutes will also increase. For example, Crossrail will increase the carrying capacity of the rail network by 10 per cent from 2017, and the Tube improvements are increasing its capacity by up to 30 per cent.

Figure 3.17: Accessibility to public transport in London (PTALs)



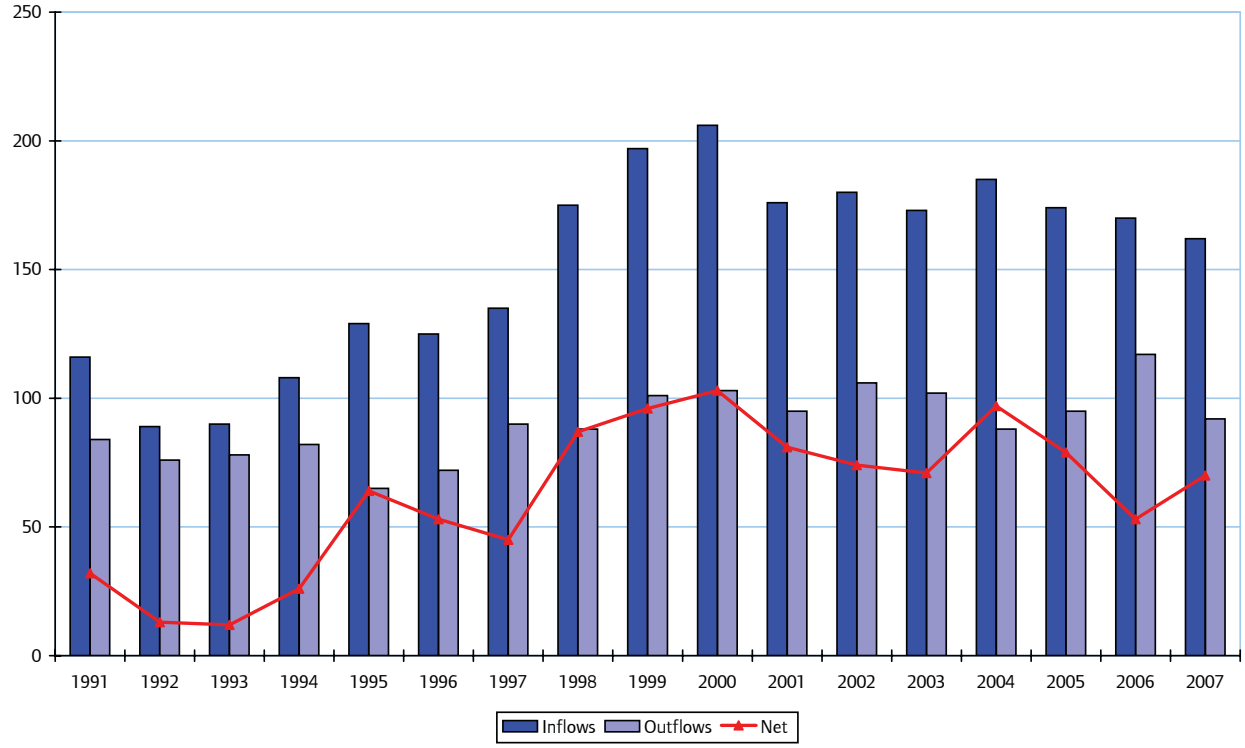
Source: TFL (2009), Travel in London.

Note: PTAL: Public Transport Accessibility Level

London's attractiveness to people

London attracts highly skilled people from around the country and around the globe. As shown in Figure 3.18, more international migrants come to London than leave each year. On average, around 152,000 international migrants move to London each year. In 2007-08, London attracted around 37 per cent of all international migrants to the UK[55].

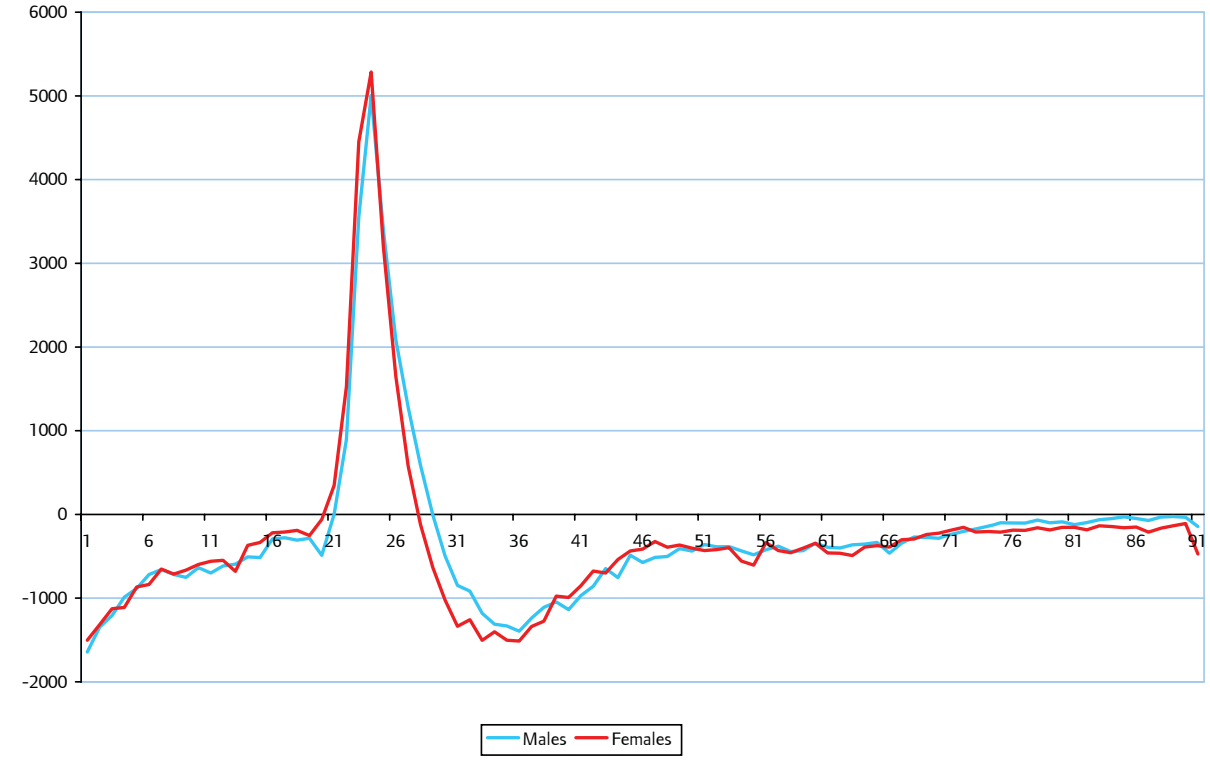
Figure 3.18: International migration into and out of London ('000s)



Source: Total International Migration Series, ONS

London is also attractive to young people starting their careers. This is evident from 2001 census data that shows large net inflows of migrants into London aged between 20 and 27[56] (see Figure 3.19). The migrants from the rest of the UK also tend to be highly skilled, with LFS data showing that around 60 per cent of working age migrants from the rest of the UK held graduate level qualifications. Further, those migrants that leave London for elsewhere in the UK are more likely to not hold graduate level qualifications[57].

Figure 3.19: Net domestic migration by age of migrant, 2001



Source: Census 2001, ONS

London is attractive to highly skilled people because it:

- Offers good career opportunities and high wages;
- Has one of the most diverse populations of any international city;
- Has a significant cultural and entertainment offer; and,
- Is a relatively green city – in terms of access to green space.

Employment opportunities and wages

One of the main factors that attract highly skilled people to London is the vast array of employment opportunities. For example, London's financial and related business services companies employ around 7,950 to 10,000 graduates each year[58].

London is often referred to as an escalator city because it allows workers to develop their career. Workers in London are allowed to develop to their potential because they are often required to occupy jobs that are 'above what might be expected from their qualifications'[59].

In addition to offering more employment opportunities, Table 3.5 shows that London also offers significantly higher wages than the rest of the UK. This can be seen by comparing median wages across the regions. The median wage in London is 28 per cent higher than the median wage for the UK, and between 23 and 47 per cent higher when compared directly to other regions.

Table 3.5: Median gross weekly earnings by government office region (full-time employees, £ per week)

	All full-time employees (£)	London mark-up
London	612.7	
United Kingdom	478.6	28%
North East	420.6	46%
North West	450.2	36%
Yorkshire and the Humber	441.0	39%
East Midlands	442.8	38%
West Midlands	448.9	36%
East	468.1	31%
South East	499.8	23%
South West	445.4	38%
Wales	421.0	46%
Scotland	460.1	33%
Northern Ireland	417.6	47%

Source: ONS (2008) Annual Survey of Hours and Earnings

Wages in London have historically been high by international standards. After allowing for taxes and other social security contributions, UBS's 2008 survey[60] found that wages in London were the 8th highest of the 71 cities it compared. In its 2009 survey, London's position had fallen to 18th as a result of the depreciation of Sterling[61].

With demand for highly skilled workers forecast to increase over the next 20 years, London should remain an attractive city for migrants seeking employment opportunities.

Cultural diversity

London is one of the most culturally diverse cities in the world. Based on both the mix of nationalities and the number of residents born overseas, London is rated as the 5th most diverse city, behind only New York, Toronto, Dubai and Los Angeles[62]. In fact, there are more than 40 nationalities for which the population of working aged residents exceeds 10,000 people and a further 30 nationalities with more than 5,000 working aged residents in London[63].

The resulting social networks that come from having a critical mass of people from different countries and cultures helps maintain London's attractiveness as a place for international migrants. These social networks can help newcomers to the city find work and accommodation. Some international studies have found that social networks can help new migrants find jobs better matched to their skills[64].

Culture and entertainment

London's cultural offerings and vibrant night life is an important factor in attracting people to London[65]. London's amenities – museums, libraries and archives – are some of the best in the world[66]. London offers its residents and visitors more cultural and entertainment offerings than most other leading international cities (see Table 3.6).

Table 3.6: London's cultural and entertainment offering

Indicator	London	New York	Paris	Shanghai	Tokyo
Number of museums	184	101	157	106	79
Number of public libraries	395	255	303	248	369
Number of UNESCO world heritage sites	4	1	2	0	0
Number of major theatres	55	39	N/A	19	N/A
Number of performances at major theatres per year	17,285	12,045	15,598	3,117	8,281
Number of music performances per year	32,292	22,204	3,612	11,736	7,419
Number of art galleries	92	N/A	59	6	40
Number of film festivals	62	128	43	1	27
Number of night clubs, discos and dance halls	306	279	277	N/A	N/A
Number of bars per 1,000 population	0.41	0.22	1.22	0.17	0.75
Number of festivals	200	81	40	22	N/A
(1) Figures for New York calculated for the New York Metropolitan Area.					

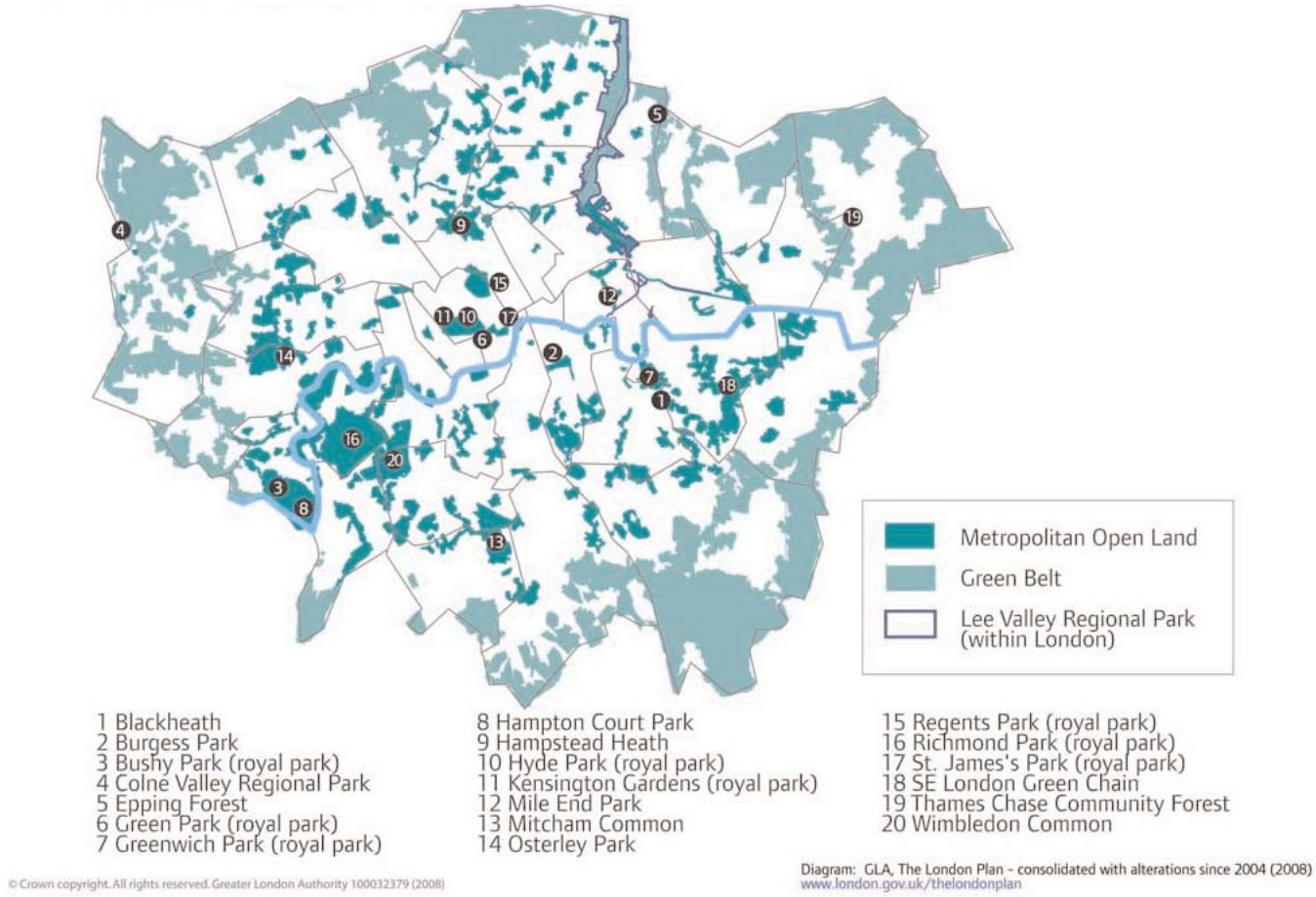
Source: LDA (2008) London a cultural audit

In addition to the local offerings, as shown earlier, London's transport links mean it is an excellent base for accessing other locations around Europe and the rest of the world. There are direct flights from London to around 486 worldwide destinations.

Green space and local amenities

Parks and gardens, when combined with the capital's rivers and other green spaces – woodlands, meadows, grasslands, golf courses, sports pitches etc. – account for 66 per cent of Greater London's land mass[67].

Figure 3.20: Green space in London



Source: GLA, The London Plan 2008

London is continually investing to enhance the liveability of the city. For example, between 2000 and 2006, more than £600 million was allocated to London boroughs for: locally oriented transport schemes to improve the safety, appearance and accessibility of town centres and residential streets; walking and cycling programmes; road maintenance works and bus priority measures[68]. And, between 2009-2018, Transport for London plans to invest £449 million in improving cycling and pedestrian infrastructure[69].

In addition, London is investing heavily in its sporting infrastructure and improving public spaces around the city as part of London 2012. A significant factor contributing to London winning the 2012 Olympic Games was due to the investment that the Government would make in improving and regenerating large areas of London and its commitment to increasing the ease with which its residents could gain access to sporting groups and facilities.

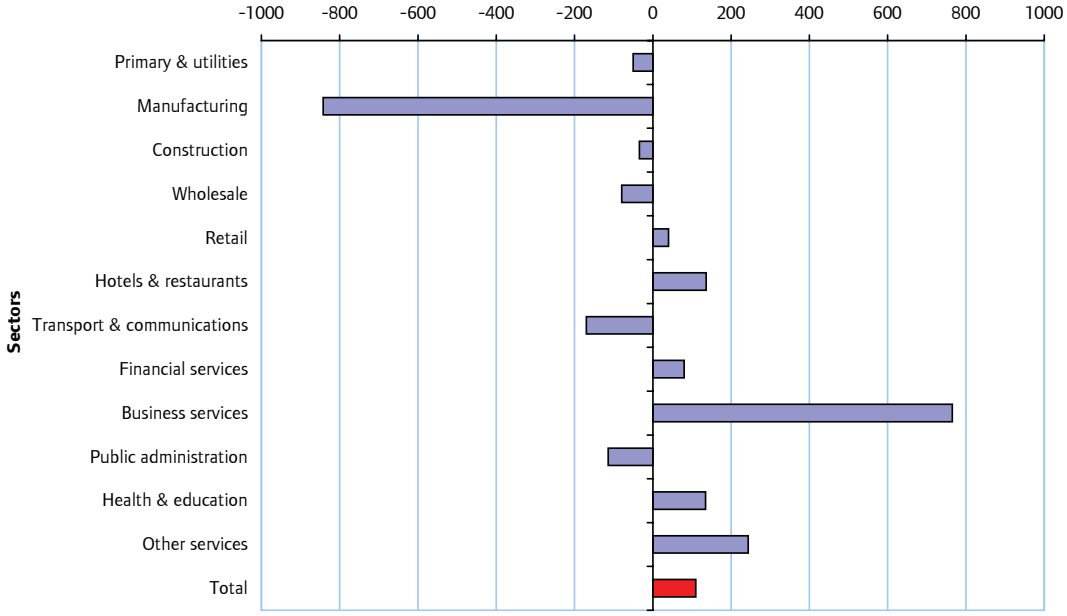
Chapter 4: The outlook for economic growth

London has seen a significant shift in its industrial structure away from manufacturing towards services over the past three decades or so. The recent difficulties in the financial services sector will impact other sectors of London's economy given the linkages that exist between these sectors. The current economic downturn is severe with many forecasters expecting that it will take until 2011 for meaningful growth to resume. However, growth is expected to rebound and in the longer term employment levels in London are projected to surpass the levels seen before the recession.

This chapter considers how recent macroeconomic events – particularly the crisis in the financial services sector – might impact on London. It concludes with long-term projections of employment for London.

As noted in previous chapters, the dynamic impact of agglomeration effects and the deepening globalisation of trade, amongst other factors, have led to London currently focusing on service activities, particularly financial, business and cultural services. As shown in Figure 4.1, analysis of Experian Business Strategies (EBS) data show that between 1971 and 2007 the London economy saw a shift in its industrial structure away from manufacturing towards services. Over the period, employment in both business services and other services, which includes London's media sector and recreation and leisure, more than doubled. Employment in business services now accounts for over one-quarter of all jobs in London (up from 10 per cent in 1971). At the same time employment in manufacturing is now less than a quarter of its level in 1971 – falling by over 800,000 from 23 per cent of employment in 1971 to 5 per cent now.

Figure 4.1: Net change in London's employment 1971-2007 ('000s)



Source: EBS

Whilst employment in financial services has grown more modestly over the past three decades or so when compared to other parts of London's economy, as noted in Chapter 1, London has an international specialisation in financial services. London is home to one third of the UK's financial services jobs[70], with the UK industry contributing around 8 per cent to national output (comparable to the USA and other EU economies) and nearly 14 per cent to the tax collected. In recent work HM Treasury showed that workers in financial services were typically more productive than workers in other sectors[71]. The financial services sector is thus important to London's economy with the UK standing as a world leader in a number of financial sectors (see Table 4.1) and the European leader in most others. Furthermore a report by the IFSL in 2009[72] showed that in those sectors where it is the market leader (cross-border banking, foreign exchange, over the counter derivatives and marine insurance), the UK had either maintained or increased its share of the world market over the past 10 to 15 years. Between 2001 and 2008 the value of each of these financial markets in the UK also increased significantly[73].

The dominance of the UK in the financial services sector has been partly attributed to the clustering of a full range of expertise in a number of key sectors in the UK (the agglomeration benefits set out in Chapter 2) and London, and the UK being "home to a globally leading professional and business service sector"[74]. Financial services are therefore a significant direct net contributor to the UK's economy and as shown earlier these sectors are all areas in which London has a particular specialisation and are therefore significant contributors to London's economy.

Table 4.1: International financial markets in the UK (percentage shares)

	UK	US	Japan	France	Germany	Sing-apore	Hong Kong	Others
Cross-border bank lending (end-2008)	18	8	8	8	11	3	3	41
Foreign equities turnover (2008)	22	67	-	-	2	-	-	9
Foreign exchange turnover (Oct 2008)	35	16	-	-	-	6	-	43
Exchange-traded derivatives turnover (2008)	6	39	2	1	12	-	1	39
Over-the-counter derivatives turnover (Apr 2007)	43	24	4	7	4	3	1	14
Marine insurance net premium income (2007)	20	10	11	6	8	1	1	43
International bonds - secondary market (2008)	70	...	...	...	...	...	...	...
Fund management as a source of funds (end-2007)	9	48	6	6	4	-	1	26
Hedge funds assets (end-2008)	18	69	2	1	-	1	2	7
Private equity - investment value (2007)	7	71	-	2	1	1	-	18
Securitisation - issuance (2008)	14	55	2	-	3	...	...	26

Source: IFSL 2009

In trying to understand the effect of the recent difficulties in financial markets on London's economy, a report by EBS for the LDA[75] found significant linkages between the financial services sector and other sectors of London's economy. Sales of "professional services" to London businesses were worth an estimated £14.3 billion in 2006 (this accounts for 47 per cent of total sales, with other sales including sales to businesses outside of London and sales to consumers and sales to the public sector), with 37 per cent of the London business-to-business sales of professional services going to the financial services sector. A similar pattern was seen in the creative industries with sales to London businesses estimated at around £12.5 billion (or 36 per cent of total sales) with 36 per cent of the London business-to-business sales being with the financial services sector. Furthermore 58 per cent of the London business-to-business Information and Communication Technology (ICT) sales were to the financial services sector. Other sectors also had significant sales to the financial services sector. Thus, as well as having a large direct contribution to London's economy, financial services also impact on many other sectors of the economy through their trade linkages.

As a result of the financial crisis and the likely measures that will be implemented to mitigate the impact of any future crises, the financial services sector is likely to face a period of readjustment and structural

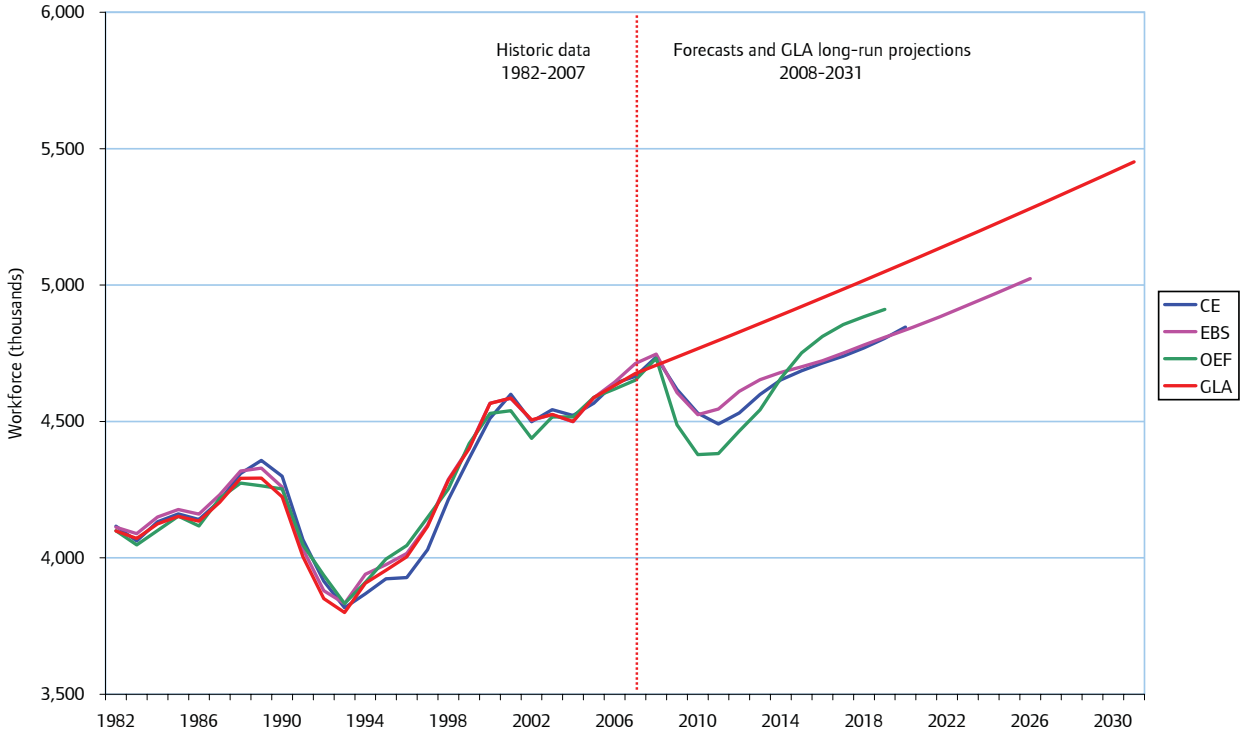
change. The recent crisis was triggered by a number of factors including global macroeconomic imbalances and financial innovation such as the growth of the securitised credit market, which was expected to reduce banking system risk but which ultimately proved not to[76]. The crisis has therefore heavily impacted the banking sector, amongst others. A failure of financial market regulation has been partly blamed for the crisis; in response the Financial Services Authority (FSA) plans to introduce a more invasive, judgment-based form of regulation compared to the 'light touch' form of regulation they previously employed. Other regulatory responses at both the national and international level are also likely. It is further probable that there will be less appetite for high-risk financial services products and operations in the economy for the foreseeable future. And it is anticipated that employment in the securitisation sector will decline as this sector is reorganised in light of the problems caused by the securitisation of sub prime mortgages amongst other things. Given the UK's (and hence London's) leading role in a number of financial sectors (see Table 4.1) all this is likely to negatively impact London's economy.

However, the scale of any impact on London's economy can be overstated. Whilst the financial turmoil particularly impacted on the banking sector, other areas of the financial services sector such as those dealing with marine insurance, equities or exchange rates for example have been less directly impacted. So although some structural change is likely in financial services, especially in banking, many sectors are unlikely to be directly affected and are likely to continue in a similar form as present. Indeed, even those sectors that are more directly affected – like securitisation for instance – are likely to continue in some form, albeit in a likely reduced and more tightly regulated form. Nevertheless, opportunities for rapid growth in the financial services sector are likely to be curtailed for some time and this is also likely to indirectly impact other sectors of the economy through the trade linkages highlighted earlier.

In the medium term it is expected that London's economy will recover from the current recession. Most forecasters, and GLA Economics, expect that GVA growth will again be positive by 2011 although the total level of GVA is still likely to be below that seen in 2008. Employment is likely to fall in all sectors of the economy in 2009[77]. Being a trailing factor to output it is probable that unemployment will continue to increase for a time after output again begins to rise. Still although the current cyclical downturn could well be relatively severe it is likely that most reductions in output and employment will be cyclical and not structural. Further, provided a prolonged global slump is avoided, at some point sustained economic growth will resume. With a bottoming out, and recovery in global corporate activity, opportunities for the financial services and business services sector will again arise. Following trends seen in previous downturns both commercial and residential real estate will also eventually bottom out, which will encourage an increase in activity within this sector. Further with a reduction in personal debt levels, a stabilisation in the labour market and increases in consumer confidence as the recession ends consumer-focused industries will again be able to grow.

Thus following a sharp contraction in employment due to the current recession forecasters expect London's employment level to continue to grow over the longer term (see Figure 4.2). All forecasts assume that by 2018, at the latest, employment will have recovered to the level observed before the recession (2008).

Figure 4.2: Employment forecasts for London by various forecasters and the GLA's long-run employment projection to 2031



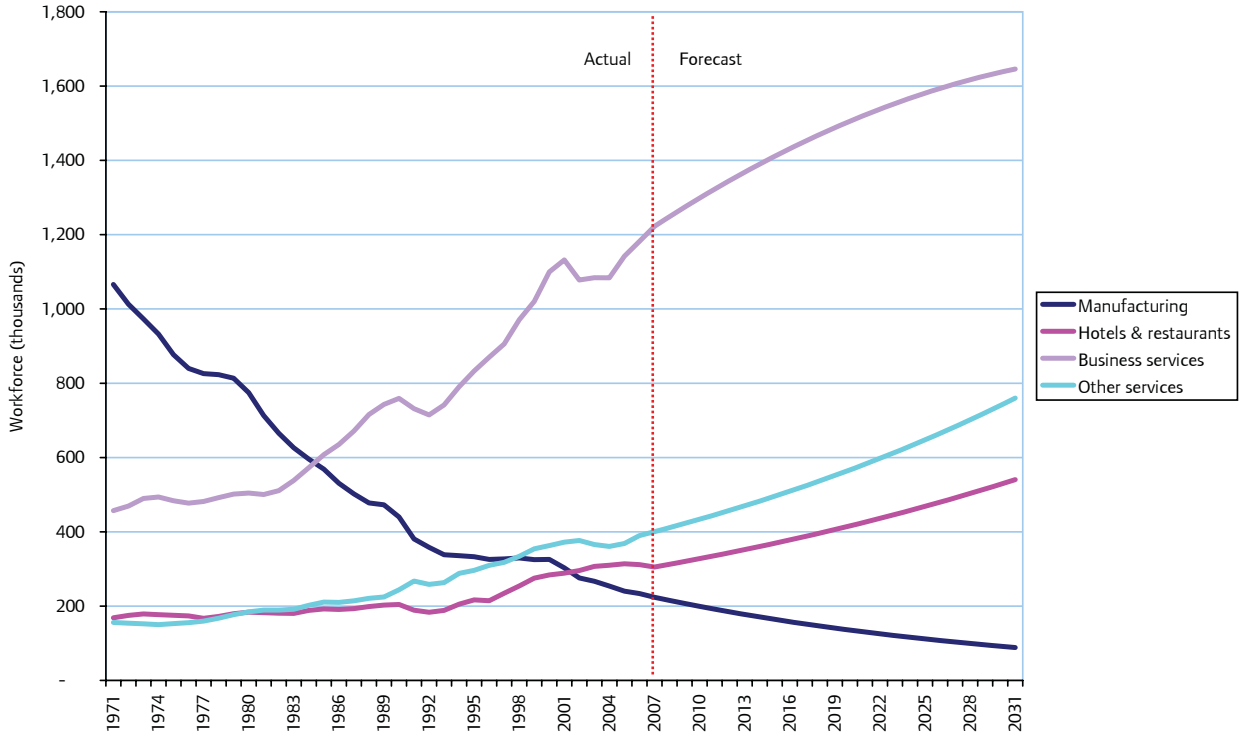
Source: Cambridge Econometrics, Experian Business Strategies, GLA Economics, Oxford Economics

As well as independent forecasts of London's employment over the short and medium term, Figure 4.2 includes the GLA's long-run employment projection. This long-run projection which is used for planning purposes by the GLA Group, abstracts from short-term fluctuations (and so is different to the independent forecasts included in the chart) and sees employment in London growing to 5.45 million by 2031, an increase of about ¾ million from 2007 levels[78].

This employment growth is projected to be driven primarily by the business services sector. Other sectors projected to experience significant growth over the next two decades or so are other services (which includes areas such as media, recreation and leisure for example) and hotels and restaurants. More modest employment growth is projected to be experienced by financial services, retail, and health and education. All other sectors are forecast to lose employment with particularly significant falls in employment in manufacturing. These projections are shown in Figures 4.3 through to 4.5.

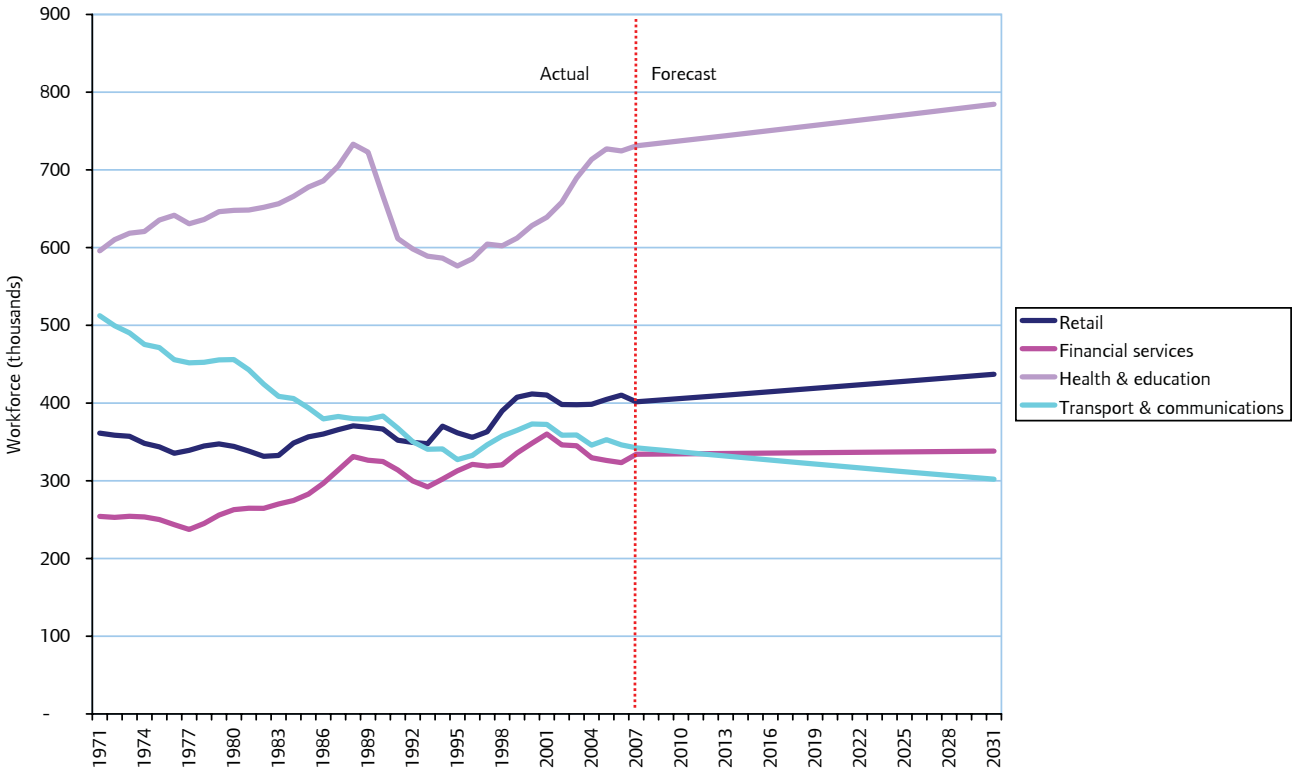
London's population, like its employment, is expected to grow substantially between 2007 and 2031. Table 4.2 shows the projected changes, split between CAZ, the rest of Inner London and Outer London. Detailed employment projections by sector and borough, alongside the GLA's population projections, are set out in appendices 1.2 to 1.4.

Figure 4.3: Employment projections for London by sector to 2031



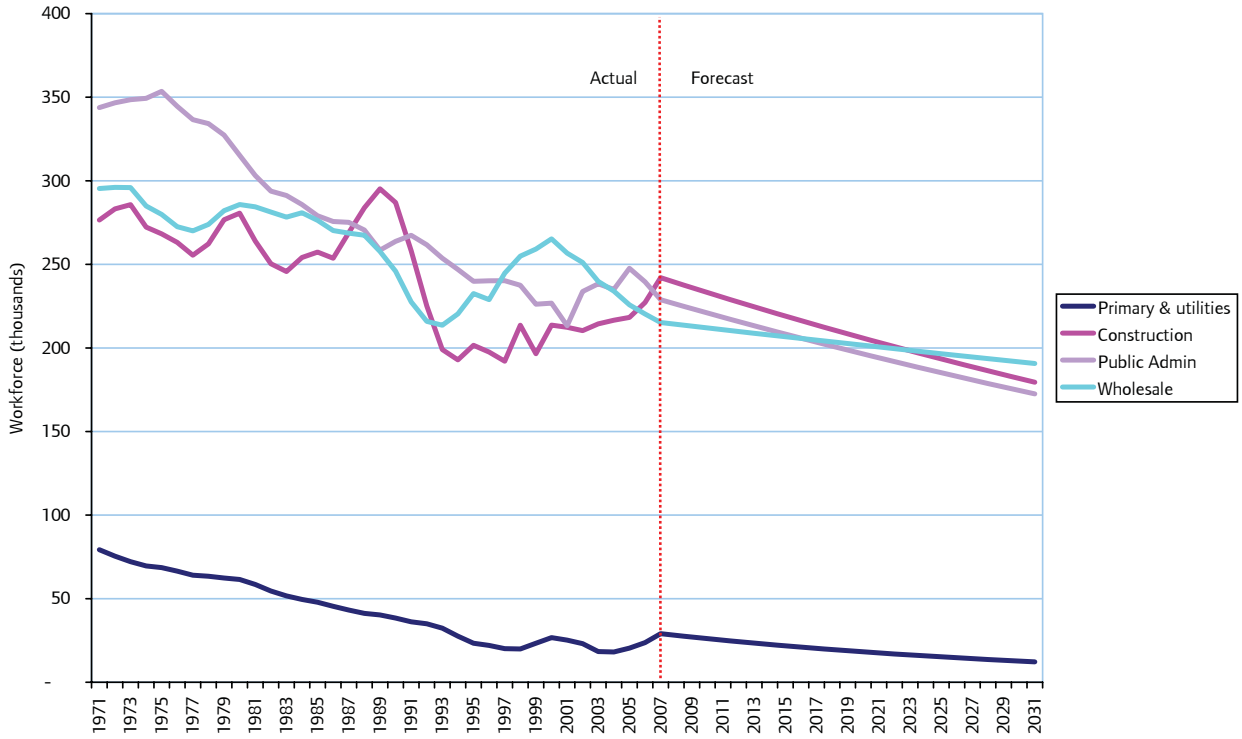
Source: GLA Economics

Figure 4.4: Employment projections for London by sector to 2031



Source: GLA Economics

Figure 4.5: Employment projections for London by sector to 2031



Source: GLA Economics

Table 4.2: CAZ, Inner (excluding CAZ) and Outer London employment and population figures

		Numbers ('000s)		% of Total	
		2007	2031	2007	2031
Employment	CAZ	1,198	1,378	26	25
	Rest of Inner London excluding CAZ	1,513	1,911	32	35
	Outer London	1,966	2,163	42	40
	Total	4,676	5,452	100	100
Population	CAZ	275	335	4	4
	Rest of Inner London excluding CAZ	2,731	3,457	36	39
	Outer London	4,565	5,094	60	57
	Total	7,571	8,886	100	100

Source: GLA

Note: This table shows population and employment figures in 2007 and 2031 for different geographic areas of London. These figures have been constructed using the information set out in appendices 1.2 to 1.4.

Chapter 5: Risks and opportunities from climate change

Climate change represents a significant market failure – greenhouse gas emissions have been higher than would have been socially optimal. As a result, some level of climate change is now inevitable. Unless greenhouse gas emissions are reduced significantly from their current levels further more dramatic changes to our climate may become unavoidable with considerable economic and social impacts.

If the full social costs of carbon – one of the main greenhouse gas emissions - could be reflected in prices then the market would create the right incentives for a socially optimal solution on the curbing of carbon emissions. However, resolving this market failure will require difficult international agreements. Nevertheless, over time, economic activity will need to become much more carbon efficient and planning for this can provide London with new economic opportunities.

As well as mitigating the effects of climate change, London needs to adapt to the change in the climate that is already occurring.

This chapter looks at a significant risk to London's future economic prosperity: climate change. It starts by looking at the issue of climate change considering how and why it has resulted and what actions need to be taken to limit the extent of future climate change. The opportunities for London that might result from such actions will be looked at. It then moves on to consider the need for London to adapt to the level of climate change already likely to occur.

According to scientific authorities, unless significant action is taken, atmospheric levels of greenhouse gases will continue to escalate, causing potentially catastrophic changes in the Earth's climate. In October 2006, the Government released the Stern Review on the economics of climate change. This report argued that, under what was considered a worst case scenario, doing nothing could cost the global economy a fifth of its GDP. In addition, Rajendra Pachauri, the Head of the Intergovernmental Panel on Climate Change, has argued, that the effects of our actions on future changes in the climate have long lead times and this implies that it may already be too late to have a significant impact on the climate of the next 50 years. This suggests that adapting to the level of climate change already likely to occur will be important. Nevertheless, what we do in the next 10 or 20 years with respect to greenhouse gas emmissions could still have a significant effect on the climate in the second half of this century and in the next century. The Stern Review suggests that the costs of mitigation – which might be around 2 per cent of GDP per annum[79] – are small relative to the costs and risks of climate change that will be avoided.

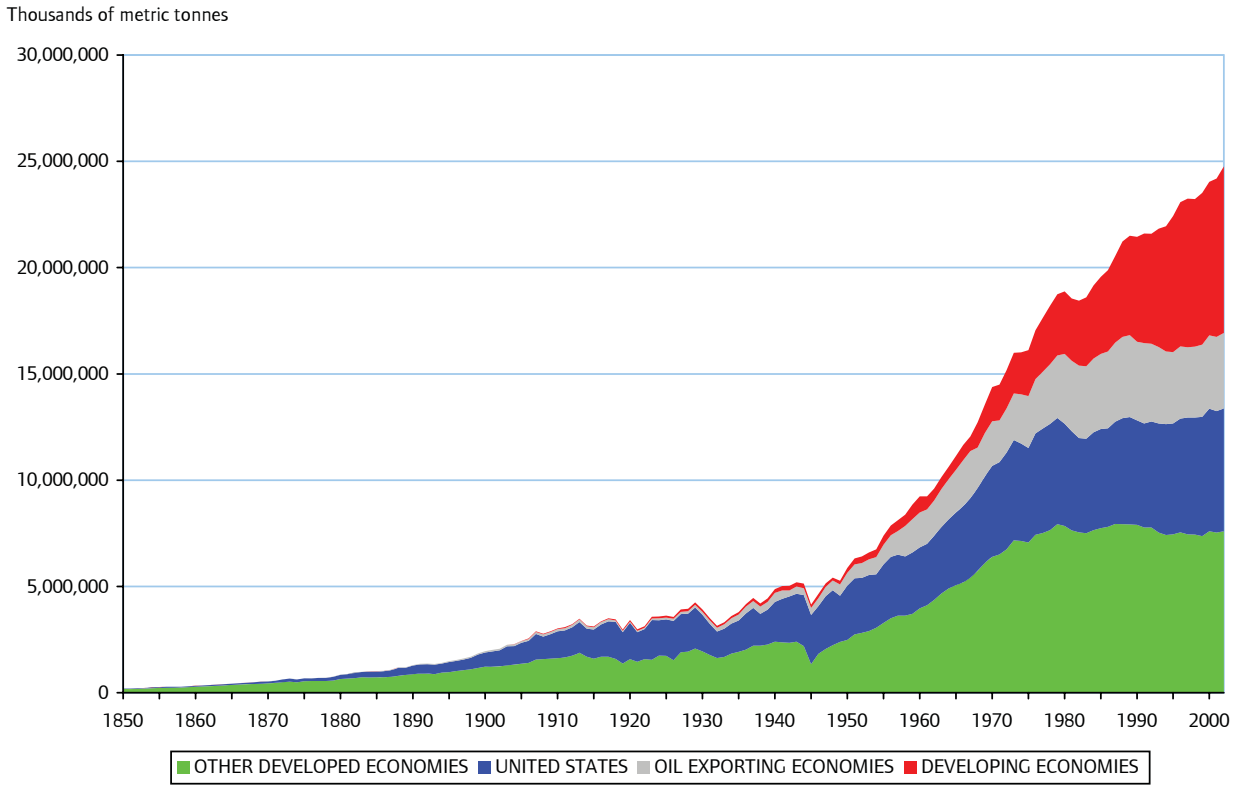
The fact that carbon emissions – one of the main greenhouse gas emissions – have been higher than would have been socially optimal is a result of the price of carbon being too low or not being included in the production of goods and services in the past. This is the market failure: the social costs of carbon emissions have not been accounted for in the price of carbon and so too much carbon has been (and is being) used in past (and current) economic activity. If the full social costs of carbon were to be incorporated in the production process then prices would adjust to reflect the new, full, costs of carbon and the market would direct businesses and individuals to the most effective use of resources. The problem, therefore, is that there are currently insufficient financial incentives (by way of prices charged for goods and services) for businesses and individuals to take the kinds of action necessary to cut carbon emissions on the scale that is required. Therefore, establishing a price for carbon that captures the full social cost of the production and consumption of carbon, which in turn will motivate individuals and businesses to switch away from high carbon products and services to low carbon alternatives is important.

This means that the most pressing issue is for the international community to set a firm, internationally binding, target to limit the global average temperature rise resulting from climate change to $2^{o}C$ and so prevent further climate change from this point. With such a limit set, actions to reduce greenhouse gas emissions through establishing a price for carbon through carbon trading markets, raising taxes on carbon emitting products/services or regulating carbon emissions for example should become much easier to implement.

However, there are a number of serious problems associated with internalising the cost of climate change within the price mechanism in the manner briefly described. For instance, any international agreement

needs to account for all countries and also future generations. Climate change does not just affect one or two individuals; it affects everyone on the planet including people who have not yet been born. It is hard to judge how those people will assess the costs of climate change. In addition, there are significant distributional impacts from the mitigation of climate change which can create additional problems in reaching the necessary international agreements. For instance, the likely sources of raised levels of global emissions in the future will be dominated by China (earlier), India (later) and other rapidly growing economies such as Indonesia and Nigeria. Such countries have not benefitted as much as other countries from the economic growth derived from past greenhouse gas emissions but are expected to play their part in limiting future emissions. This is shown in Figure 5.1 where the emissions of the developing world are shown in red.

Figure 5.1: CO2 – total emissions (United States, other developed economies, oil-exporting countries and other developing economies)



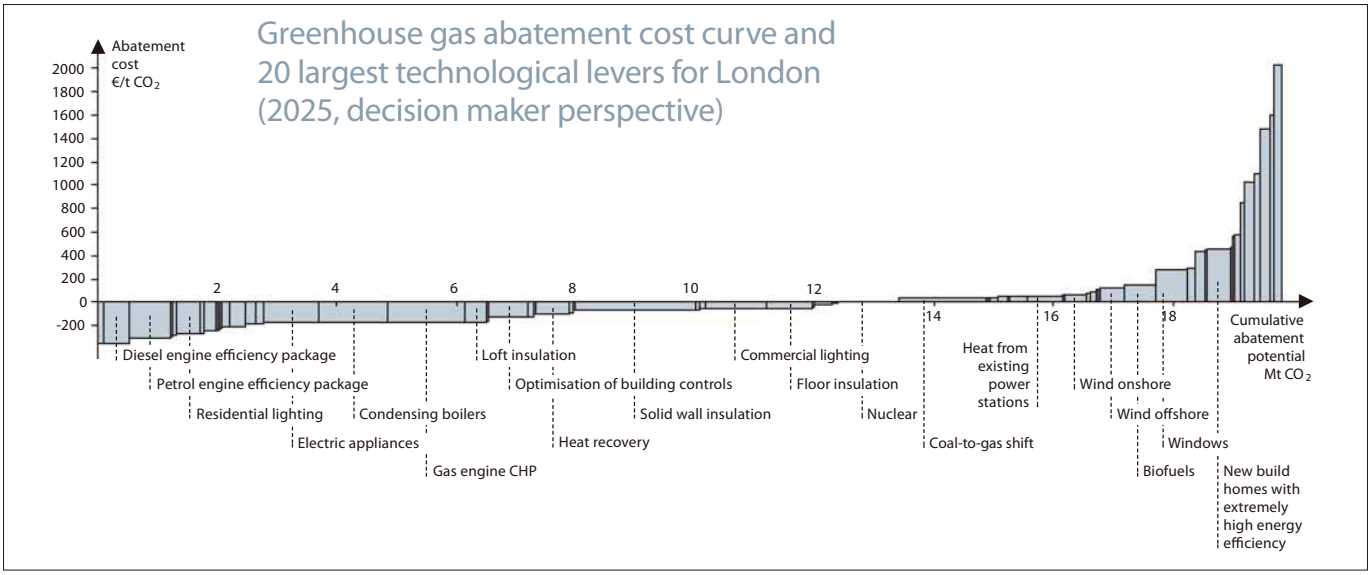
Source: World Resources Institute, Earth Trends, GLA Economics

Note that 'oil exporting economies' here is defined as OPEC members plus Russia, Kazakhstan and Mexico.

In spite of the difficulties in reaching international agreements, it is now widely accepted that carbon – and therefore energy – prices in the future will be higher. This is likely to reflect two things: a decreased supply of energy whilst demand is still rising and including the cost of carbon in the price mechanism. As a result, goods and services – especially those involving a lot of energy – will be more expensive, all other things being equal.

Economic activity needs, therefore, to become more carbon efficient and there are likely to be economic opportunities in this transition. Indeed some options for reducing carbon emissions – such as energy efficient light bulbs and better insulation of buildings – actually save money in the very short term. Such cost-saving measures lie to the left end of the cost abatement curve shown in Figure 5.2 which shows the relative cost of different measures aimed at reducing carbon emissions in a specific London context.

Figure 5.2: Cost abatement curve for greenhouse gases for London



Source: McKinsey & Co. (2008[80])

However, greater potential exists. Unlocking the low carbon economy in London could drive growth in the market worth £3.8 billion per annum according to the recent report by consultants, Ernst and Young, for the London Development Agency[81].

According to the Ernst & Young report, London is uniquely positioned to reap the full benefits of the transformation to a low carbon economy due to a combination of five drivers:

- Scale: London's size and economic complexity mean that it can deliver low carbon programmes such as Energy from Waste and a decentralised energy network at scale.

- Finance: London is the world's leading financial centre on the Global Financial Centres Index (which is produced by the City of London) and also has a leading position in the provision of finance for clean technologies, particularly through the Alternative Investment Market (AIM).

- Research & development: London has world-class research and development at UCL, King's College, Imperial and the LSE. However, the wider metropolitan area also contains Oxford and Cambridge.

- High-order business services: Law and specialised consultancies are economic specialisations of the capital's economy.

- Trading: London has established itself as the leading centre for carbon trading globally. Although the financial sector as a whole is forecast by many analysts to experience a short-term downturn, the market is still expected to grow over the longer term.

The Mayor's carbon mitigation programme around retrofitting, converting waste to energy and decentralised energy (which also has impacts both on energy security and landfill) is relatively small in the scope of the potential economic prize but could act as a stepping stone in London's journey towards mitigation of climate change. 'Bottom up' research on the Mayor's carbon abatement programme has identified that, under the 'most likely' scenario, 14,000 potential low carbon jobs are required per annum to 2025 for implementation[82].

To this point this chapter has mainly focused on mitigating future climate change. However, as noted earlier some degree of climate change is inevitable. As a result, actions are also required in order to adapt to the changes in climate already embedded in the system.

The climate for the southeast of England is projected to become increasingly warm and wet in winter, and hot and dry in summer throughout the century. This trend will be accompanied by an increase in the frequency and intensity of extreme weather events such as heatwaves, tidal surges, windstorms and heavy rainfall events. Some of this future climate change could be beneficial to London. For instance, whilst London's summers are forecast to become increasingly hot, they may still seem 'pleasant' when compared to the extreme heat of the Mediterranean basin area possibly increasing tourism to London. Additionally, increasing temperatures may on balance be beneficial to Londoners' health. Warmer winters should reduce the number of people dying of winter related illnesses, though more frequent heatwaves will affect the health of people through more poor air quality episodes (mostly affecting those with respiratory problems) and increased cases of food poisoning.

Moreover, unlike cities such as Tokyo and San Francisco, London is unlikely to suffer a major earthquake or a tsunami. Nevertheless, London does face risks from climate change from the following:

- Flooding;
- Overheating; and,
- Drought.

As a result, London ranks ninth in the "mega-city" exposure rankings undertaken by Munich Re[83] - shown in Table 5.1.

Table 5.1: Exposure of mega-cities to natural risks

Rank	City	Country	City GDP as % of country's GDP (1)	Risk index (2)	Natural Hazards (3)							
					Earthquake	Volcanic eruption	Tropical storm	Winter storm	T'storm/ hail/tornado	Flood	Tsunami	Storm surge
1	Tokyo	Japan	40	710								
2	San Fransisco Bay	USA	<5	167								
3	Los Angeles	USA	<10	100								
4	Osaka, Kobe, Kyoto	Japan	20	92								
5	Miami	USA	<5	45								
6	New York	USA	<10	42								
7	Hong Kong	China	10	41								
8	Manila, Quezon	Philippines	30	31								
9	**London**	**UK**	**15[a]**	**30[a]**								
10	Paris	France	30	25								

Sources:
1 Statistical authorities, various websites
2 Munich Re, 2004
3 Munich Re, Topics 2002
[a] GLA DMAG estimates

Risk Key :
High, Medium, Low, None

Source: Munich Re (2004) cited in London Climate Change Adaptation Strategy (GLA, 2008)

Flooding

Nearly 15 per cent of London is at risk of flooding and this includes many parts of Central London near the Thames and its tributaries. Indeed, 481,000 properties in London are within the potential flood zone including 100,000 which fail to meet criteria for insurance against floods. At present London does benefit from a strong system of flood defences but the risks are increasing on account of construction in the Thames Gateway and the loss of green space in the capital and upstream in the Thames Valley. The Environment Agency estimates that the Thames Tidal Defences protect some 1.25 million people and over £80 billion of property, 35 Underground stations, 51 railway stations, 400 schools, 16 hospitals and 8 power stations.

Flooding on the TfL network as a result of poor drainage, particularly where drains are badly maintained, can lead to congestion, disruption and damage to infrastructure. It is predicted that both the frequency and magnitude of flooding will increase due to climate change. TfL's main objective in this area is to target investment to reduce flood risk sites.

Overheating

Overheating refers to the point where temperatures rise so much that they affect the health and comfort of Londoners. Prolonged high temperatures can cause an increase in heat-related discomfort, illness and death (though, as noted earlier, this is off-set to an extent by a decrease in the number of people dying from winter related illnesses), an increase in demand for cooling (leading to more demand for power), an increased demand for limited water resources (increasing the risk of drought – see below) and damage to temperature-sensitive infrastructure (such as electrical equipment and transport networks).

This impact is accentuated in urban areas due to the "Urban Heat Island" effect[84]. The urban heat island is caused by the ability of urban materials that make up the buildings, roads and pavements to absorb heat from the sun, which is then radiated at night, preventing the city from cooling off as quickly as rural areas. During hot weather this can make the centre of London significantly hotter at night than the countryside.

Climate change is projected to increase average summer temperatures by the middle of the century, when two out of three summers may be as hot as the 2003 heatwave. The urban heat island effect will also intensify as a result of future climate change. For instance, there are feedback loops from air conditioning systems to the urban heat island effect: the hotter it gets, the more air conditioning is used and the more heat is expelled into the outside environment. Continued Central London agglomeration will also exacerbate the urban heat island effect.

Public transport infrastructure will not just become more unpleasant to travel on as a result of overheating but many of its operating systems will be affected. With the planned London Underground capacity improvements, more trains will mean more heat and parts of the Tube will become even hotter. On the sub-surface lines, like the District and Circle, TfL is introducing air conditioning, with new trains arriving from 2010 onwards delivering significant benefits. However, on the deeper lines, TfL cannot introduce conventional air conditioning because there are not enough air passages to the surface to allow warm air to escape. As a result, TfL is investigating more innovative solutions[85].

Drought

Just because London is at risk of flooding in the future does not mean that the city is not at risk from drought as well. The large population living in the south east of England, combined with the relatively low rainfall means that the Thames region has less water per person than many hotter, drier countries such as Morocco.

Climate change will result in wetter winters with a greater proportion of rain running off into the rivers, rather than being absorbed into the ground where it can contribute to future years' supplies. Hotter summers will increase the amount of water lost to evaporation. Hotter, drier summers will see demand for water increase from people and wildlife, while warmer winters may mean a longer growing season, increasing demand from plants and so reducing the winter recharge period for groundwaters.

Chapter 6: Risks to London's attractiveness to business and people

London faces a number of challenges if it is to maintain its position as a leading global centre over the next 20 years. To some extent, these challenges are the result of London's success in attracting both businesses and people. For example, more people and businesses in the city tend to place a strain on public amenities and lead to higher demand and congestion which tends to drive up prices for goods and services.

The challenges London faces, like congestion and higher costs for example, are common to all global cities. However, it is important that factors that could reduce the attractiveness of London to businesses and people, such as changes to tax or regulatory policy or reductions in the quality of life for example, are managed as effectively as possible.

In this chapter the risks to London's business environment, including some of the implications of the recent financial crisis and the corresponding assistance package provided to the financial sector in the UK are considered. Other risks to the competitiveness of London's business environment including the risks of not maintaining sufficient skilled migration and not maintaining a good quality transport network are then considered. Finally, the chapter considers a number of factors that could potentially impact on the quality of life people experience when living in London, and so impact on the attractiveness of London to people.

Risks to London's business environment

A number of recent reviews of both London and the UK business environment have noted concerns about trends in tax policy and regulation, and the implications for the international competitiveness of London's business environment[86]. The primary concern is that greater uncertainty surrounding changes to taxation arrangements in the UK as well as the introduction of more EU regulations on businesses reduces the attractiveness of London relative to other cities.

Concerns about London's international competitiveness have been increased by the recent global financial crisis (see Box 6.1). In particular, the cost of the financial assistance package to the banking sector, combined with the impact of higher welfare payments and lower tax revenues that occur during a recession, will place a considerable strain on the UK's capacity to maintain an internationally competitive taxation environment for businesses, and additionally limit the UK's capacity to invest in public infrastructure.

Box 6.1: The global financial crisis 2007-2009

Over the past decade, low interest rates had two significant consequences, it helped drive rapid growth in credit-based consumption — particularly property market speculation — and drove investors to seek out products which could provide higher yields. At the same time, the financial sector introduced innovative products based on 'slicing and dicing' securitised credit. This explosion in the use of these complex debt products drove big increases in the leverage (debt levels) of major financial institutions around the world, but particularly in the US and UK.

As interest rates in the United States began to rise, the returns on some of these complex debt products began to falter, and by mid 2007, investors started to lose confidence in the value of securitised debt products. Initially, few appreciated the extent to which international financial institutions had exposed their balance sheets to these products, nor how 'toxic' some of the assets were. However, as financial institutions in the US began to struggle and collapse, it became evident that many financial institutions around the world were at risk of collapse in mid to late 2008.

To prevent the significant economic and social consequences that would result from the collapse of their financial sectors, governments commenced implementing financial support packages intended to stabilise their banking sectors.

In the UK, the Government's total investment in the banking sector will be substantial. The Government has effectively nationalised three banks through providing loans and taking equity. In addition, there is the cost of protecting bank deposits and the potential significant cost from the Asset Protection Scheme[87].

In a comprehensive review of the UK financial market regulation[88], Lord Turner, chairman of the Financial Services Authority, has recommended a range of measures which will:

- ensure greater regulation and supervision of system-wide "macro-prudential" issues rather than a sole focus on specific firms;
- tighten controls and oversight of banking and 'shadow banking' activities; and
- provide greater monitoring and oversight of cross-border banking arrangements in Europe.

Source: GLA Economics based on information from FSA and HM Treasury

Financial market regulation

The UK's 'light touch', risk-based approach to financial market regulation has been cited as an important driver of London's position as a global financial centre. However, this approach has ultimately proved ineffective and permitted excessive and socially undesirable growth in the level of risk within the sector, resulting in the near collapse of the banking sector recently[89]. There is a risk that, as a result, financial market regulation becomes disproportionate, which could potentially diminish the attractiveness of London as a location for financial services firms.

It is difficult to determine the extent to which increased financial market regulation might impact on the growth of London's financial sector. It is possible that stricter regulatory oversight could lead some firms to consider moving some of their operations to other countries, particularly as some countries are trying to increase their global market share of financial services. For example, Switzerland is trying to attract an increased share of the hedge funds and private wealth management markets.

However, there are a number of factors that mitigate the risk that London could lose a significant share of its financial services market due solely to stricter oversight of the sector. As described in Chapter 3, regulation is only one of the many reasons why firms choose to locate in London. London will continue to provide companies with a highly skilled labour force, access to markets, excellent auxiliary services (such as access to world class legal firms) and many of the other factors set out in Chapter 3. Moreover, many of the reforms put forward by Lord Turner require international agreements; this should minimise the likelihood that UK regulations will become more onerous than those elsewhere. Finally, there could be branding benefits for firms if they are viewed as submitting themselves to strict regulatory standards.

Initial evidence from the GFCI[90] suggests that although the financial crisis has had a negative impact on both London and New York as financial centres, both centres maintain a significant advantage over other locations. This could be because firms see the greater size and depth of these markets as providing greater security. Indeed, smaller centres, such as Dubai and Dublin have, at least in the short term, suffered greater falls in their perceived attractiveness.

Reduced economic competitiveness

In general, the factors that make London's business environment attractive to financial sector firms have also allowed firms in other sectors to flourish in London. In particular, competitive corporate and labour tax rates and business friendly regulations have benefited all firms that locate in London.

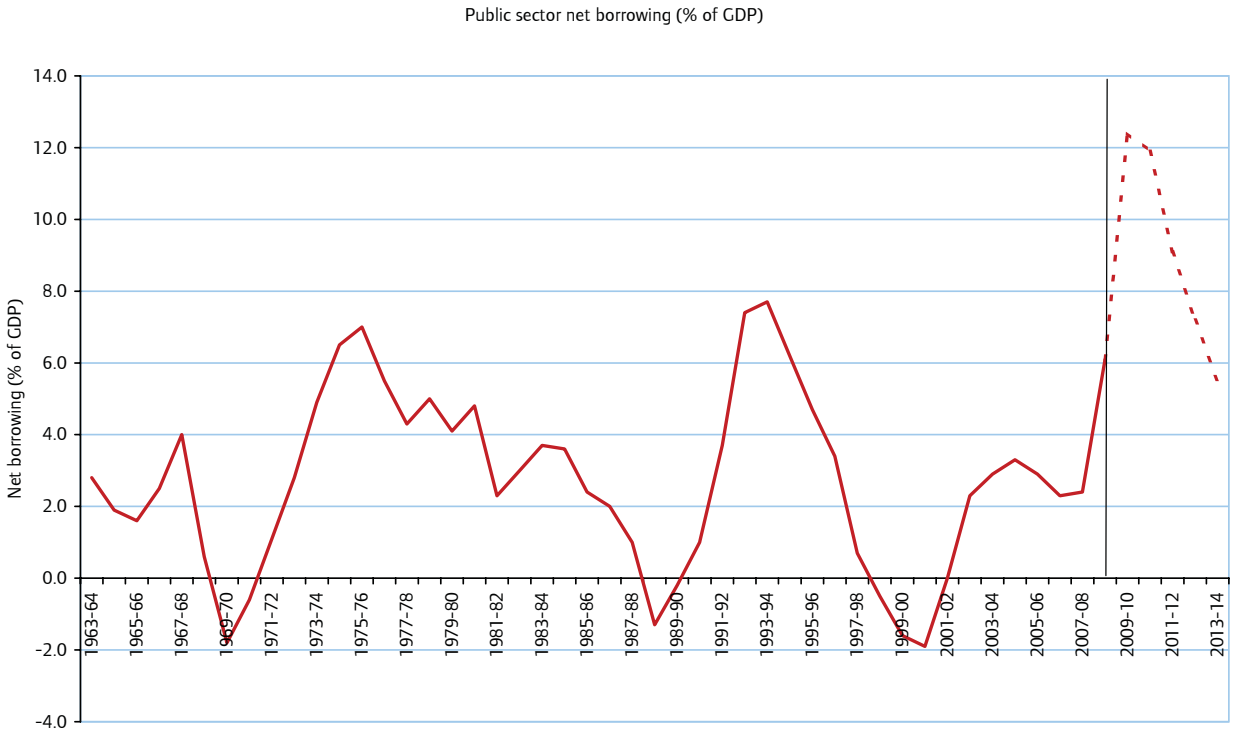
As noted in Chapter 3, London (and the UK) has traditionally provided businesses with a competitive tax environment. In particular the tax wedge and average effective corporate tax rate are lower in the UK than in most other OECD and similar sized EU countries. Offering competitive tax rates has potentially provided firms with an offset to some of the other business costs (wages, rents and other inputs) which are higher in London compared to other cities.

In recent years, some of London's tax competitiveness has been eroded as other countries have endeavoured to reduce their tax burdens. Jeffery Owens (OECD, Director, Centre for Tax Policy Administration)[91] contends that there was little need for the UK to cut existing tax rates to remain internationally competitive. However, this analysis was conducted prior to the 2009 Budget. In the Budget, the top rate for personal income tax was increased to 50 per cent from April 2010. In addition, the level of tax relief on pension contributions for those earning over £100,000 was reduced.

Another concern that businesses have with taxes in the UK has been the recent changes in the approaches to tax design and enforcement in recent years. A CRA International[92] report for the City of London Corporation notes that, in general UK tax rates were not stifling business investment decisions in the financial sector (although there could be some negative impacts at the margin). However, businesses were concerned about the manner in which tax reforms were being implemented, particularly the lack of consultation. In addition, businesses felt that that the HM Customs and Revenue Office often adopted a combative approach to settling disputes.

The impact on public finances from the current economic downturn and the assistance package to the UK financial sector could have a detrimental impact on the international competitiveness of the UK's tax position. As noted in Box 6.1, the costs to the Government of stabilising the banking sector will be substantial. The decline in tax revenues and increases in public expenditure requirements (e.g. unemployment benefits) as a result of the economic downturn are impacting significantly on the UK's budget deficit. Figure 6.1 shows that the level of public sector net borrowing is currently projected to increase to around 12 per cent of GDP in 2009-10 and 2010-11. This level of deficit exceeds – by some margin - the previous post WWII highs of 7.7 per cent set in the mid 1990s.

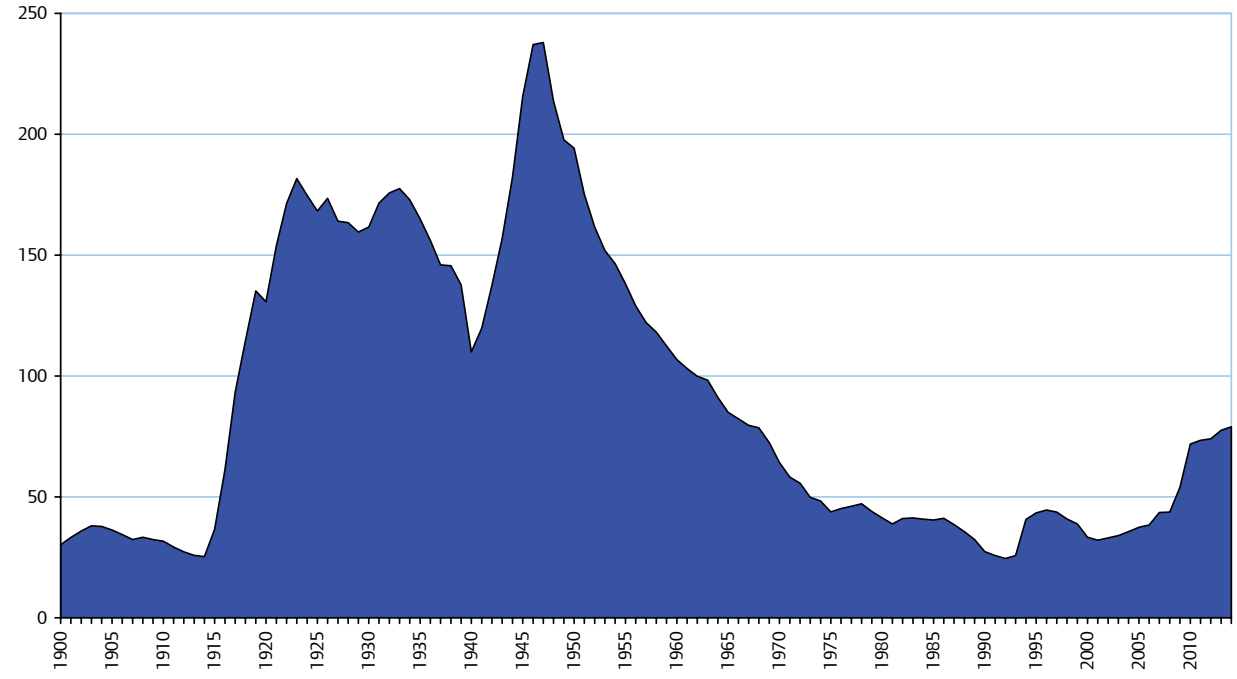
Figure 6.1: UK Public Sector Borrowing Requirement over time



Source: GLA Economics based on data in the 2009 Budget

As a result of these deficits, the level of public sector net debt as a proportion of GDP will almost double as shown in Figure 6.2[93].

Figure 6.2: Public Sector Net Debt in the UK (% of GDP)



Source: UKSpending.co.uk (PESA data)

This rapid deterioration in public finances suggests that a mix of tax increases and spending/investment cuts over quite an extended period of time will be necessary to return the levels of public debt (as a proportion of GDP) to recent levels. As discussed in Chapter 3, it will be important that consideration is

given to the likely implications for business and investment in the UK of raising different taxes. The OECD[94] found that increasing taxes on both profits and wages (such as income taxes and NI contributions) can have a significant negative impact on foreign investment decisions[95].

As a result, the UK (and therefore London) will find it difficult to maintain its international tax competitiveness position relative to other countries over the coming years. The UK is fortunate to have some scope to increase taxes before they reach similar levels to those faced in other similar sized European countries. Net debt of around 80 per cent of GDP is in line with many other large European countries, such as France and Germany (who themselves are experiencing significant strains on public finances as a result of the economic downturn and financial crisis, which will increase their net debt figures further). Nevertheless, the evidence at the moment would seem to suggest that the UK's public finances are set to worsen to a greater extent than most other developed countries in the next few years, therefore putting a strain on the UK's relative international tax position[96].

Public spending and investment

The UK's ability to spend on services and invest in capital projects is also likely to diminish in the coming years as a result of the deterioration in public finances. Spending on education, healthcare, public transport, housing, public security and various other services help underpin the business environment. In particular, health, education and transport spending are important to business because they improve the quality and quantity of London's labour force.

The 2009 Budget states that from 2010-11, public spending is forecast to grow at 0.7 per cent in real terms. This compares to growth of 3.3 per cent per year for the ten years between 1997-98 and 2007-08. In addition, the Budget also reduced the level of future public investment, with investment expected to fall from £44 billion in 2009 (3.1 per cent of GDP) to £22 billion (1.3 per cent of GDP) in 2013-14. This is important because large scale public investment can often be important for increasing the productive capacity of the city (through transport improvements for example).

Higher costs of doing business

Although higher wages make London an attractive place for highly skilled workers, higher staffing costs can be a deterrent for businesses considering where to locate or expand their operations. As previously noted, wages in London are amongst the highest in the world[97]. Similarly, Cushman and Wakefield[98] consistently rank London's staffing costs as amongst the highest of the European cities it compares.

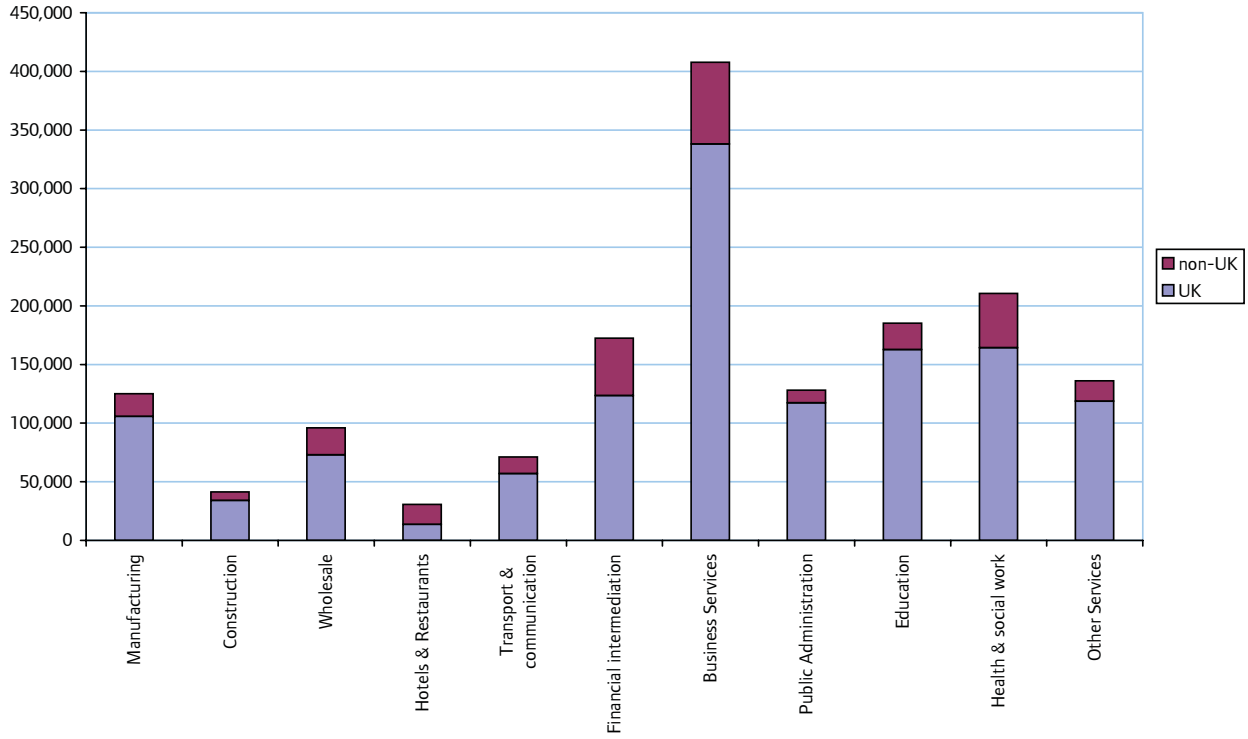
Renting office space is also a significant cost for businesses. London has traditionally been one of the most expensive cities in the world for renting office space. Despite the recent economic downturn, office space in London's West End is still the third most expensive office space in the world[99]. Office rents in other parts of Central London, although significantly below the rates for the West End, are ranked as the fourth highest in Europe (behind the Central Business Districts (CBDs) of Moscow and Paris)[100].

In the short term, the fall in the pound relative to other currencies could reduce the costs of doing business in London for some multinational firms. However, it is less clear that in the medium to long term London will become a cheaper place to do business compared to other global cities.

Reduction in international migration?

One of London's most attractive features for business is the depth of its highly skilled labour market. Currently, around 45 per cent of those working in London hold a degree level qualification, and the demand for people with such skills is forecast to increase. The financial and business service sectors (financial intermediation, and real estate and renting) account for most of the employment of workers with degree level qualifications or higher. These sectors, along with the health and social work sectors also account for much of the employment of foreign nationals in London (see Figure 6.3).

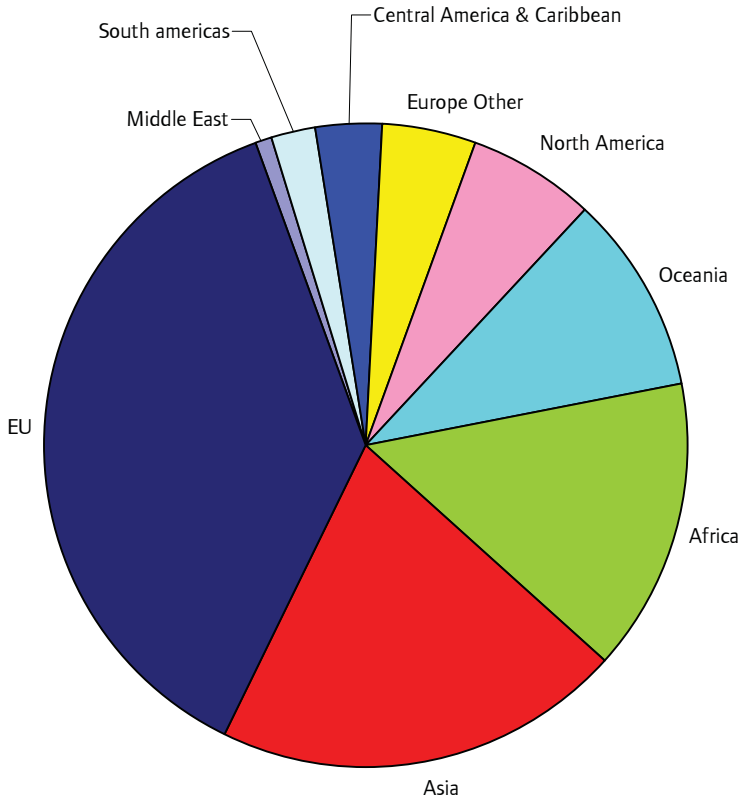
Figure 6.3: Degree level workers in London by sector and nationality, 2007



Source: APS, 2007 (ONS Crown copyright)

In London, 81 per cent of employed workers with a degree are UK nationals. Of the remaining 19 per cent of degree holders employed in London, almost two-thirds are non EU nationals (see Figure 6.4). The majority of these workers come from India, Australia, USA, Nigeria and South Africa.

Figure 6.4: London's Non-UK National workers with NVQ level 4 or above qualifications, 2007



Source: APS, 2007 (ONS Crown copyright)

The UK has traditionally maintained a relatively open door policy towards international migrant workers, particularly in comparison to other EU countries. For example, the UK was one of the few EU-15 countries that permitted free entry of EU Accession Country workers in 2004.

More recently, the UK has introduced a points based system for those wishing to emigrate from non-EU member states. This was viewed as a method of simplifying the immigration system as well as giving greater capacity to target the types of skills that the country needs. The UK also decided to toughen up the existing resident labour market test for employers and tighten the criteria for highly skilled migrants by raising the qualifications and salary level needed to enter the UK.

In addition, the UK has also changed tax arrangements for the treatment of resident non-domiciles[101]. At the same time, personal income tax rates for high income earners are increasing, and the international competitiveness of wages is falling due to the fall in the pound.

These changes appear to fall on a small but significant proportion of London's highly skilled workforce. The impact of these changes is difficult to measure. This is because London is likely to continue to attract migrants (both skilled and unskilled) in the short and longer term, and visa eligibility criteria can be changed relatively quickly. However, the change in attitude and less favourable economic conditions could well encourage some of the more highly skilled and productive migrants to either stay in their home country or select other countries as their preferred destination. Moreover, the impact of discouraging other migrants from non-EU countries could be more pronounced, in the short term at least, if skilled migrants from EU nations also start choosing locations other than London as lower exchange rates and higher taxes make London a less desirable location.

Transport infrastructure, crowding and congestion

Transport congestion, crowding and delays are consistently identified as a concern for London residents and businesses[102]. A certain amount of congestion can be expected in a large city as, like higher land prices, it is evidence of higher demand and significant economic activity and shows that major investments are used very intensively[103]. However, London suffers from significant crowding problems, both on its roads and its public transport network.

There is overcrowding on the Underground and National Rail lines (see Figures 6.5 and 6.6)[104]. Crowding can impact on economic growth because sustained delays on the transport network increase costs for business and discourage further investment. In particular overcrowding and delays can make coming into London less attractive to employees and potential customers. Research using data over a 20-year period found a negative relationship between crowding and the level of passenger growth[105]. A part of the argument for Crossrail was that existing levels of crowding on the tube and rail network would restrict future growth of Central London; Crossrail also helps agglomeration.

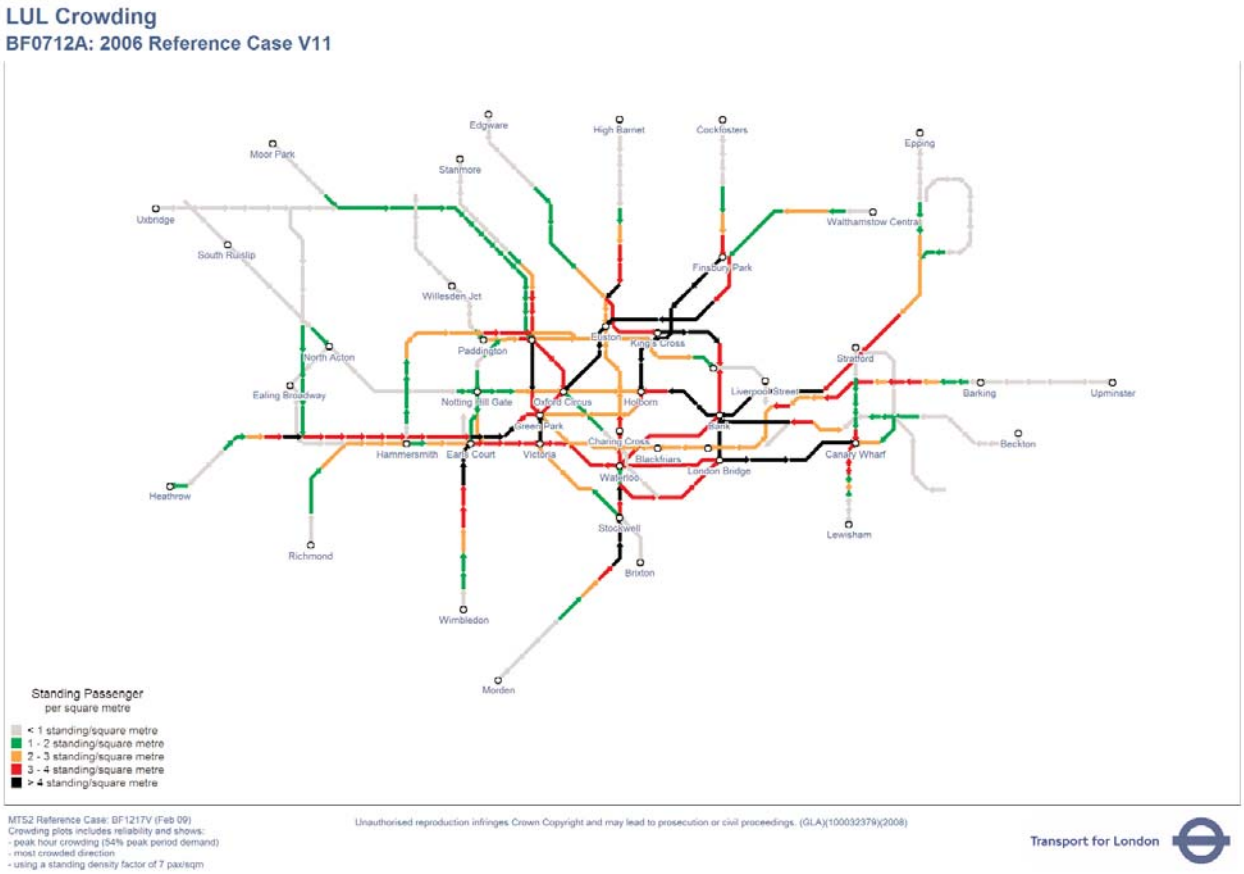
Much has been done recently to improve London's transport system after several decades of underfunding. The investment in London's transport system, set out in TfL's Business Plan, will offset the impact on crowding of demand growth as a result of population growth, and the expected increase in jobs over the next decade, and also reduce crowding from current levels.

This investment will increase public transport capacity by over 30 per cent from 2006 levels by 2020. This includes Crossrail, a major new east-west railway, which alone will increase London's rail-based network by 10 per cent when it opens in 2017. Other committed improvements to the national rail network, including the Thameslink programme, will increase capacity between now and 2014. The ongoing works to the Underground will increase the Tube's capacity by up to an additional 30 per cent.

These improvements will relieve crowding, but even with such investment crowding is still likely to exist on parts of the Underground and Rail network (see Figures 6.7 and 6.8. These look out to 2031 and are for MTS "reference case" – effectively the committed and funded investment only: they do not include the impact of the package set out in the Mayor's Transport Strategy).

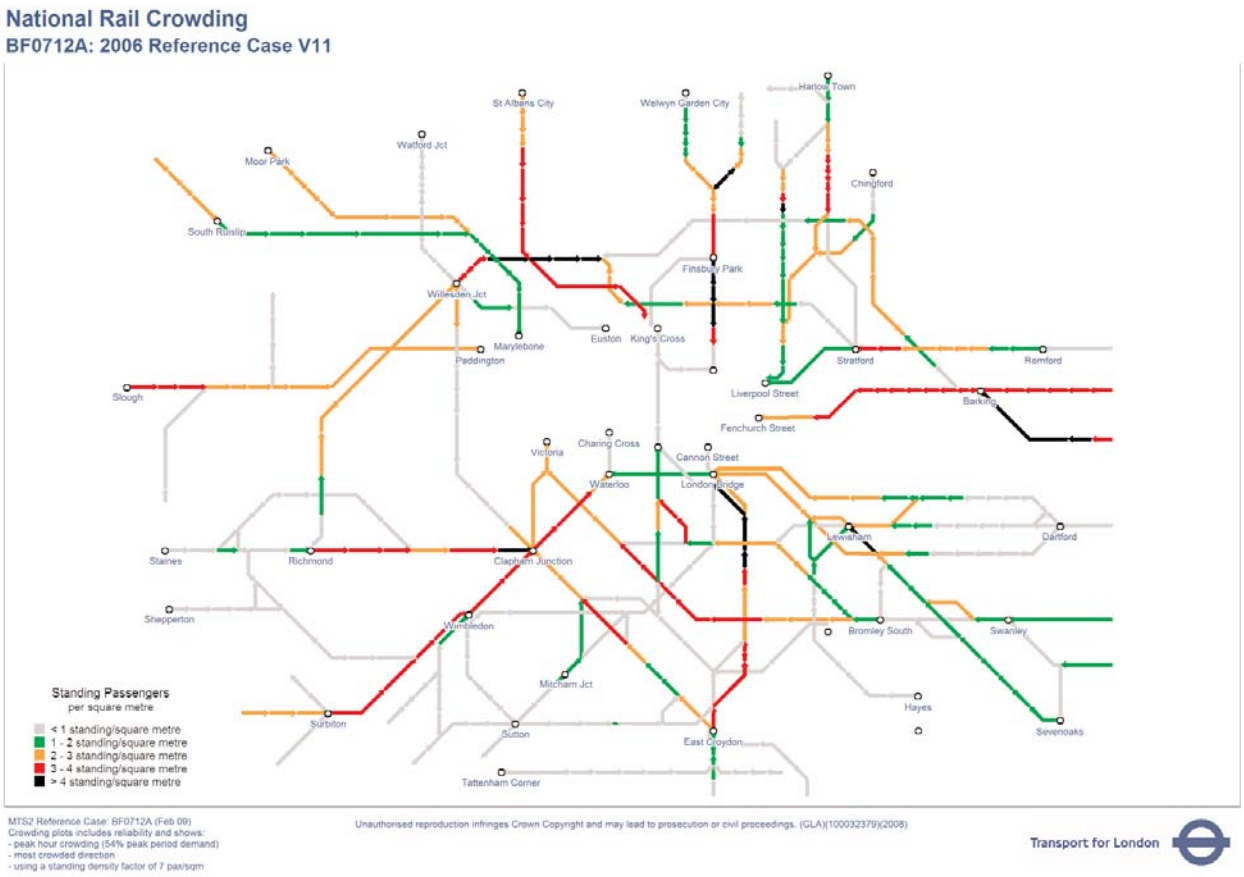
Crowding on some links improves. On others, it worsens when the effect of demand growth (from higher population and employment) to 2031 is greater than the effect of committed and funded investment. Overall crowding (measured as the percentage of Tube/rail passenger km in the morning peak that are in excess of "Passenger Guideline Capacity") will fall between now and 2018 as a result of these investments, even after the effect of demand growth. However, crowding would then rise, as a result of demand growth, in the absence of further measures. Therefore, in spite of committed investments, if further measures (such as those set out in the Mayor's Transport Strategy) are not taken beyond the end of the business plan in 2018, crowding on public transport would then start to grow once more (as a result of the growth in demand resulting from more population and jobs). This would have a negative effect on the overall productivity of London's economy and, in turn, the UK national economy.

Figure 6.5: London Underground and DLR crowding – 2006



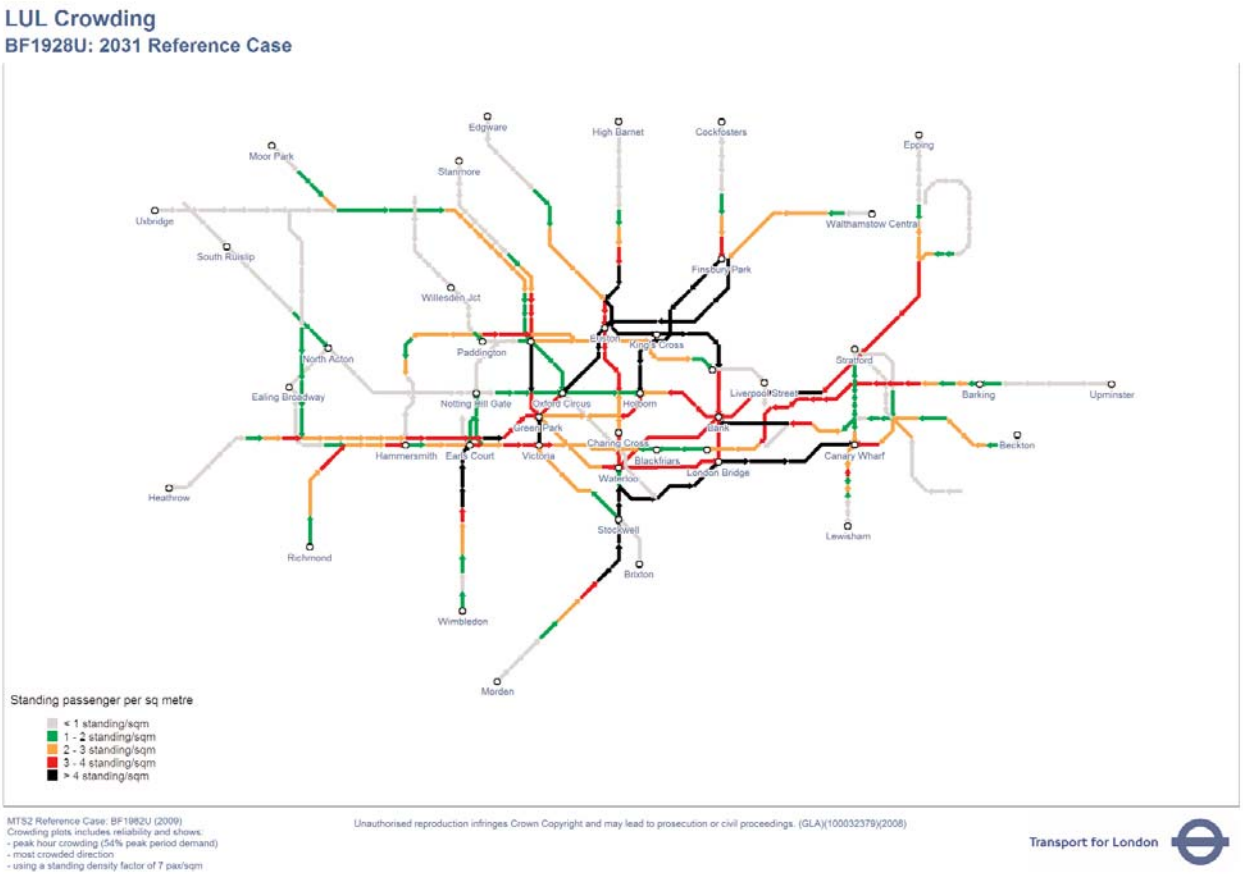
Source: TfL 2009

Figure 6.6: National Rail crowding – 2006



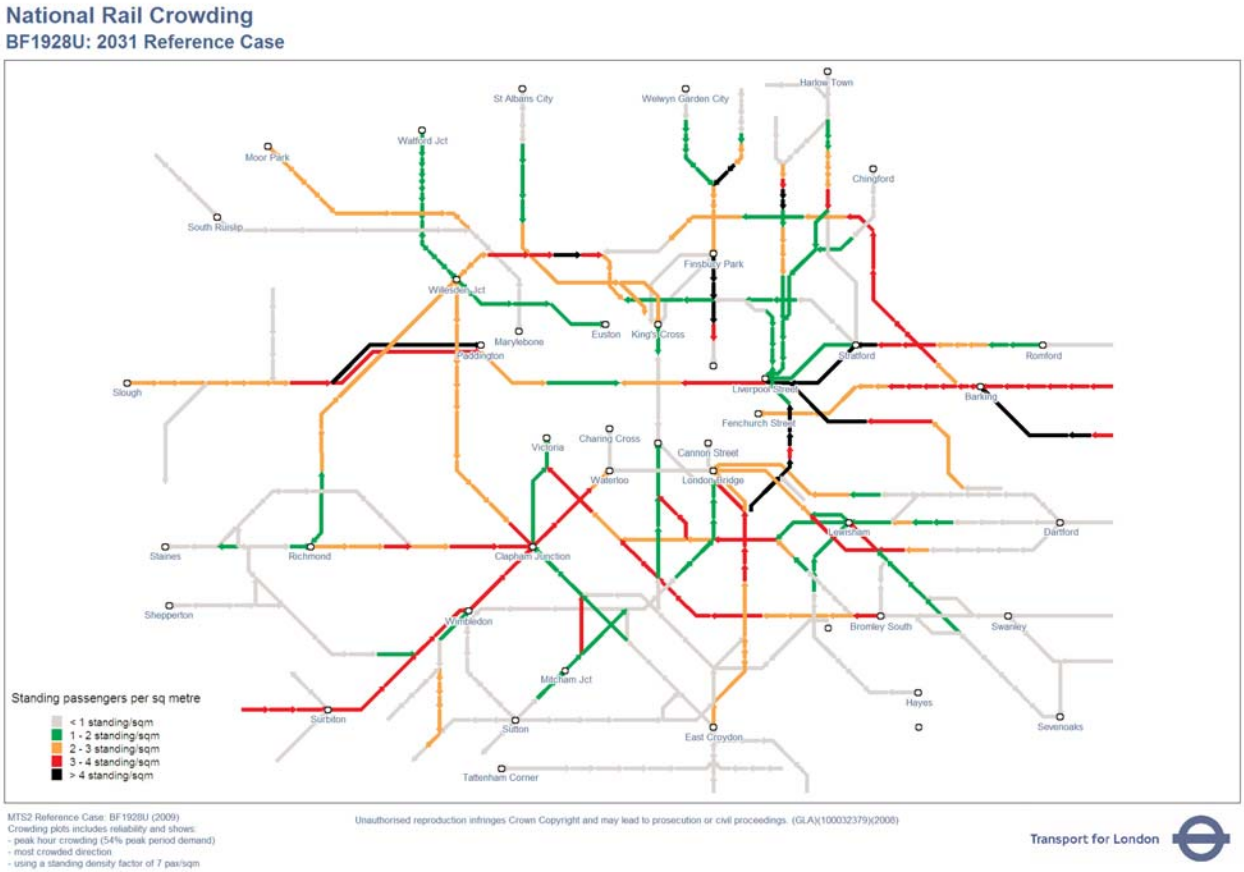
Source: TfL 2009

Figure 6.7: Anticipated London Underground and DLR crowding – 2031 reference case



Source: TfL 2009

Figure 6.8: Anticipated National Rail crowding – 2031 reference case

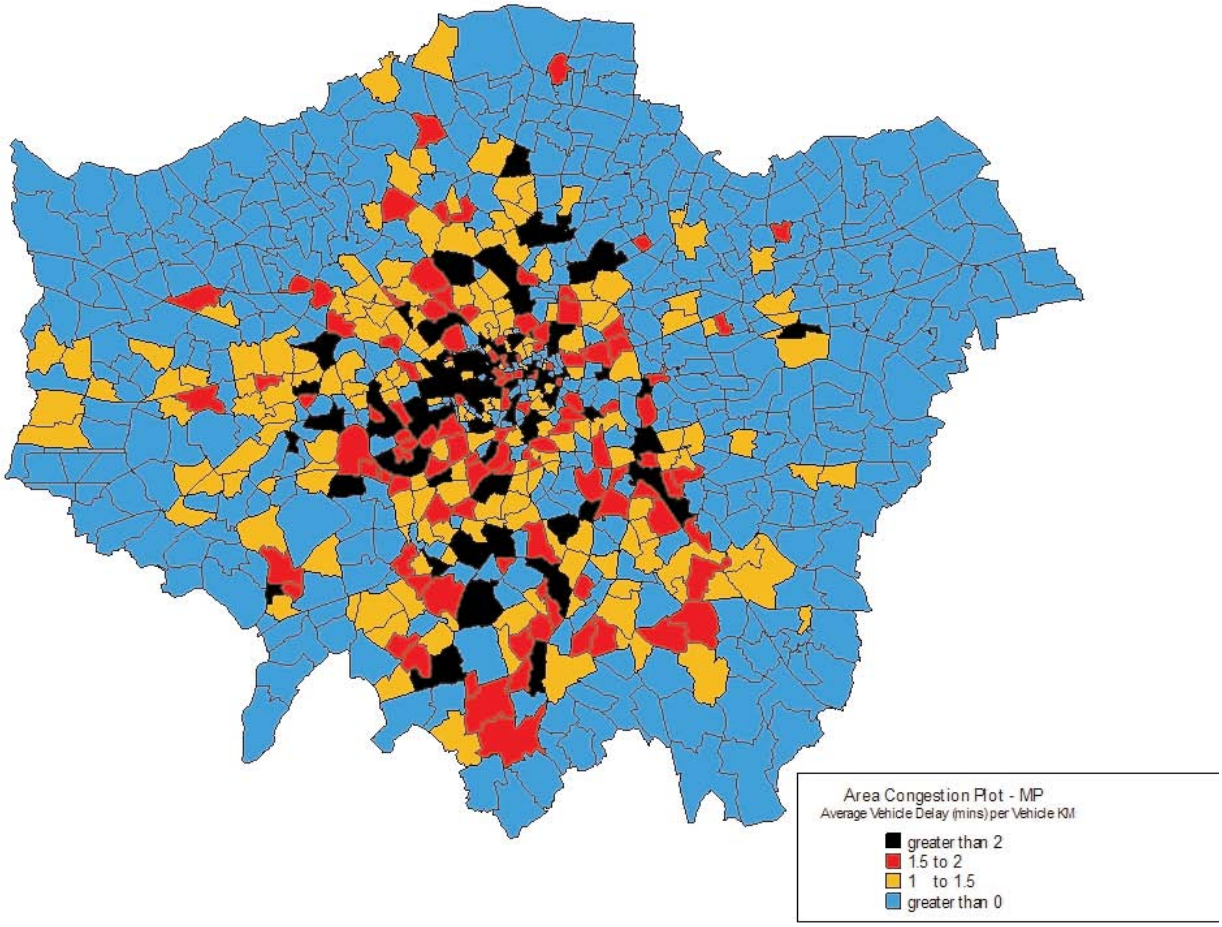


Source: TfL 2009

A report published by GLA Economics[106] estimated that, under certain assumptions, transport delays in Central London alone cost around £2 billion every year. Nearly half these costs are incurred by commuters through lost time spent delayed on the way to work with business and leisure trips making up the rest. The cost of delays for all London will be even higher.

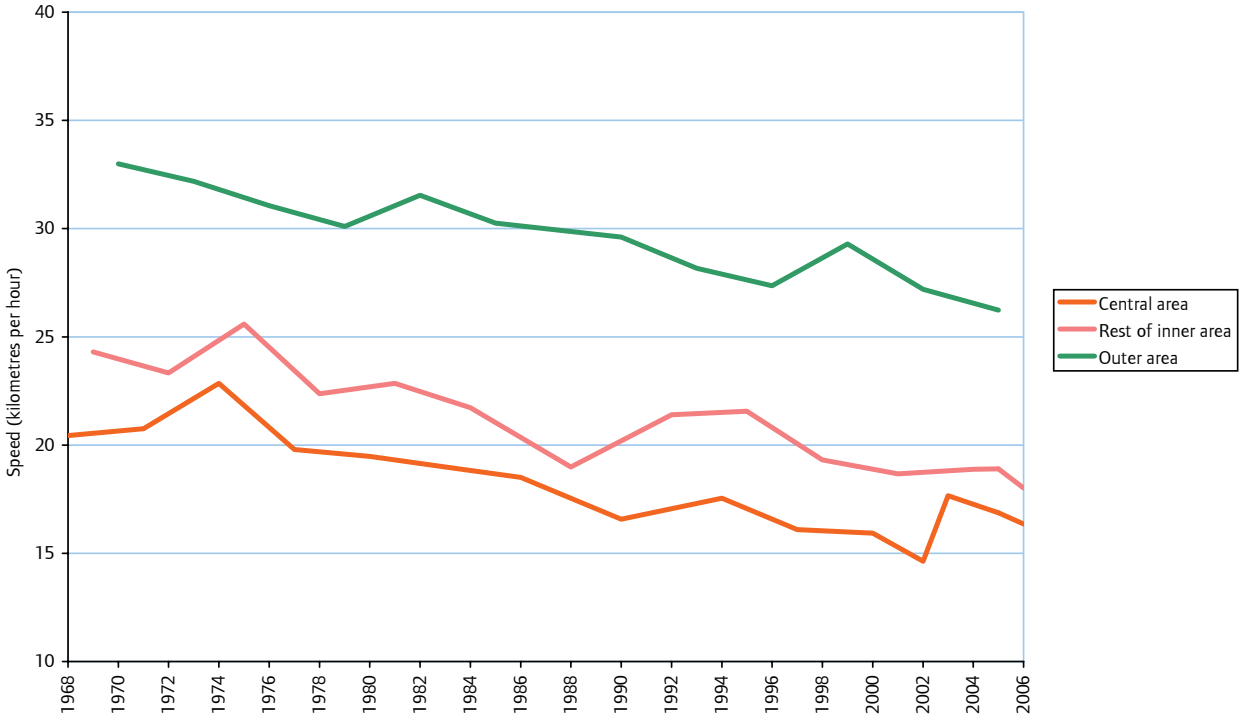
Congestion is also an issue on London's roads (see Figure 6.9). With the exception of road traffic speeds in Central London when the congestion charge was introduced, London road traffic speeds have been on a declining trend over recent decades as shown in Figure 6.10.

Figure 6.9: Highway congestion in London, 2006



Source: TfL 2009

Figure 6.10: Road traffic speeds



Source: TfL, 'Travel in London' report 2009

In addition to concerns about the state of London's internal transport infrastructure, business groups have also raised concerns about the quality of the UK's international transport links[107]. In particular, concerns have been raised about the quality of Heathrow.

Heathrow is one of the busiest airports in the world and is currently operating at near full capacity. Some business groups have raised concerns that if Heathrow does not expand its capacity the overall attractiveness of London as a location for businesses could diminish.

However, a report by York Aviation[108] shows that many of the concerns about Heathrow relate to the quality and timeliness of service within the terminal and transit times to and from the airport. Further, some of the capacity concerns regarding direct flights to other destinations (particularly emerging markets) could be alleviated by increased competition between London's airports. The level of competition should increase if BAA is required to sell Gatwick and/or Stansted airport in the near future.

Risks to attracting people to London

As noted previously, global cities tend to suffer from congestion and the negative consequences it has on the quality of life of residents. For example, higher demand for housing drives up land values, which feeds through to many other living costs (for example, business rental costs also increase, which can drive up prices for their products as they aim to recover this cost). In addition, higher demand for travel to Central London increases crowding and congestion to which investment and other policies have to respond.

Surveys and international comparisons regarding liveability tend to bear this out. For example, in the 2009 Mercer Quality of Living Survey London was ranked 38th while the other recognised global cities, New York, Paris and Tokyo were ranked 49th, 33rd and 35th respectfully for their liveability[109].

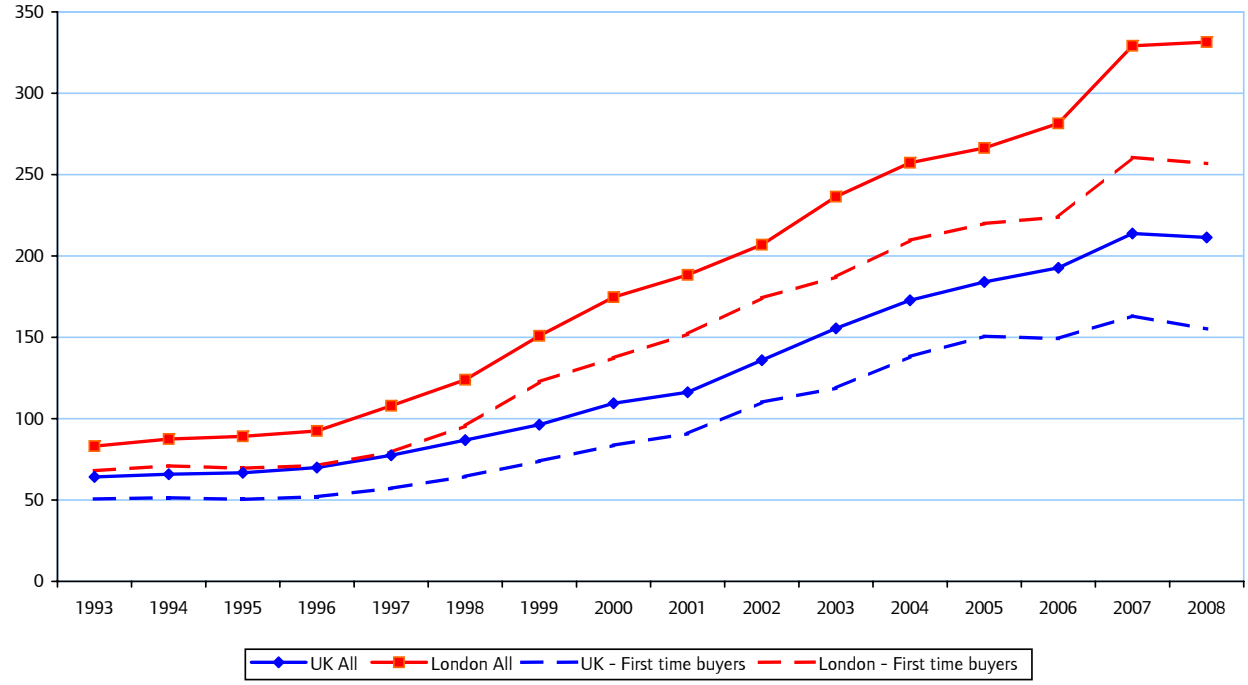
Enhancing the liveability of London is vital to the ongoing prosperity of London. This is because the city depends on its ability to attract and retain highly skilled people from around the country and around the world. The challenges associated with liveability are likely to increase over the coming years as London's population is forecast to grow. Current projections of London's population see an increase of over 1.3 million people between 2007 and 2031[110].

Cost of living

London is an expensive city to live in. Many comparisons rate London as one of the most expensive cities in the world[111].

One of the most challenging obstacles to living in London, in terms of cost, is the ability to buy a house. Chapter 7 illustrates how housing has become less affordable over the past decade or so, with Figure 6.11 showing it has become relatively much more expensive to buy a house in London than elsewhere in the UK.

Figure 6.11: Average house prices (1993-2008, £'000)



Source: DCLG Survey of English Housing (Table 507), 2008

Although the economic downturn is putting downward pressure on house prices in the short to medium term, as shown in Chapter 2, in the longer term house prices in London are likely to continue to grow.

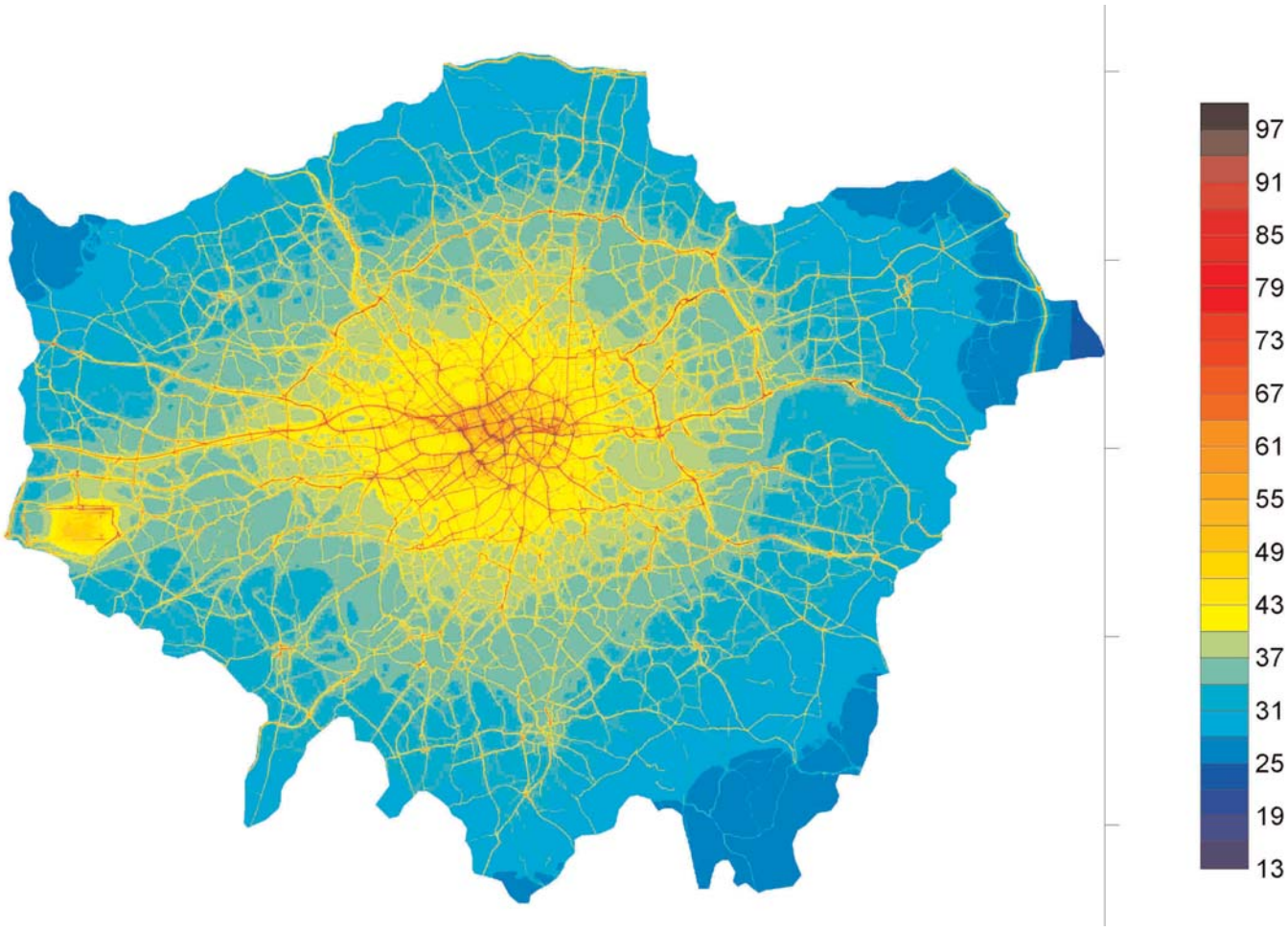
Environment

London relies on high quality labour viewing it as an attractive place in which to live and work. High quality and creative individuals feel attracted to places where there are concentrations of other talented individuals but they also value a pleasant aesthetic environment and a beautiful physical setting[112]. A study by BAK Basel found London to perform well on economic and societal variables but far less well on environmental factors when compared to other European cities such as Stockholm[113]. Perceptions of poor air quality, long commuting times, heavy traffic and London's rainy climate were singled out as issues.

Whilst air quality in London has improved in recent decades, poor air quality remains an issue for London. The levels of two pollutants - particulate matter (PM_{10}) and nitrogen dioxide (NO_2) - still do not meet the limit values set out by the EU. Whilst some measures to tackle carbon (including the pricing of carbon in chapter 5) may help reduce emissions of these pollutants, targeted measures to tackle the most polluted areas of London and the greatest sources of emissions are also required. The draft Mayor's Air Quality Strategy, published in October 2009, sets out the position on air quality in more detail. Road transport is a major source of air pollution emissions in London, although London's air quality is also affected to some extent by pollution from outside the capital. Figure 6.12 shows concentrations of NO_2 across London in 2006: as can be readily seen, the areas with the highest concentrations are closely related to the road network and around Heathrow.

Another key issue is green space. High density city living creates a need for areas of recreation and respite. There are established psychological and physiological risks associated with not being able to provide such space[114]. Market pricing mechanisms surrounding green space are particularly complex. A GLA Economics report from 2003[115] found that a 1 per cent increase in green space was associated with a 0.3 to 0.5 per cent increase in average house prices. However, this relationship was complicated by two conflicting preferences: one towards proximity to Central London and the other towards greener spaces on the periphery.

Figure 6.12: NO2 annual mean concentrations (mg/m3) for the year 2006



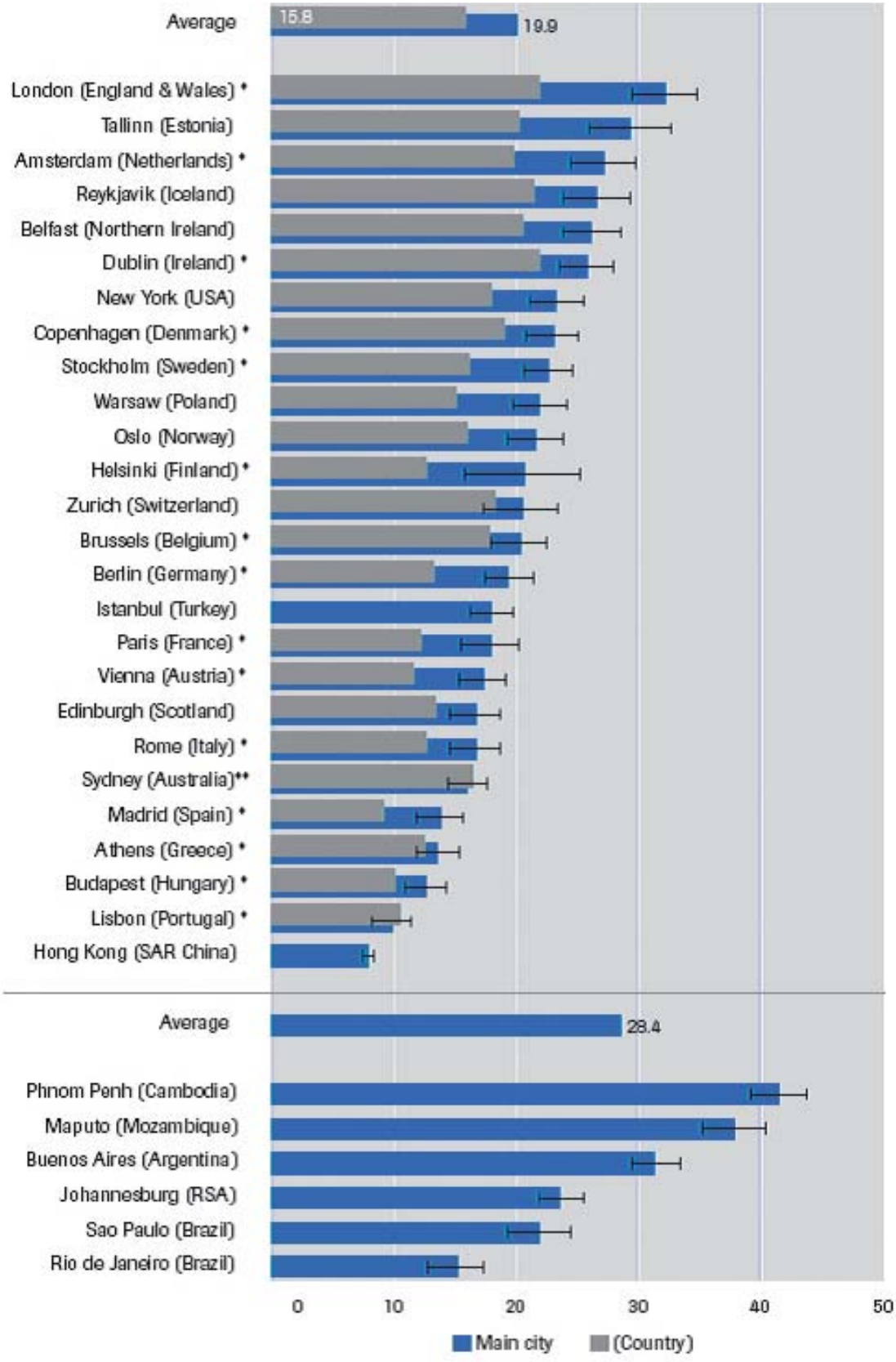
Source: TfL

Crime

In the 2009 Annual London Survey over a third of respondents highlighted safety and policing as the worst thing about living in London (the largest single category)[116]. It is important for London's ongoing attractiveness that residents feel safe both when in their homes and in public places.

Unfortunately, international comparisons suggest that the UK (and London) residents suffer from relatively high levels of victimisation. Figure 6.13 shows the percentage of people victimised once or more in 2004 by any of ten common crimes[117]. The chart shows that, on average, around 16 per cent of the population was a victim of at least one of these crimes in 2004. The chart also shows that levels of vicitimisation are higher in cities than for the country as a whole (Lisbon being the only exception in Figure 6.13). The chart shows that, whilst the figures are estimates and so subject to statistical variability, London (and England and Wales) compare rather unfavourably with other countries and cities[118].

Figure 6.13 Overall victimisation for 10 crimes; one year prevalence rates in 2003/04 (percentages) of main cities and national populations of 28 countries. 2002-05 ICVS and 2005 EU ICS



Source: European Survey of Crime and Safety (2005 EU ICS). Brussels, Gallup Europe

Tackling crime is more costly and complex in London when compared to the rest of England because of higher labour costs, the presence of organised criminals, the heterogeneity and dynamism of the population, additional costs of policing demonstrations, large events and the number of service delivery bodies in London[119].

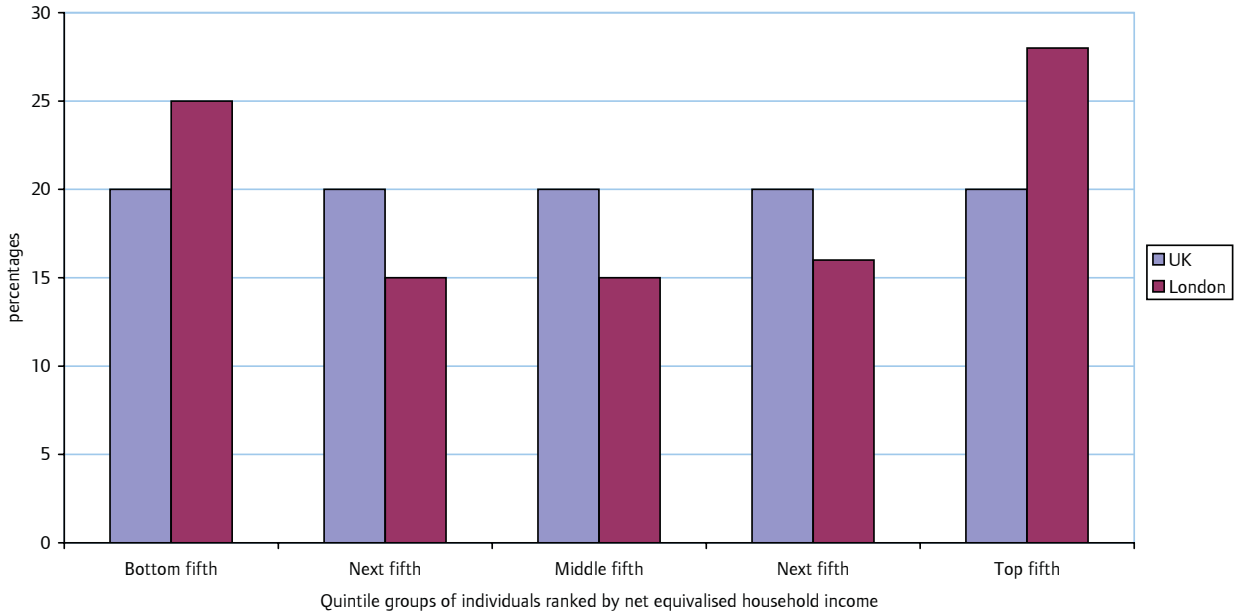
Chapter 7: Socio-economic issues

London has a polarised income distribution. As well as containing a high share of the UK's most prosperous individuals, it is also home to a high share of the UK's poorest individuals. Part of the reason for London having a high share of the UK's poorest individuals is because of its relatively high rate of worklessness. This is also a factor behind London's high rate of child poverty. Child poverty can also impact on a person's future chances of progressing in education and, as a result, their future labour market prospects.

This chapter focuses on some of the socio-economic issues in London. It looks at households on low incomes and highlights the significant share of London households, and children in particular, that live in poverty. The chapter shows how prospects as an adult are linked to educational achievement as a young person but also that educational achievement for a young person is strongly linked to parental incomes.

Previous chapters have shown a side of London in which large numbers of highly qualified workers help maintain London's status as a global business centre. However, this is not the whole story of London because London is also home to a significant numbers of adults and children living in poverty.

Figure 7.1: Income distribution of individuals in London, 2005/06-2007/08 after housing costs



Source: DWP, Households below Average Income (UK figures are based on a single year, London figures are based on 3 year average)

Looking at the income distribution of individuals, after housing costs, we find that 28 per cent of Londoners are ranked in the top quintile nationally, whilst 25 per cent are ranked in the bottom quintile (see Figure 7.1). This means that in comparison to the rest of the country London is home to significant income polarisation, with much of the population skewed either towards the top or bottom of the UK's income distribution. Furthermore, this polarisation is even larger in Inner London, with 27 per cent in the bottom quintile and 29 per cent in the top quintile after housing costs[120].

So why does London have such an income distribution? The explanation for London's high share of individuals at the top of the UK income distribution seems clear. Compared to the rest of the UK, London is home to a large share of the UK's highest paid job opportunities, particularly in the financial services and business services sectors and in management and professional occupations. Thus, for those with the requisite skills and qualifications opportunities for advancement and high incomes in London are widely available.

In terms of why London should also have such a large number of individuals towards the bottom of the UK income distribution, the first thing to note is that this is only the case when measured net of housing costs. In other words, the level of incomes received via wages or benefits towards the bottom of the income scale are no worse in London than elsewhere in the UK. However, the high cost of housing in London means that once housing costs have been deducted, we find that 25 per cent of Londoners are amongst the 20 per cent of UK residents with the lowest incomes net of housing costs.

Another reason why London has a large share of its population towards the bottom of the income scale but relatively few in the middle of the UK income scale is that there is evidence of greater job polarisation in London than in other UK regions. Research showed that during the 1990s the employment shares of both low and high paid occupations grew whilst there was a shrinkage of job opportunities in between. This occurred nationally, but the trend was much larger in magnitude in London[121]. The impact on incomes occurs because a higher share of workers therefore find themselves in low pay occupations, with the opportunities for progression limited arguably by the shrinkage in the number of mid-paying jobs available.

A final reason why London has a significant number of its population towards the bottom of the income distribution is that it has a higher level of worklessness amongst working age adults than the rest of the UK. This is particularly true amongst females.

Therefore, due to a mixture of low pay, worklessness, and high housing costs, many Londoners find themselves living in poverty. That this is a problem is seen not just in social problems such as higher crime rates and poorer health outcomes that characterise many low-income areas of London but also in the fact that a disproportionately high number of London's children (39 per cent) live in low-income families.

With high levels of skills and qualifications becoming increasingly important to succeed in the London job market, the fact that almost four out of every ten children live in poverty is a major problem as the evidence is clear that children in low-income families significantly under-perform their peers in educational attainment. The risk is therefore that these children will themselves as adults continue to live in poverty, either workless or in low-wage jobs, due to their lack of qualifications, and that deprivation in many areas of London will continue.

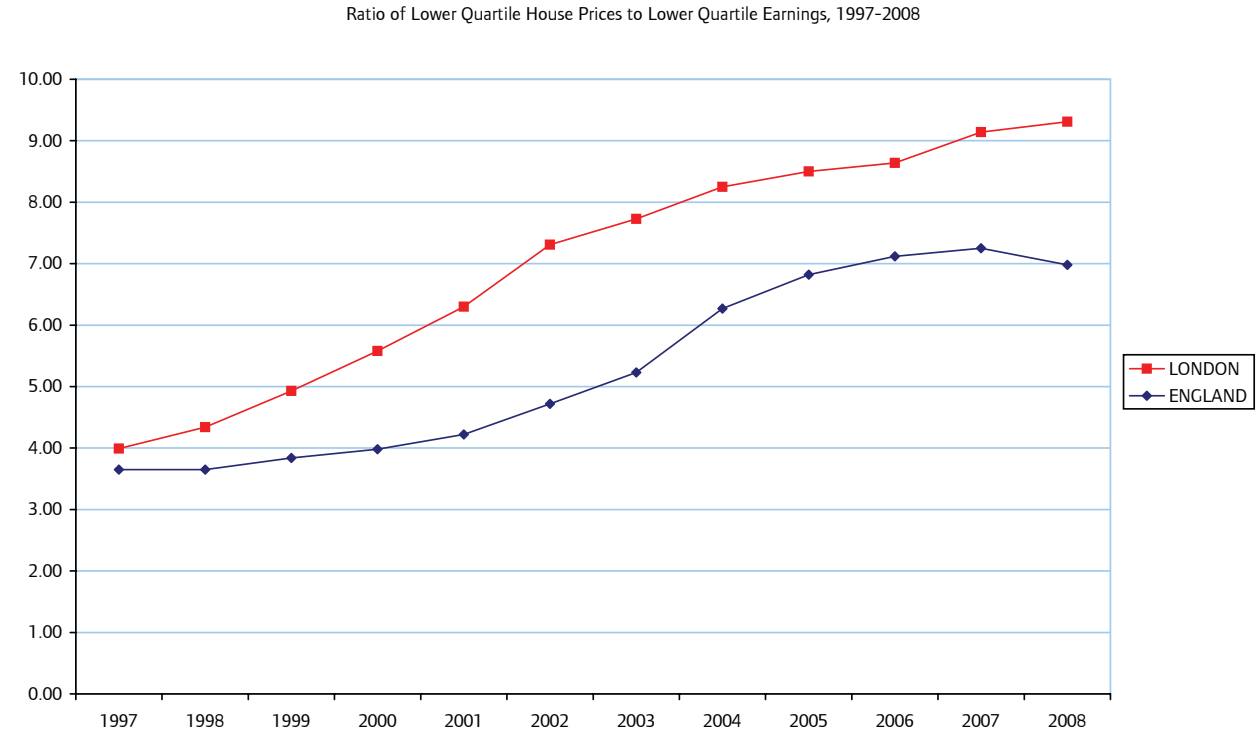
From the point of view of London employers, if they are unable to find sufficient skills amongst residents, they will look to migrants from abroad to fill their jobs, as already occurs (or in the extreme look to locate in other destinations). However, employers would clearly benefit from being able to employ suitably qualified local residents. As such, the need to raise educational attainment amongst London's young people, and particularly those from low-income backgrounds is clear. It would help the London economy, and it would help alleviate some of the social problems that currently exist in many of London's deprived neighbourhoods.

Housing

The government's preferred measure of housing affordability is the ratio of lower quartile house prices to lower quartile earnings. Figure 7.2 shows that this ratio increased from 4.0 in 1997 to over 9.0 in London in 2007 and 2008. People on low incomes have therefore found homes increasingly unaffordable in London since the mid 1990s. As such, home ownership in London is currently not a realistic option for those on low quartile earnings and has become increasingly difficult for those on median incomes.

As a demonstration of this, the average income (including joint incomes) of those buying a home in London in early 2008 was £59,100 for first-time buyers and £96,000 for existing owners[122].

Figure 7.2: Affordability of housing over time



Source: CLG

It is not a surprise therefore that the number of households on local authority waiting lists has been growing. The number of households on local authority waiting lists in 2008 was over 353,000 (11 per cent of all households), up from 177,000 in 1998[123]. At the same time as housing lists have grown, lettings to social housing in London have fallen from 70,000 to 42,000 per year[124]. So as waiting lists rise the numbers receiving social housing has been falling, creating an increased demand for private renting.

However, the gap between the cost of social renting and private renting is significantly larger in London than elsewhere in England. In London, the average weekly social rent is £80 and private rent is £180[125]. Elsewhere, the averages are typically around £50 and £100 respectively. As a result, 25 per cent (about 150,000 households) of those who privately rent in London receive housing benefit to subsidise the cost[126 127]. (In total 21 per cent of London households receive housing benefit, mostly made up of those in social housing but also including these private renters).

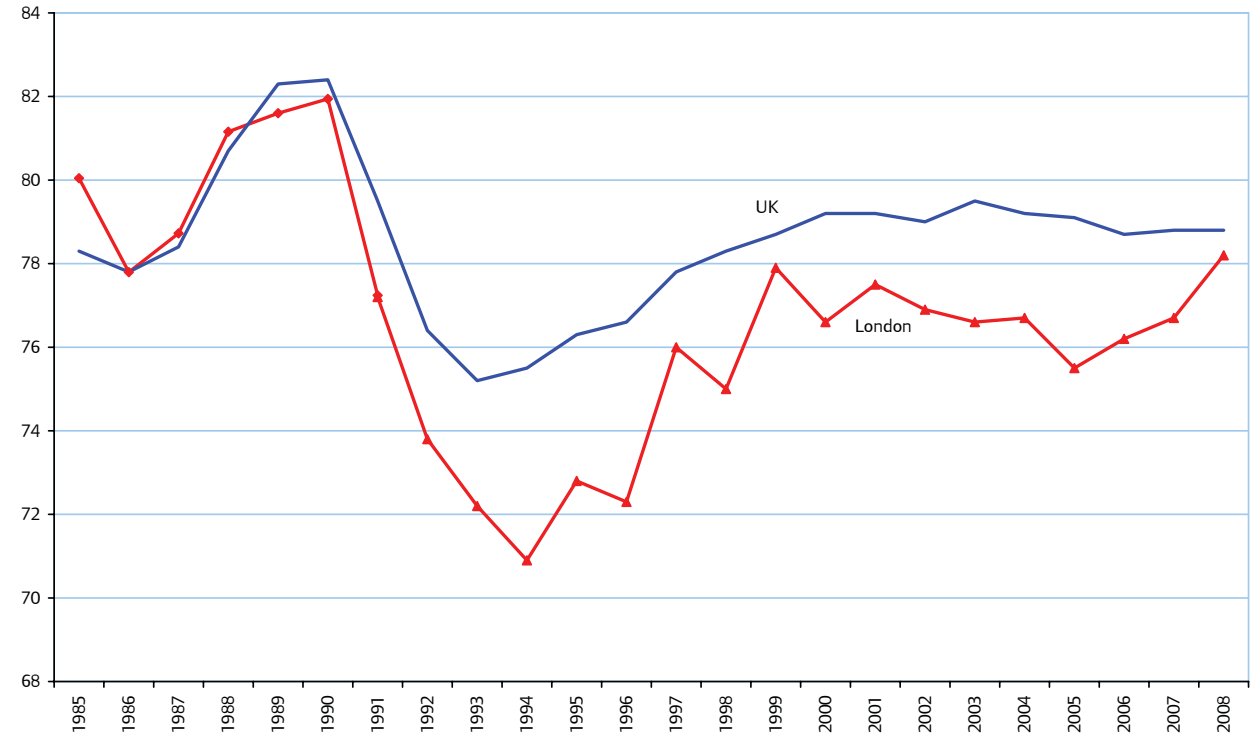
The recent boom in house prices was caused partially by a boom in credit. The tightening of credit conditions over the past year or so has therefore led to house prices declining. However, rising prices were not just down to lax credit control. As shown in Chapter 2, they have also reflected tight fundamentals in the housing market with the number of new homes struggling to match the increasing size of the London population and the rise in the number of households. As such house prices in London are likely to remain high, and relatively unaffordable, compared to elsewhere in the UK.

High house prices across London, together with relatively low incomes for a significant proportion of Londoners[128], mean that there will continue to be a large number of London residents who therefore require assistance to finance their housing requirements whether this be through social housing, or housing benefits to pay towards private sector rents.

Worklessness

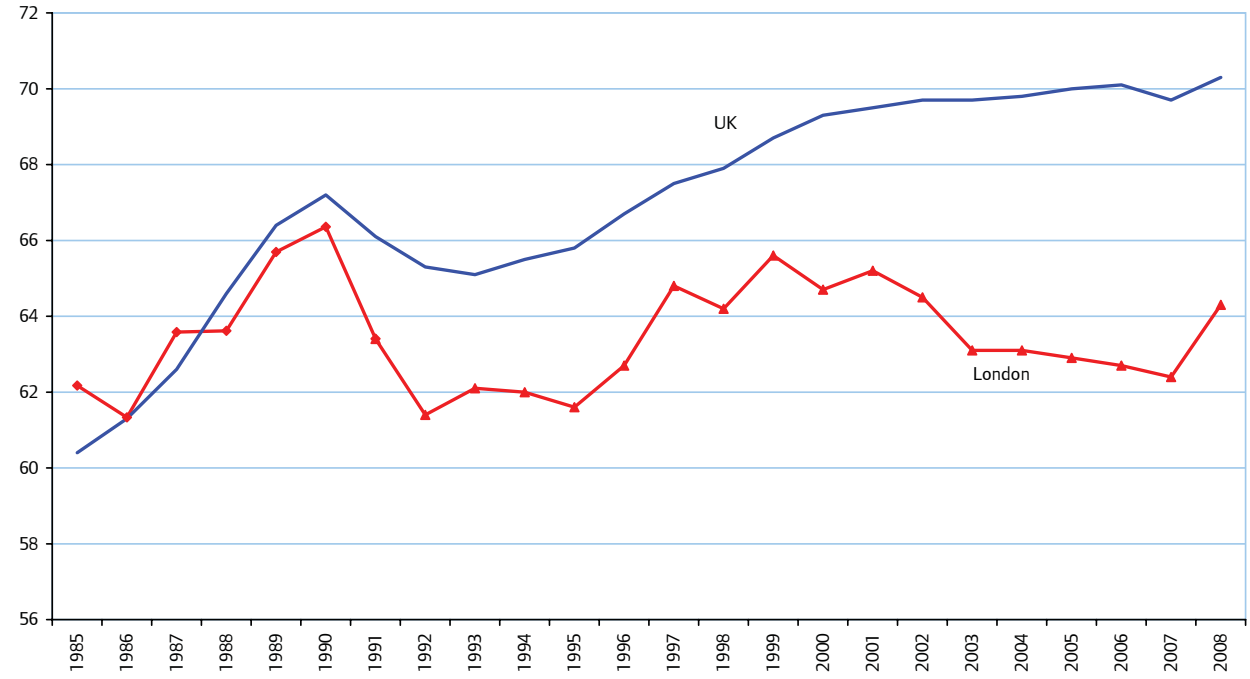
The London labour market is unusual. Demand for labour is high and employment levels were growing until the onset of recession in late-2008 with the number of jobs in London rising by 800,000 from 1996 to 2008[129]. At the same time, however, London's employment rate has lagged that of the UK throughout this period, with the female employment rate in particular lagging. As Figures 7.3 and 7.4 show, the problem of higher levels of worklessness in London is one that has persisted since the early 1990s.

Figure 7.3: Male employment rates in London and UK over time (%)



Source: LFS

Figure 7.4: Female employment rates in London and the UK over time (%)

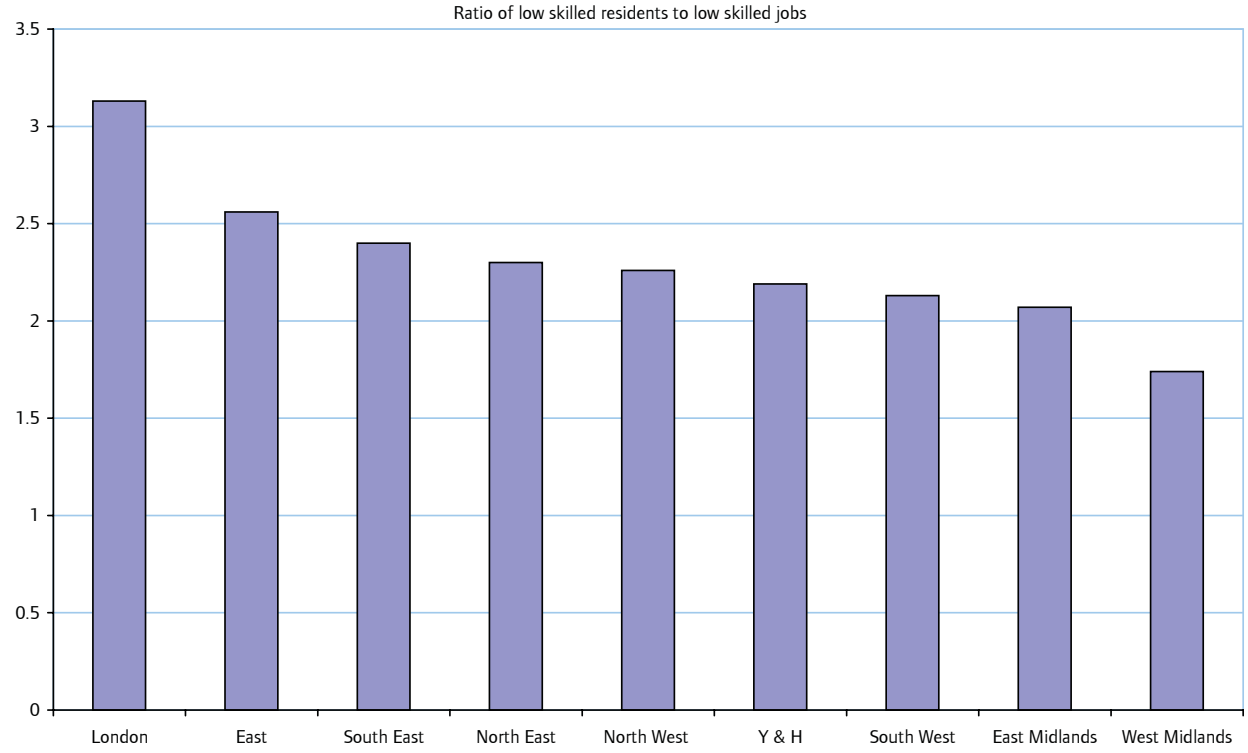


Source: LFS

One of the reasons for worklessness – but not the only reason - is a lack of qualifications amongst some residents. There are approximately 645,000 working age Londoners with no qualifications and they face stiff competition at the lower end of the jobs market. As shown in Figure 7.5, London has over 3.0 low skilled residents for every low skilled job as compared with 2.3 in the rest of the UK[130]. Furthermore, relative to other regions, London also has fewer jobs in 'average' pay sectors, which means it can be difficult in London to facilitate progression and provide opportunities in the labour market for those with low or mid level skills.

By contrast, the demand for employees with high skills continues to grow and it is projected that 50 per cent of employees in London will have degree level skills by 2020. This compares with the current proportion of working age Londoners with degree level qualifications of 37 per cent[131].

Figure 7.5: Competition for low skilled jobs across the UK



Source: HMT

Overall therefore London has a partial mismatch between a demand from employers for workers with high qualifications and a significant proportion of its population having relatively low or no qualifications. However, qualifications are not the only factor impacting on worklessness, research has shown that London's low employment rate is a result of a number of factors including amongst others the relatively greater concentration of those groups who experience lower employment rates wherever they are located (lone parents, people from Black, Asian and Minority Ethnic (BAME) communities; the long-term disabled; and being aged 50 or over) and also the high cost base of London and in particular the higher costs of child care.

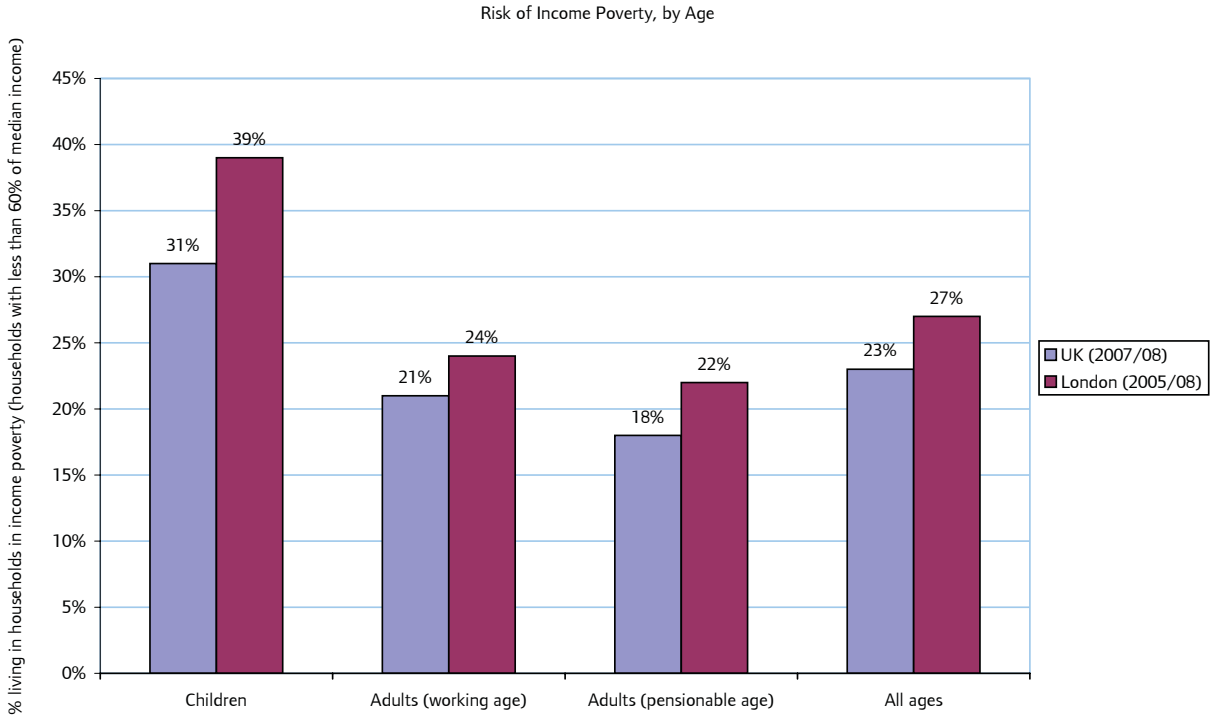
There is also a correlation between housing tenure and worklessness. Employment rates for working age residents in private sector housing are above 80 per cent whilst in social housing they are below 50 per cent. Research suggests that the causality between social housing and worklessness works both ways. On the one hand individuals with labour market disadvantages are likely to disproportionately be housed in social housing (generally due to the fact they are unable to finance private sector housing). So it is to be expected that average employment rates would typically be lower amongst social housing tenants. However, evidence also suggests that being a tenant of social housing itself then appears to further lower prospects of employment[132].

The existence of high levels of worklessness in London has a number of significant economic consequences including a loss of economic output; an increased fiscal burden and an impact on the prospects of tomorrow's workforce through its impact on the children of workless adults today.

Child Poverty

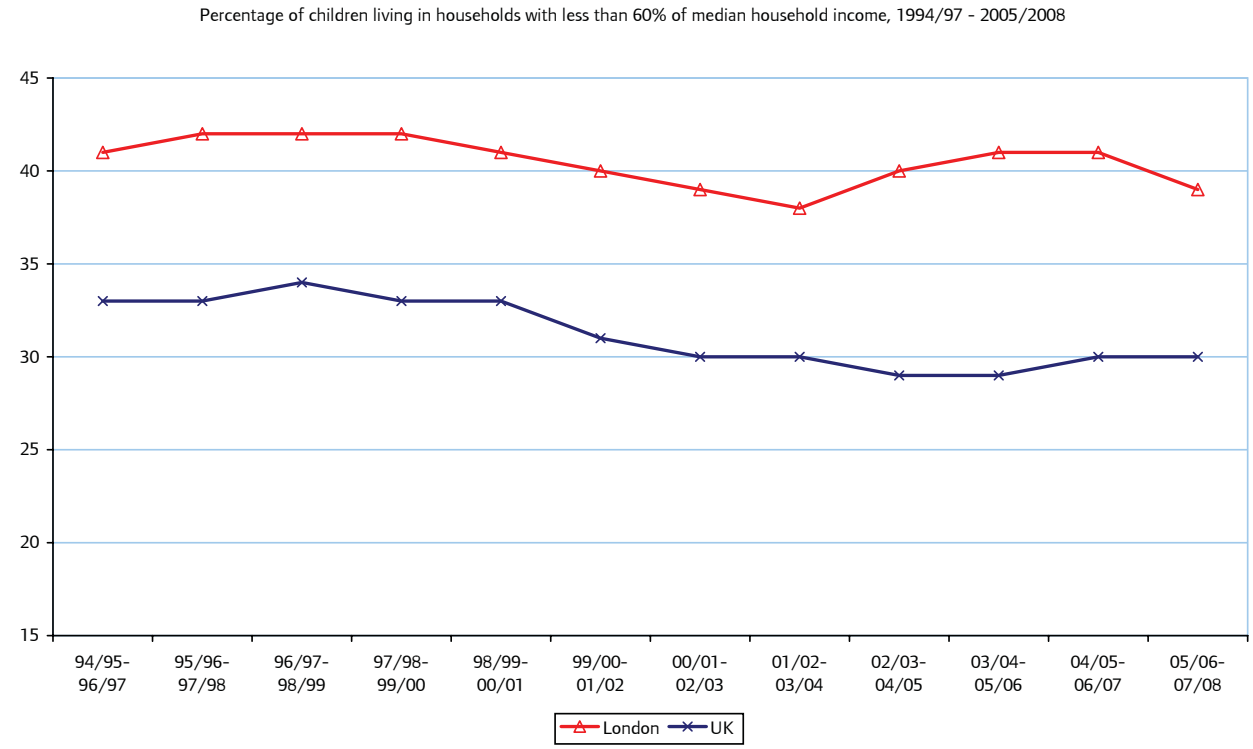
During 2005-08, nearly two out of five children (39 per cent) in London lived under the poverty line after accounting for housing costs (see Figure 7.6). Rates of child poverty are particularly high in Inner London, where 44 per cent of all children live in poverty[133]. Furthermore, trend data over the last 12 years show that national improvements in child poverty rates have not in general been evident in London where rates remain stubbornly high (see Figure 7.7).

Figure 7.6: Income poverty in London and the UK



Source: DWP, Households below Average Income (UK figures are based on a single year, London figures are based on 3 year averages).

Figure 7.7: Child poverty in London and the UK over time



Source: DWP

One quarter (25 per cent) of all London's children live in workless households, that is households with no adults in work (October-December 2007). London has, by far, the highest percentage of children living in workless households of all regions. Rates are exceptionally high in Inner London where around one third (32 per cent) of all children live in workless households. While the rate is lower in Outer London (21 per cent) it still remains well above the rate in the rest of the UK (15 per cent)[134].

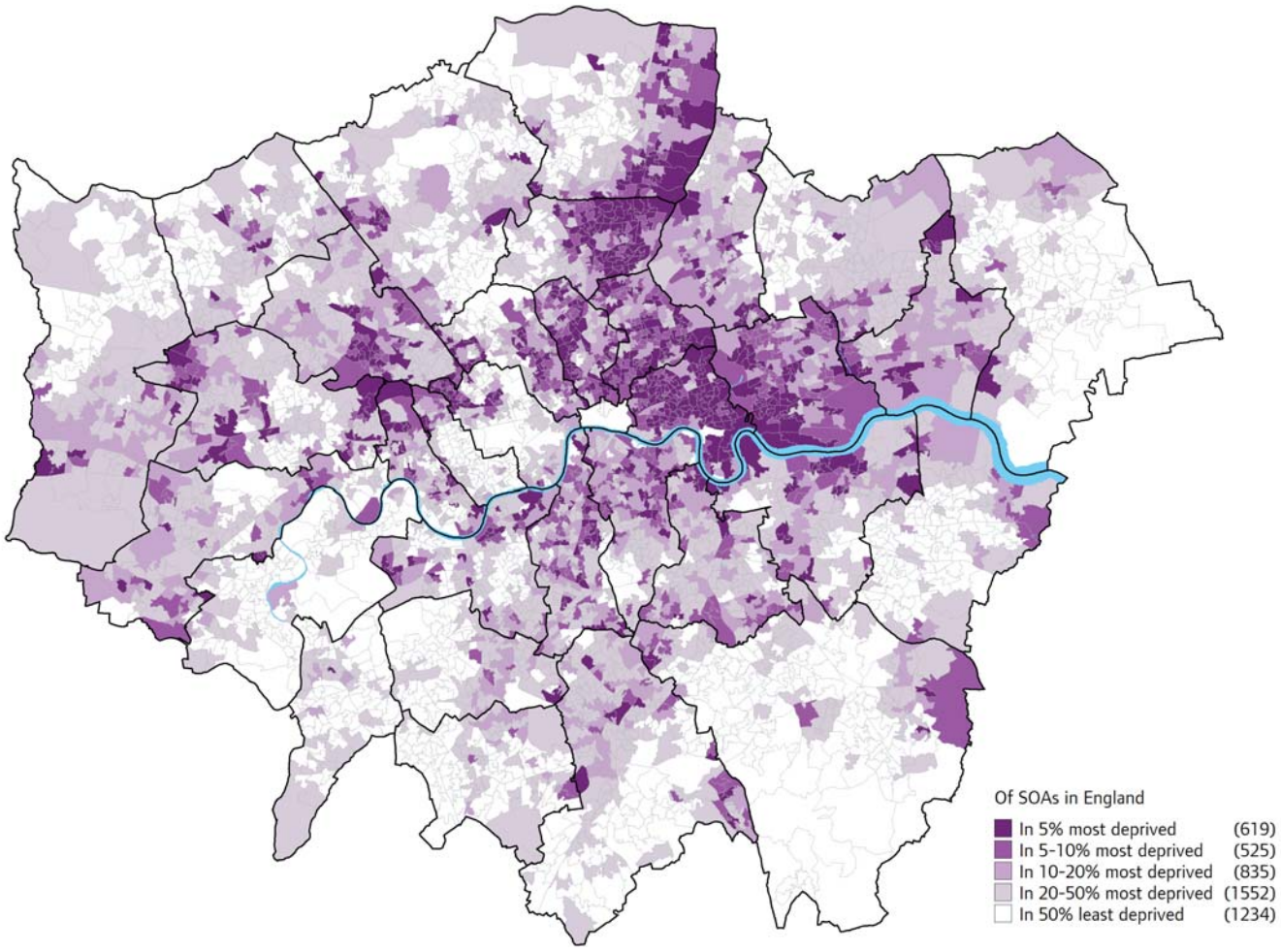
Similarly, in August 2007, 28 per cent of children in London lived in families with at least one adult claiming a key benefit[135] - around 472,400 children. Three quarters of these children lived in lone parent families. Of all local authorities in Great Britain, the four with the highest percentage of children living in families on key benefits are London boroughs: Tower Hamlets (49 per cent), Islington (46 per cent), Newham and Hackney (both 41 per cent). A third of London boroughs appear in the top 5 per cent of GB authorities on this measure[136].

Therefore, child poverty in London is particularly high with worklessness amongst parents a major contributing factor in many cases. However, it is not the case that all child poverty is due to parental worklessness. Latest UK research for the Joseph Rowntree Foundation found that over half of all UK children in child poverty live in households where at least one parent works. This data showed that child poverty in the UK was shared amongst households as follows; working couple 44 per cent, lone parent working 8 per cent, non-working couple 15 per cent and non-working lone parent 32 per cent. As such, whilst worklessness is a key cause of child poverty, low pay amongst working parents is also significant for many children living in poverty.

To give an indication of the number of workers in London receiving relatively low wages, currently 15 per cent of full-time employees, and almost half of part-time employees, in London earn less than the living wage of £7.60 per hour[137]. There is strong evidence of a 'low pay, no pay' cycle affecting significant numbers of employees. Low paid employees are more likely to be out of work in the future and those who re-enter the labour market after being unemployed are likely to be in low paid jobs. Low paid individuals therefore are more likely to fall into poverty.

Whether due to parental worklessness or low pay, it is clear that many children live in poverty in London and that they are concentrated geographically in particular areas. In total, 13 per cent of SOAs (Super Output Areas ie, small local geographical areas) in London are within the top 5 per cent most deprived SOAs in the country according to the Income Deprivation Affecting Children Index[138], and 42 per cent of London SOAs are within the top 20 per cent most deprived SOAs in the country. Figure 7.8 shows the location of these areas with a clear concentration towards the North and East of Inner London. At the local authority level, Tower Hamlets, Hackney, Islington, Newham and Haringey are the five boroughs with the highest rates of children living in income poverty in England. In each of these boroughs over 50 per cent of children are living in income poverty by this measure.

Figure 7.8: Deprivation affecting children



Source: Department of Communities and Local Government Indices of Deprivation 2007

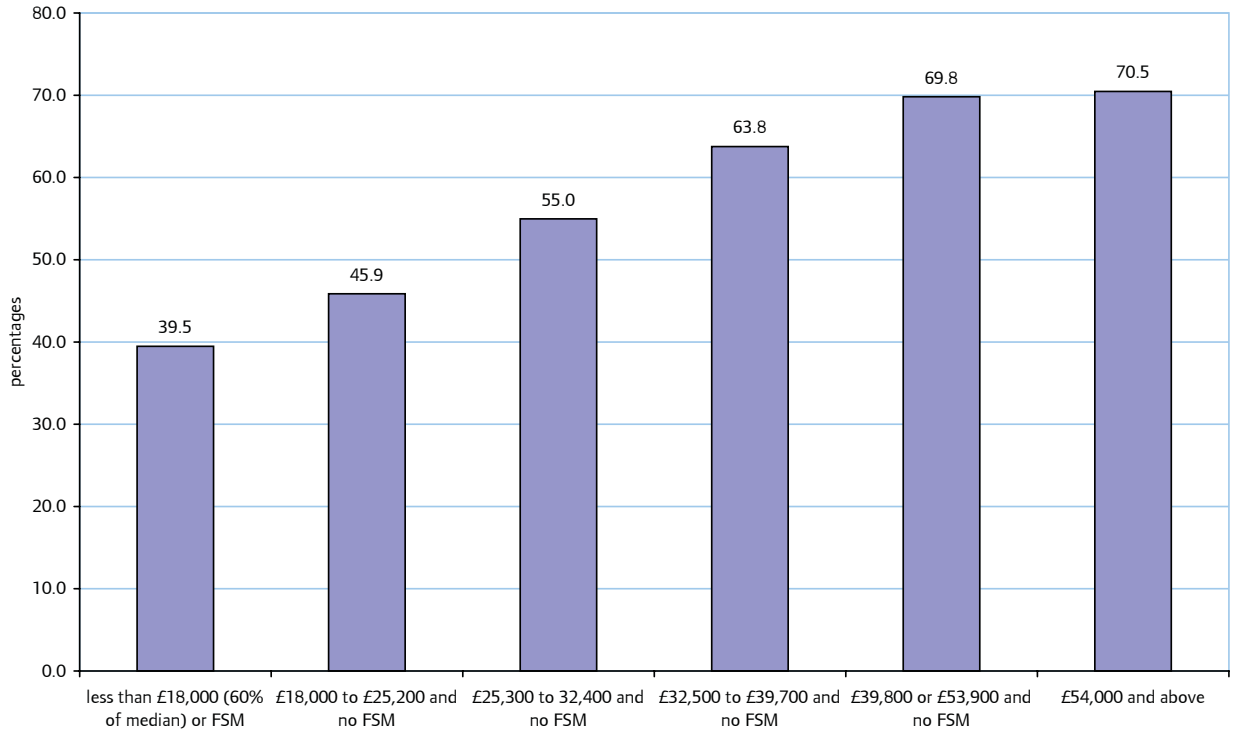
The risks of persistent poverty for a child are accentuated by a number of factors. These include having a larger number of siblings, living in a one-parent household, and living in a household headed by an adult with low educational attainment[139].

Birth cohort studies highlight the impact of poverty on life chances across the life course and between generations: people who experienced poverty in childhood are more likely to have low incomes and worse employment prospects than those who did not have poor childhoods, whilst children from poor backgrounds are less likely than other children to continue in school after age 16, or to attain educational qualifications. Meanwhile, women who experience poverty in childhood are more likely than those who did not to become mothers at a young age and lone parents. There is also a significant relationship between poverty and ill health and disability[140].

Educational attainment lessens the risk of poverty by improving employment opportunities and wage potential. However, birth cohort studies have observed that education often serves as a 'transmission mechanism' for disadvantage: childhood poverty is associated with lower educational attainment which, in turn, is associated with low income in adulthood[141].

Figure 7.9 illustrates this issue. It shows that educational attainment amongst children is strongly correlated to parental incomes. Indeed, the differences between pupils' GCSE results are larger when comparing pupils in the same ethnic group but of high and low socio-economic status than when comparing the difference between ethnic groups.

Figure 7.9: Pupils (aged 15 in 2004) achieving 5 or more GCSE A*-C grades or equivalent by home income group and Free School Meals (FSM) entitlement



Source: DMAG using merged 2002 – 2005 LPD

A good illustration of this is the fact that whilst overall White British children in London achieve higher results than those from BAME groups at GCSE level, this is not the case if we constrain the sample to just look at those in each ethnic group who live in poverty (measured as those receiving free school meals). When this is done it is found that amongst pupils on free school meals it is actually White British children who perform worst of the ethnic groups with 47 per cent of White British children on free school meals not achieving a single grade D at GCSE[142].

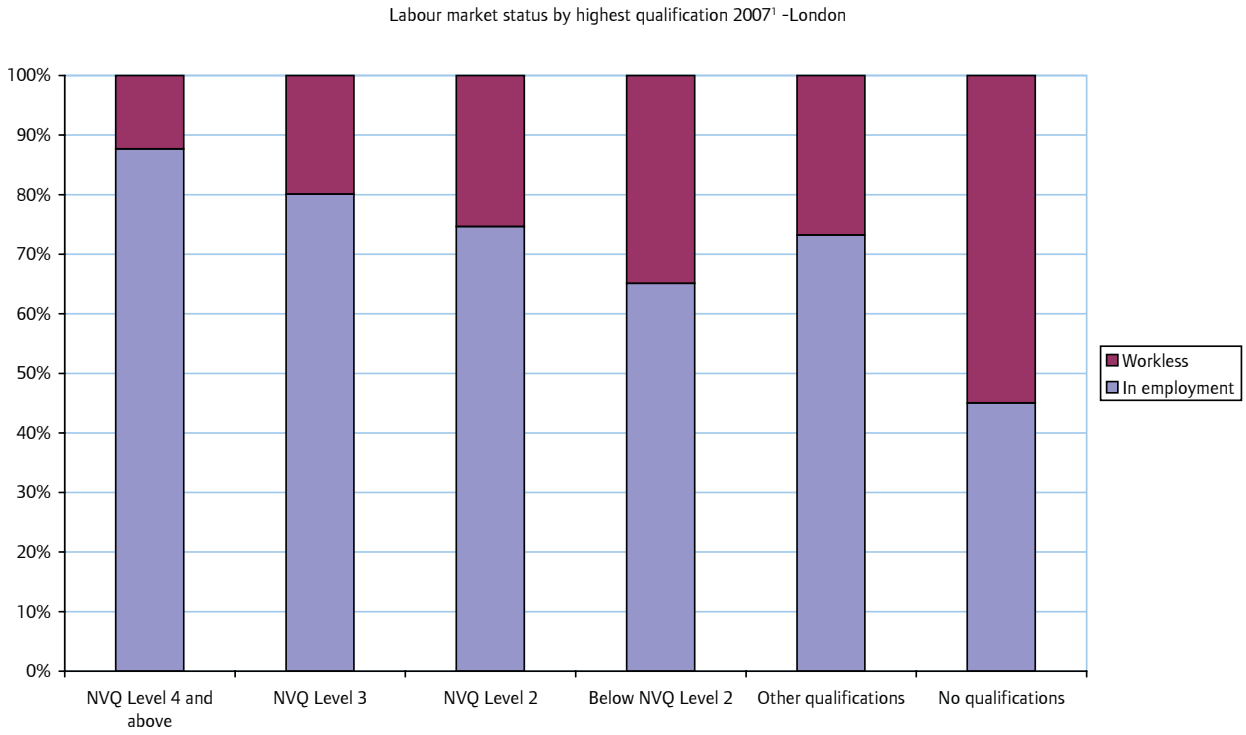
In summary, in addition to the economic costs of dealing with crime, poor health and other similar social problems often associated with poverty, there is the additional economic impact created by the fact that children who grow up in poverty generally have low educational attainment and are therefore on average going to be less productive workers as adults. That 39 per cent of London's children are currently living in poverty is therefore a major economic issue for the future as it suggests there are a large number of children in London at present who may in the future struggle as adults to compete effectively for jobs in London's labour market.

This chapter has illustrated that a significant proportion of Londoners live in poverty, cycling through low-pay jobs and worklessness and relying on benefit payments, particularly in terms of housing to supplement their incomes. In particular, this chapter has illustrated the high proportion (four out of ten) of children who live in poverty in London, and how many risk becoming adults living in poverty due to low educational attainment.

By contrast, we have employers increasingly seeking high-skilled individuals to fill jobs in London. Already, over 50 per cent of 25-34 year olds working in London have a degree while across all age groups the proportion is well over 40 per cent.

Figure 7.10 shows employment rates by qualification. It shows that employment rates rise as an individual's qualifications rise. It shows a major benefit to having a degree in London (level 4+ qualifications). At the lower end of the scale, it additionally shows the importance of having at least a level 1 qualification compared to having no qualifications at all.

Figure 7.10: Labour market status by qualification level

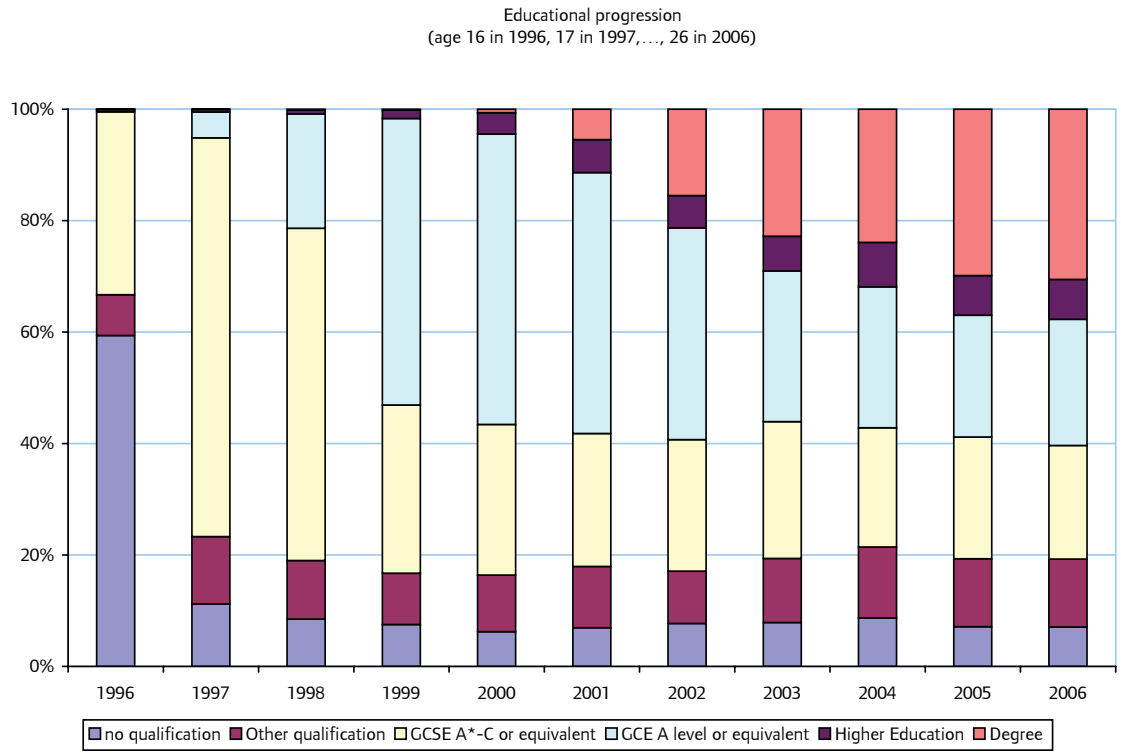


Source: ONS, APS 2007

1 Data exclude full-time students

Meanwhile, evidence also suggests progress amongst low-skilled adults to higher level qualifications over time is fairly minimal. Figure 7.11 follows the results from the Labour Force Survey of a cohort who were 16 in 1996 and 26 in 2006. The chart suggests that beyond the age of 19 (and certainly beyond the age of 21) there is little improvement made in terms of obtaining qualifications by those who have level 2 or below qualifications.

Figure 7.11: Qualification profile of different age groups



Source: Spring quarters from the Labour Force Survey, 1996-2006

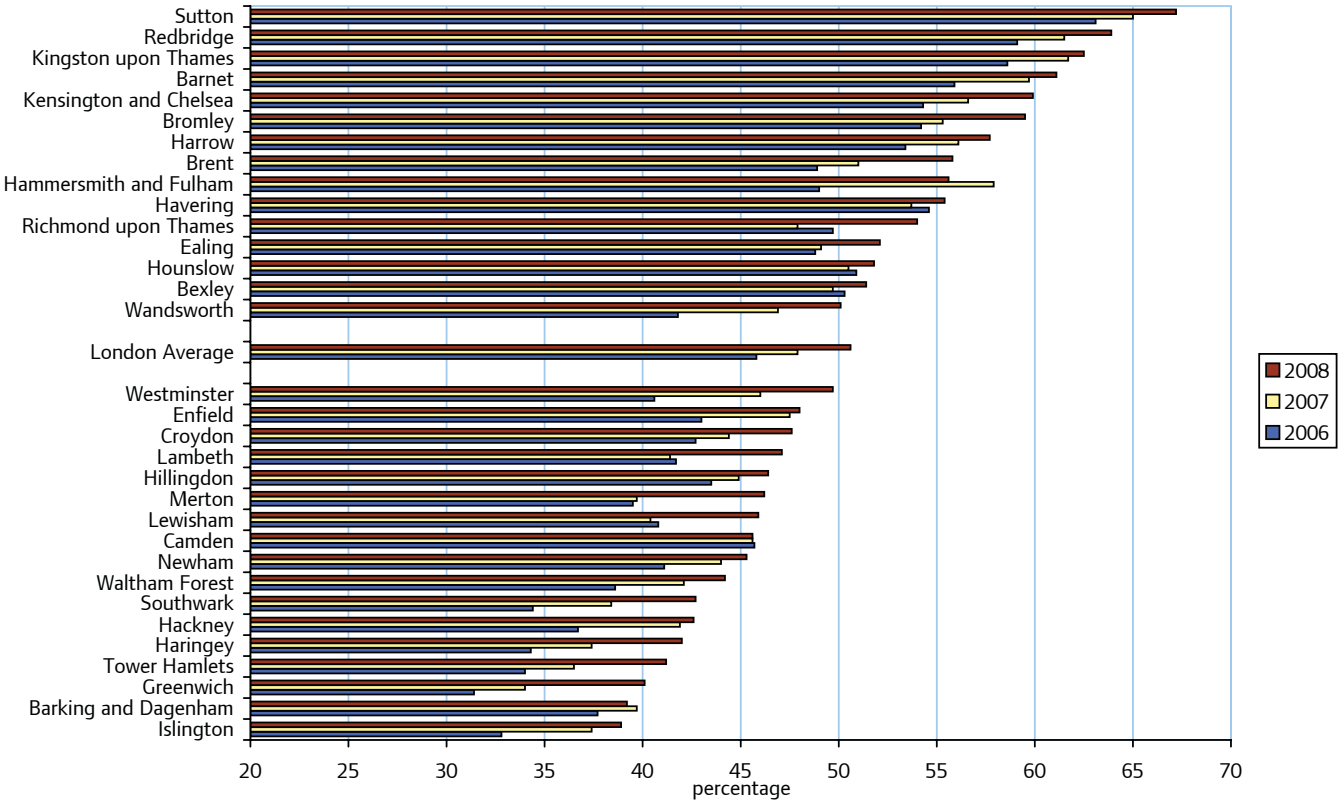
All of the above suggests that successful education of children (all children, but particularly those from disadvantaged backgrounds) is vital for addressing future issues of poverty and social mobility in London. The fact that it is very difficult to raise the educational performance of children from disadvantaged backgrounds is clear to see by the evidence that shows current childhood educational attainment so strongly correlated to parental incomes. Nevertheless, in terms of potential public sector interventions, any policies that can successfully raise the educational standards of children from disadvantaged backgrounds would appear to have huge potential benefits for London in terms both of providing a better trained workforce to future London employers and in helping to address the social problems, deprivation and lack of social mobility that exist across much of London today.

Qualifications of Young People in London

With London's job market consisting of a much greater share of jobs requiring higher qualifications than other regions, there is a real need for London's young people to obtain good qualifications if they are to successfully compete in the labour market upon completion of their studies. This is particularly important as they will face extra competition from many highly qualified domestic and international migrants moving to London aged in their 20's.

The good news is that headline qualification achievements have been improving amongst London's young people. The numbers obtaining both level 2 and level 3 qualifications has risen sharply in recent years. Additionally, it is also the case that a higher proportion of London's young people go on to higher or further education than do young people from other UK regions.

Figure 7.12: GCSE attainment (including English and Maths) by London borough over the past three years



Source: DCSF

Maintained Schools Only - Share of pupils at end of Key Stage 4

GCSE results have improved rapidly amongst London children over recent years with the percentage obtaining 5 A*-C grades rising from 45 per cent in 2000 to 64 per cent in 2008. However, ability in English and Mathematics are crucial to many employment opportunities and so it is often considered preferable to consider the data on the numbers of pupils obtaining 5 GCSEs A*-C including English and Mathematics.

Figure 7.12 shows this data for London boroughs. It shows that in 2008, 50.6 per cent of London pupils achieved 5 A*-C GCSEs including English and Maths, an increase from 45.8 per cent in 2006.

Table 7.1 compares this London data for 2008 with other English regions and by gender. It shows that Outer London has a higher share of pupils (53.0 per cent) achieving 5 GCSEs A*-C including English and Mathematics than any other UK region. Average results for Inner London (45.4 per cent), however, are below the England average. It is also noticeable from Table 7.1 that there is a large gender gap in achievement with only 46 per cent of boys obtaining this qualification level in London in 2008 compared to 55 per cent of girls.

Table 7.1: GCSE 5 A*-C including English and Mathematics, 2007/08

	Boys	Girls	Total
London	46.4	55.0	50.6
Inner London	40.6	50.1	45.4
Outer London	48.9	57.2	53.0
Yorkshire and the Humber	40.6	48.3	44.4
North East	41.5	48.5	44.9
West Midlands	41.6	50.9	46.1
East Midlands	43.4	50.8	47.0
North West	43.7	51.3	47.4
South West	44.9	53.8	49.2
East of England	46.0	54.7	50.3
South East	48.1	55.4	51.7
TOTAL (Maintained sector, including CTCs and Academies)	44.4	52.4	48.3
England Average	43.2	52.3	47.6

Source: DCSF

After obtaining GCSEs or other level 2 qualifications, the next qualification target are level 3 qualifications. The share of London's 19 year olds who have obtained level 3 qualifications was 51.9 per cent in 2008 which shows a considerable improvement on the 2005 level of 45.8 per cent (see Table 7.2).

It should be noted that the increases in level 3 attainment in London (and in England) over the 2005 to 2008 period occurred via increases in the award of Vocational Related Qualification (VRQ) level 3 qualifications. At the same time, the percentage who achieved level 3 qualifications through A-levels[143] in London only remained stable at around 41.4 per cent . This distinction is of importance as it is those who obtain level 3 qualifications through A-levels or related qualifications, rather than VRQs, who are most likely to progress onto Higher Education[144]. VRQs are knowledge-based vocational qualifications earned via taught courses. The increase in attainment of these qualifications may be partly linked to the increased accreditation of courses as VRQs over recent years. In 2001 there were just 128 accredited VRQs in England. By 2008, this number had risen substantially to 2,139 accredited VRQs[145].

Table 7.2: Percentage of 19 year olds obtaining level 3 qualifications, by route of attainment, 2005 and 2008

	London			England	
	2005	2008		2005	2008
AS, A-levels, AVCEs or Advanced GNVQs	41.3%	41.4%		38.4%	37.0%
Advanced Apprenticeship	0.2%	0.4%		0.5%	0.8%
NVQ Level 3	0.4%	0.7%		0.9%	1.3%
VRQ Level 3	4.0%	8.9%		5.6%	10.4%
International Baccalaureate	0.0%	0.5%		0.0%	0.3%
Total with Level 3					
Per cent	45.8%	51.9%		45.4%	49.8%
Number	37,000	44,000		281,000	322,000

Source: Department of Children, Schools and Families matched administrative dataset

Table 7.2 shows that young people in London perform slightly better than their English counterparts at obtaining level 3 qualifications. However, interestingly a much larger proportion of London's young people go on to Higher and Further Education. The most recent published data on this, for 2000, showed 36 per cent of 18 and 19 year olds in London continuing onto Higher or Further Education compared to 30 per cent for England overall[146]. Indications are that this trend towards higher participation rates amongst young Londoners has continued since this date.

Chapter 8: The role of the public sector

In order to improve economic efficiency and social welfare the public sector intervenes to alleviate market failures. Government and the Mayor also have a mandate to intervene for equity reasons. Interventions by Government are more likely to be successful when market failures that they seek to address are big or significant, when actions tackle the source of the market failure and when they offer best value for money in comparing net benefits and costs. When the public sector intervenes, Government failure is liable to reduce or limit potential improvements to social welfare and can lead to ineffective policies.

All of the evidence on London's economy; on the drivers and implications of growth and risks to future success, prompts questions regarding the role the public sector and specifically public bodies overseen by the Mayor. This Chapter aims to outline reasons why the public sector can have a role to play in the market and provides examples of relevance to the Mayor's economic development, transport and planning activities. Also included are principles governing when public sector interventions are likely to be successful, and the risks that interventions can pose to social welfare.

The basis for public sector intervention

Government is required first and foremost to enforce property rights and contracts (through policing and law courts), without which individuals and firms would find it difficult to trade. With such arrangements in place free markets are, under certain ideal conditions, the most effective way to organise economic activity – with prices acting to ensure an efficient allocation of resources.

However, real-world markets are often subject to failures that prevent an efficient allocation of resources and harm economic performance as a result. The following key market failures imply scope for public sector activity to improve resource allocation within the economy:

- Public goods
- Externalities
- Imperfect information
- Failure of competition
- Episodes of disequilibrium (recessions/booms)

Details and examples of these market failures that underpin Mayoral spending are provided below[147]. As well as addressing market failure, Government can act to alter what it believes is a socially undesirable distribution of income and in London the Mayor has a mandate to intervene for such equity reasons. However, even in instances where there is a clear rationale for public sector intervention, such intervention will not necessarily improve matters. This issue, of government failure, is considered a little later.

Of the five key market failures above, actions to remedy episodes of disequilibrium such as the current recession are in general the focus of central Government, as are attempts to address failure of competition (by the UK competition authorities).

However, a lack of viable competition also explains public sector provision of London's transport system, for instance London Underground has the characteristics of a natural monopoly due to the prohibitive entry costs a competitor would face in setting up a rival network.

The market failures underpinning the Mayor's economic development activities are principally public goods, externalities and imperfect information.

Public goods are both non-rival (one person's consumption of a good or service does not detract from another person's consumption) and non-excludable (where it is not possible to exclude someone from the benefits of a good without them incurring greater costs). Activities classified as public goods include public realm improvements undertaken by the Mayor's agencies.

Individuals or firms may be able to cooperate to provide public goods. However, when the group of potential beneficiaries is large and non homogenous the public sector may have cause to intervene – for example to promote the tourism sector in London that displays an atomistic market structure.

Externalities are costs or benefits borne or received by parties not directly involved in an economic transaction, and they can be negative or positive. Examples of negative externalities are most notably environmental costs. In contrast, the supply of basic education to an individual is activity that creates positive externalities in the wider economy. Many LDA investments are in response to externalities in the areas of environment and basic skills.

Imperfect information describes different levels of information between buyers and sellers that may lead to reluctance to trade. For example, small firms looking to acquire finance may know that they have a viable business and are not likely to default on loans, but banks do not have proof of this information and are therefore unlikely to lend without the backing of collateral. If small firms do not hold such collateral then the Government may step in to guarantee private loans, facilitating lending which information problems would otherwise prevent.

When should the public sector intervene?

There are a number of conditions that, in general, increase the likelihood that public sector involvement in the market will improve social welfare.

Improvements to welfare are more likely when the public sector attempts to alleviate market failures that are large or significant. In addition, worthwhile Government actions are usually those which target the cause of a market failure rather than supplanting the market. This requires a shrewd diagnosis of the failure to be addressed and analysis of how it can be tackled without creating dependency on the state.

Benefits to society are likely to be greater if public projects offer best 'value for money'. Therefore when a number of different policy options are proposed to tackle a particular market failure, these should be assessed on the basis of which is likely to prove most effective and offers the best 'value for money'.

Higher benefits are also more likely when public sector actions are aligned rather than overlapping or duplicating. A positive example of alignment in the area of skills is public sector agencies and private sector employers working together through the London Skills and Employment Board (chaired by the Mayor).

All of the factors mentioned can be captured or estimated in an assessment of the likely benefits and costs of a proposed intervention. Public investment will be advantageous only when additional benefits (over and above what would have happened in its absence) outweigh the costs (required to overcome market failure).

In the design of interventions, comparison of likely additional benefits and costs may be qualitative in many cases but should ideally be supported by quantitative evidence (cost benefit analysis) from evaluations of similar projects. It is therefore crucial that the GLA and LDA effectively evaluate their own projects and be driven by knowledge of 'what works' to inform future policy selection and design. Robust quantitative evidence from evaluation of GLA and LDA activities is also important to help prioritise future investment.

Robust evaluation evidence and cost-benefit analysis attempts to assess the net effects of interventions. However, net effects may be impacted by private market responses to Government actions that were not anticipated by the public sector. Limited control over private market responses is one of the reasons that Government may fail to achieve its stated objectives. Such Government failure implies risks to its interventions in the market.

Government failure – the risks of intervention

Government failure results from a number of factors that can lead to public sector actions reducing social welfare. When acknowledging and responding appropriately to these factors the public sector has the potential to be more realistic and effective in the design of its interventions.

The first source of Government failure is a lack of information and incentives available to the public sector. Decisions of private firms are based on their incentive to maximise profit, while Government has no such overriding goal to drive performance. And the market has prices to inform on the value of goods and services available to consumers, but often no such mechanism is available to inform government spending. The success of cost benefit analysis to inform spending decisions relies on the public sector's ability to accurately assess benefits and costs – something which often proves difficult.

Interventions may be ineffective or detrimental if the public sector fails to anticipate private market responses to its actions that occur for a number of reasons.

If the public sector provides any good or service for which a market exists then there is the potential for government production to 'crowd out' private sector activity. For example, public provision of particular business support services can lead to a reduction in private provision of those services, either by established firms or entrepreneurs coming into the market. The outcome may affect the quality and appropriateness of business services available to firms and prevent optimal amounts of business and other services being produced in the economy.

The public sector may fail to correctly anticipate the relative strength of substitution and income effects of policies that change relative prices, such as subsidies that make certain goods cheaper (possibly to overcome externalities). As a result Government may under or over estimate the overall impact of its actions. For example, subsidies on home insulation will likely increase its use to help reduce heating need and associated carbon emissions. However, the scale of an increase in use (and the amount that emissions drop as a result) depends on the extent to which homeowners substitute towards insulation and away from other products as a result of the price change, and the extent to which they buy more insulation (or other products) with income saved on their existing purchases of it.

Even if the public sector is well informed about the consequences of its actions, Government failure can result from political or administrative failings. Political failings arise when individual interests override the public interest, as when special interest groups successfully influence the political process or lobby for an intervention for their own rather than the public's benefit. Administrative failings arise because public servants face the information problems already discussed and, importantly, different incentive structures to those of the private sector.

Lack of incentives and information can leave the public sector susceptible to the influence of individuals seeking preferential treatment for particular sectors or companies that they deem have potential not being recognised by the market. There are strong economic arguments against such selective support, commonly termed 'picking winners', which may take the form of direct subsidies or other interventions designed to aid particular sectors.

Examples of 'picking winners' have historically been shown to produce a poor return on investment of public money – even when at the time of investment areas supported were supposedly 'key' or 'growth' sectors. If investments in particular companies or sectors are likely to yield returns in the medium to long run (even with short term losses) then it is highly probable that they will be funded by the private sector – which has better information and incentives on which to base investment decisions.

Moreover, any gains from Government support to particular companies or sectors are bound to be outweighed by damage caused to the wider economy; a higher tax burden for the majority of sectors and companies not given preferential treatment (leading to lower production in those sectors), and importantly drawing labour and capital away from more productive sectors of the economy.

Where markets work they are the most efficient means of meeting the needs and preferences of individuals and firms. Rather than pick key sectors or particular companies Government policy should therefore focus on barriers that businesses face as a result of market failure (for example around skills, transport and quality of life).

Equity as a rationale for intervention

In addition to policies aimed at improving economic efficiency (based on alleviation of market failures), Government may intervene for social justice or equity reasons. This may be the case if an efficient market outcome is seen by society or Government as one that is not desirable.

Interventions for equity reasons are based on the judgements of democratically elected politicians. A market failure framework should still be used to consider the potential consequences of an equity based intervention and to ensure the desired outcome is achieved in the most efficient and effective way.

In conclusion, due care should be given to the conception of interventions based on significant market failures through to policy design and implementation. Evidence of 'what works' and appreciation of the ways in which the private sector is likely to respond to and influence interventions is also key to the success of public sector investment.

Appendices, endnotes and bibliography

Appendix 1.1: Selected international surveys of London's attractiveness to business

Index	Rank	Focus	London's assessment
European City Monitor (Cushman & Wakefield)	1	500 of the largest European companies were surveyed from nine European countries. Senior Managers or Board Directors, with responsibility for location rate cities based on 12 criteria. Respondents rated access to high quality staff and market access as the most important factor.	London is the most attractive European city to locate in. It has a significant lead over its nearest rival Paris, and was ranked first in 6 of the 12 categories.
Global Financial Centres Index (YZen Consulting / City of London corporation)	1	Focussing on the financial services sector, the study uses external indices and responses to an online questionnaire to compare the competitiveness of cities based on: the business environment (regulation and taxes); people; business infrastructure (transport, office space); market access (cluster of professional advisors; access to international markets); and competitiveness (reputation and marketing).	London is consistently ranked as the best city for financial services, marginally ahead of New York and significantly ahead of the next European city (Zurich). London performs very well across almost all the external indices. London is rated highly in most sectors of the finance industry – asset managers, banking, insurance and professional services.
MasterCard Worldwide Centres of Commerce Index (MasterCard)	1	A panel of top international, independent economic, urban development and social science academics rate the business environment of 75 cities. Cities are rated according to their legal and political framework, economic stability, ease of doing business, financial flows, standing as a business centre and as a centre of knowledge and information.	London performs well in ease of doing business, financial flows, knowledge creation and business centre accessibility. London out performs Paris and Frankfurt by a significant margin.
Global Cities Index (AT Kearny and Foreign Policy)	2	Using a broad array of data, and expert opinions, cities are rated using 24 metrics across five dimensions. These dimensions are, business activity; attractiveness to talented people; news and information flows domestically and to the rest of the world; cultural experience; political engagement (city's influence in global policymaking).	Runner-up to New York, London's strongest category was its cultural offerings. London also performed well in relation to human capital (attracting talented people).
Cities of Opportunity (PwC)	N/A	20 cities are compared across 51 variables. Cities are selected based on their size of their capital market, regional importance. The study uses publicly available data to rank cities across six axes of advancing urbanisation: quality and power; cost competitiveness; openness for business; intellect and innovation; sustainability management; physical momentum (construction and foreign investment).	Although there is no overall ranking, London is ranked first for its financial clout and transport infrastructure. It is also top five for most variables besides those relating to cost and safety and security.

Appendix 1.2: Employment projections by sector

This appendix sets out employment data for London by sector. It sets out historic employment data (from 1982) at the 12 sector level. It also provides projections of employment by sector out to 2031. Details of the nature of the data and how the employment projections are made will be provided in a forthcoming GLA Economics Working Paper.

GVA Growth = 2.5% p.a. (000s)													
	Primary & utilities	Manufacturing	Construction	Wholesale	Retail	Hotels & restaurants	Transport & communications	Financial services	Business services	Public Admin	Health & education	Other services	Total
1982	55	666	250	281	332	181	424	265	511	294	652	189	4,099
1983	52	626	246	278	333	180	409	270	538	291	656	191	4,071
1984	50	596	254	281	349	188	406	275	573	286	666	202	4,124
1985	48	569	257	276	357	192	394	283	608	279	678	211	4,152
1986	45	531	254	270	360	191	380	297	635	276	686	210	4,134
1987	43	502	269	269	366	193	383	314	671	275	705	214	4,204
1988	41	478	284	267	371	199	380	331	716	271	733	221	4,291
1989	40	473	295	258	369	203	379	326	743	259	723	225	4,292
1990	38	440	287	246	367	205	383	325	759	264	666	244	4,224
1991	36	381	258	228	352	189	368	314	732	267	612	268	4,004
1992	35	358	225	216	349	184	350	300	715	262	598	258	3,851
1993	32	338	199	214	348	188	341	292	742	254	589	263	3,800
1994	28	336	193	220	370	205	341	302	791	247	586	288	3,907
1995	23	333	202	232	362	217	327	313	833	240	576	296	3,954
1996	22	326	198	229	356	214	333	321	870	240	586	310	4,004
1997	20	327	192	245	363	235	346	319	906	240	605	318	4,115
1998	20	330	214	255	390	254	358	320	971	237	602	334	4,285
1999	23	325	197	259	408	275	365	336	1,020	226	612	354	4,401
2000	27	326	214	265	412	284	373	348	1,100	227	628	363	4,566
2001	25	303	212	257	410	289	372	360	1,132	213	639	372	4,586
2002	23	276	210	251	398	296	359	346	1,078	234	658	377	4,506
2003	18	267	214	240	398	307	359	345	1,084	238	690	366	4,526
2004	18	254	217	234	398	310	346	330	1,084	235	713	361	4,500
2005	20	240	218	226	405	314	353	326	1,142	248	727	369	4,588
2006	24	234	227	220	410	312	346	323	1,182	240	724	390	4,632
2007	29	224	242	215	402	305	342	334	1,222	229	731	400	4,676
2008	28	215	239	214	403	313	341	334	1,249	226	733	411	4,706

GVA Growth = 2.5% p.a. (000s)													
	Primary & utilities	Manufacturing	Construction	Wholesale	Retail	Hotels & restaurants	Transport & communications	Financial services	Business services	Public Admin	Health & education	Other services	Total
2009	27	207	236	213	404	320	339	334	1,274	224	735	422	4,736
2010	26	199	233	212	406	328	337	335	1,299	221	737	434	4,767
2011	25	192	230	211	407	336	335	335	1,323	218	740	446	4,797
2012	24	184	227	210	409	344	334	335	1,346	216	742	458	4,828
2013	23	178	225	209	410	352	332	335	1,368	213	744	470	4,859
2014	23	171	222	208	412	361	330	335	1,390	211	746	483	4,890
2015	22	164	219	207	413	369	328	335	1,411	208	748	496	4,922
2016	21	158	216	206	415	378	327	336	1,431	206	751	509	4,953
2017	20	152	214	205	416	387	325	336	1,451	203	753	523	4,985
2018	20	146	211	204	418	397	323	336	1,470	201	755	537	5,017
2019	19	141	208	203	419	406	322	336	1,488	199	757	552	5,049
2020	18	135	206	202	420	416	320	336	1,505	196	760	567	5,082
2021	18	130	203	201	422	426	318	336	1,522	194	762	582	5,114
2022	17	125	201	200	423	436	317	337	1,538	192	764	598	5,147
2023	16	121	198	199	425	447	315	337	1,553	190	766	614	5,180
2024	16	116	196	198	426	457	313	337	1,567	187	769	631	5,213
2025	15	112	193	197	428	469	312	337	1,581	185	771	648	5,247
2026	15	107	191	196	429	480	310	337	1,594	183	773	665	5,280
2027	14	103	189	195	431	491	308	337	1,606	181	775	683	5,314
2028	14	99	186	194	433	503	307	338	1,617	179	778	702	5,348
2029	13	96	184	193	434	515	305	338	1,628	177	780	721	5,383
2030	13	92	182	192	436	528	304	338	1,637	175	782	740	5,417
2031	12	89	179	191	437	540	302	338	1,646	173	785	760	5,452

Source: GLA Economics

Appendix 1.3: Employment projections by borough

This appendix sets out employment data for London by borough. It sets out historic employment data (from 1982) and projections out to 2031. These 'triangulated' employment projections result from the resolution of three key determinants:

- Historic trends – reflecting the past revealed preference of employers for locating jobs in particular boroughs;
- Site capacity – reflecting the expected availability of business sites for jobs to locate in across London; and,
- Transport accessibility – reflecting the changes in accessibility across London expected to flow from various improvements in London's transport infrastructure.

Details of the data and of the triangulation process will be provided in two forthcoming GLA Economics Working Papers.

('000s)	Barking and Dagenham	Barnet	Bexley	Brent	Bromley	Camden	City of London	Croydon	Ealing	Enfield	Greenwich	Hackney	Hammersmith and Fulham	Haringey	Harrow	Havering	Hillingdon
1982	76	108	73	126	104	233	363	166	142	103	78	96	88	73	68	77	132
1983	73	107	73	122	104	233	360	163	140	102	77	95	87	72	69	77	129
1984	72	109	75	121	106	238	360	163	140	104	78	95	88	73	71	79	131
1985	72	110	75	120	107	240	360	163	142	106	77	93	88	75	73	79	131
1986	71	111	74	119	108	240	356	163	143	108	76	91	86	76	74	78	128
1987	72	114	75	120	110	245	361	166	147	112	75	91	86	79	76	79	128
1988	71	114	77	123	114	252	355	170	149	115	78	93	90	78	77	82	131
1989	70	113	80	124	116	251	331	174	146	117	79	93	92	75	77	85	135
1990	70	113	80	123	116	249	314	172	140	115	78	90	93	71	77	85	149
1991	68	111	75	116	111	239	287	163	129	106	74	84	92	66	74	81	157
1992	68	108	72	109	107	228	272	155	122	101	68	81	88	67	72	77	158
1993	67	107	71	105	105	222	270	149	119	99	62	80	86	70	70	74	162
1994	65	112	73	104	112	228	287	147	119	102	63	81	89	70	73	77	166
1995	64	113	77	100	114	233	303	140	121	101	63	83	94	66	74	80	164
1996	63	117	74	105	110	231	323	140	123	103	67	84	94	63	72	82	162
1997	64	124	75	110	112	241	318	143	128	104	71	90	96	68	77	83	173
1998	61	133	77	115	116	265	329	150	133	105	72	92	100	69	78	84	184
1999	61	134	76	117	116	275	343	151	131	108	71	92	105	68	79	85	191
2000	60	137	78	117	118	289	358	159	134	116	73	95	112	69	80	88	195
2001	56	137	76	114	116	295	358	159	133	115	73	97	119	70	80	87	192
2002	52	134	77	110	116	292	345	154	132	109	72	99	120	72	79	87	183
2003	51	133	76	110	121	285	347	154	135	108	77	103	123	77	82	89	181
2004	52	131	79	111	121	274	338	150	134	110	77	97	122	76	81	92	185
2005	53	133	78	113	124	279	337	152	135	114	77	94	128	77	84	92	201
2006	52	134	75	112	124	283	332	151	137	111	80	90	131	82	83	91	203
2007	51	134	75	111	131	290	339	150	139	110	81	92	132	85	82	85	203
2011	52	137	74	113	130	307	374	147	138	109	80	95	143	87	82	83	202
2016	52	140	74	116	129	325	401	145	138	111	80	99	149	89	83	82	202
2021	53	139	73	115	128	340	423	144	143	113	81	104	166	92	82	83	202
2026	54	145	77	119	132	350	428	149	148	118	85	108	173	95	86	87	210
2031	56	150	79	124	137	362	438	155	154	121	87	111	178	98	88	89	217

('000s)	Hounslow	Islington	Kensington and Chelsea	Kingston upon Thames	Lambeth	Lewisham	Merton	Newham	Redbridge	Richmond	Southwark	Sutton	Tower Hamlets	Waltham Forest	Wandsworth	Westminster	Total
1982	141	128	97	71	146	72	76	85	73	61	148	57	95	76	96	572	4099
1983	138	127	97	69	146	71	75	83	73	61	148	58	94	75	98	575	4071
1984	139	130	99	68	148	72	76	82	75	63	152	61	95	75	101	588	4124
1985	141	131	103	70	143	72	76	82	72	64	152	63	99	77	102	594	4152
1986	143	131	106	72	136	72	74	81	68	63	150	64	104	77	102	591	4134
1987	147	134	111	75	133	72	75	82	65	64	152	66	110	80	105	598	4204
1988	154	140	116	78	138	73	75	79	68	65	160	70	117	80	110	600	4292
1989	160	142	118	80	141	72	76	76	72	65	166	72	122	80	113	582	4292
1990	149	140	116	78	135	71	78	75	75	66	162	72	125	76	111	563	4224
1991	130	132	110	73	124	69	78	72	74	65	152	69	122	70	104	528	4004
1992	124	126	106	70	119	67	76	70	71	63	146	64	120	69	99	511	3851
1993	123	122	106	69	118	66	76	69	69	61	145	61	120	70	98	509	3800
1994	122	127	112	72	119	65	76	69	70	65	152	62	123	71	102	533	3908
1995	121	132	114	75	116	65	76	66	70	68	156	63	122	67	104	550	3954
1996	128	136	116	83	117	62	72	69	71	70	153	66	119	66	109	557	4004
1997	132	146	126	86	119	62	74	69	73	69	156	64	129	61	109	570	4115
1998	138	149	132	83	120	66	75	72	77	72	163	67	139	62	109	599	4285
1999	140	158	134	84	123	68	77	74	77	78	172	68	148	65	112	620	4401
2000	146	170	140	87	128	72	81	77	80	83	180	72	157	71	119	628	4566
2001	147	173	144	84	131	73	81	77	80	83	183	75	161	69	122	629	4586
2002	143	170	145	80	131	76	77	76	80	83	175	73	162	68	122	611	4506
2003	138	175	138	81	136	82	78	77	82	83	171	72	166	67	127	604	4526
2004	133	175	131	80	136	80	80	79	83	81	180	72	170	67	125	597	4500
2005	133	179	134	80	137	78	83	82	81	84	188	73	180	73	126	606	4588
2006	132	182	130	86	137	76	80	85	75	93	202	73	202	74	127	609	4632
2007	134	193	129	87	136	76	81	83	76	92	217	73	206	69	127	610	4676
2011	131	206	132	85	139	77	83	88	74	90	236	72	217	68	127	622	4797
2016	129	220	138	83	141	77	83	94	73	88	246	72	251	67	127	646	4953
2021	129	233	148	83	143	77	84	100	75	87	255	71	280	68	127	674	5114
2026	133	238	151	86	148	80	86	103	79	91	264	74	290	70	131	696	5280
2031	138	243	154	89	154	83	87	107	81	95	274	77	300	73	136	718	5452

Source: GLA Economics

Appendix 1.4: Population projections by borough

This appendix sets out population data for London by borough. It sets out historic population data (from 1982) and projections out to 2031. This data is provided by GLA Demography 2009.

('000s)	Barking and Dagen-ham	Barnet	Bexley	Brent	Brom-ley	Cam-den	City of London	Croy-don	Ealing	Enfield	Green-wich	Hack-ney	Hamm-ersmith and Fulham	Harin-gey	Harrow	Have-ring	Hilling-don
1982	161	293	218	247	298	176	7	321	284	261	214	183	149	205	200	242	233
1983	160	291	217	247	299	175	7	320	285	262	214	186	150	207	202	240	235
1984	159	293	218	247	298	176	7	317	288	261	213	186	151	203	205	240	232
1985	158	295	217	246	297	179	7	317	291	263	213	185	152	201	206	239	233
1986	157	296	218	246	295	181	7	317	292	262	214	184	152	201	207	238	232
1987	157	296	218	247	296	182	6	316	292	258	213	184	152	200	206	238	231
1988	157	290	218	246	295	179	6	314	291	257	210	185	151	200	203	236	232
1989	156	297	217	243	296	179	6	314	287	257	209	187	150	199	201	233	235
1990	157	296	217	244	296	181	6	316	286	259	211	187	152	203	201	233	236
1991	156	298	218	241	294	181	5	316	284	260	211	185	154	207	203	231	234
1992	156	297	218	240	292	179	5	317	285	261	212	187	153	206	204	229	235
1993	156	297	218	242	290	179	5	319	286	261	211	188	153	207	206	229	236
1994	157	297	219	246	290	180	5	323	286	260	210	190	154	207	207	229	239
1995	157	299	219	248	290	183	6	327	289	263	209	193	154	209	207	228	240
1996	157	303	218	252	292	186	6	329	293	265	210	193	155	212	207	227	242
1997	158	305	216	255	293	186	6	331	294	268	211	191	155	215	207	226	243
1998	161	308	216	260	292	184	6	333	296	269	212	195	156	217	207	224	244
1999	162	314	218	260	295	190	7	332	302	273	212	199	161	219	208	226	245
2000	164	316	219	265	295	196	7	334	304	275	214	203	164	220	209	225	246
2001	166	320	219	270	296	203	7	335	307	277	218	207	169	221	210	225	246
2002	166	320	219	269	297	206	7	335	308	281	219	208	170	224	211	225	246
2003	166	321	220	268	296	210	7	334	305	281	220	208	169	223	211	225	246
2004	165	323	220	269	296	216	8	336	304	282	220	206	169	223	212	225	246
2005	166	326	221	270	298	223	8	336	306	283	222	207	171	224	214	226	248
2006	166	329	222	271	299	228	8	337	306	285	223	208	171	226	215	227	250
2007	167	330	222	270	301	232	8	340	305	285	223	210	173	225	215	228	251
2011	176	335	219	286	304	207	9	346	320	292	247	229	181	239	224	233	254
2016	192	358	220	296	306	212	10	356	328	295	272	240	186	246	226	245	258
2021	207	380	221	306	308	216	11	367	334	298	297	250	190	252	227	256	262
2026	221	401	222	315	310	219	12	376	340	300	320	259	194	258	228	267	266
2031	235	421	222	323	312	223	13	386	346	302	343	269	197	264	229	277	269

('000s)	Hounslow	Islington	Kensington and Chelsea	Kingston upon Thames	Lambeth	Lewisham	Merton	Newham	Redbridge	Richmond	Southwark	Sutton	Tower Hamlets	Waltham Forest	Wandsworth	Westminster	Total
1982	202	162	139	133	248	236	167	212	220	163	215	171	144	215	260	187	6765
1983	199	161	138	133	247	235	166	210	218	163	216	170	143	215	260	185	6753
1984	197	163	141	133	247	237	166	209	217	162	217	170	143	215	261	183	6755
1985	196	166	143	133	248	238	167	209	218	162	217	171	145	216	262	181	6767
1986	196	165	144	132	251	239	168	206	217	162	218	170	150	216	261	178	6774
1987	195	165	141	130	251	239	167	208	219	163	219	170	156	214	262	176	6766
1988	193	165	135	132	249	238	168	209	219	160	219	170	159	213	261	172	6729
1989	199	165	141	133	249	237	168	210	219	162	222	171	161	212	261	176	6752
1990	202	169	143	136	246	238	170	212	222	165	228	170	164	214	261	183	6799
1991	204	172	144	136	255	240	171	216	222	167	227	170	166	216	262	185	6829
1992	202	173	142	136	256	240	172	219	224	165	228	171	167	217	262	181	6829
1993	202	173	142	136	255	240	174	222	225	165	231	173	169	218	261	177	6845
1994	202	173	140	136	257	242	176	225	227	165	232	173	172	220	261	174	6874
1995	204	173	141	138	257	240	178	228	229	167	237	174	175	220	260	174	6913
1996	206	175	141	139	260	243	181	230	233	169	237	176	180	220	261	179	6974
1997	210	176	142	141	260	244	182	231	235	170	239	177	185	220	261	182	7015
1998	212	178	143	144	264	247	182	235	236	170	242	178	188	222	261	185	7066
1999	214	176	148	146	267	250	185	241	238	173	248	179	194	221	264	189	7154
2000	215	178	155	147	270	252	188	246	240	173	253	181	197	221	268	197	7237
2001	216	179	162	149	273	254	191	249	242	174	257	182	201	222	272	203	7322
2002	216	181	165	150	271	253	192	254	244	174	256	182	207	222	272	212	7362
2003	214	181	168	150	269	251	192	253	246	174	256	182	208	220	272	217	7364
2004	214	181	171	152	269	252	192	252	247	176	259	182	208	220	273	221	7389
2005	217	184	176	154	270	253	195	250	249	178	264	183	209	220	276	229	7456
2006	219	186	178	156	272	256	198	248	252	180	269	184	213	222	279	232	7512
2007	221	188	179	158	273	259	199	250	254	180	274	186	215	222	282	234	7557
2011	234	206	172	154	294	270	199	292	255	184	281	185	252	228	290	215	7812
2016	237	216	175	157	305	279	200	320	262	184	300	185	283	234	300	220	8101
2021	239	225	179	159	314	288	201	348	268	184	318	185	313	240	310	224	8372
2026	242	234	182	161	324	296	202	375	273	185	336	185	342	245	320	228	8635
2031	244	243	185	163	333	304	202	400	279	185	353	185	370	250	329	232	8886

Note: The historic populations (1982 to 2000 are ONS mid-year estimates) the rest can be attributed to GLA Demography

Source: GLA Demography

Endnotes

1 'Trade and the Global Economy: The role of international trade in productivity, economic reform and growth', HM Treasury 2004 (chapter 2).

2 See for example, Krugman and Obstfeld (2003).

3 Analyses tend to examine employment shares simply because data are more accessible than output data for example.

4 Even in developed countries where the same industrial structure, at a broad industrial level, exists there is likely to be some within industry specialisation. That is, it is likely that when there is a lot of 'intra-industry' trade, countries trade goods which fall in the same broad industrial classification but differ in their specialised features.

5 The index of specialisation is calculated as:
(London employment in sector / London total employment) / (Rest of GB employment in sector / Rest of GB total employment).

Therefore if the index of specialisation is greater than 1, then this shows that London has a greater share of its total jobs in the sector being examined than does the rest of GB. As such it can be regarded as an area in which London has some specialisation. The higher the index of specialisation above 1.00, the greater the degree of specialisation.

By contrast if the index of specialisation is less than 1, then this shows that the rest of GB has a greater share of its total jobs in the sector being examined than does London. The closer the index of specialisation gets to zero, the smaller London's role in the sector being considered is compared to the rest of GB.

6 Estimates of London's exports are based on data from the ONS Pink Book and ABI employment data – see 'The value of London's key exports' in 'London's Economy Today', Issue 61, September 2007 for more detail.

7 Increasing returns and economic geography, P Krugman, Journal of Political Economy, 1991, vol 99, no.3.

8 Rosenthal and Strange, "Evidence on the Nature and Sources of Agglomeration Economies," in J. V. Henderson & J. F. Thisse (ed.) *Handbook of Regional and Urban Economics*, chapter 49, pages 2119-2171, 2004.

9 What's new about the new economic geography?, P Krugman, Oxford Review of Economic Policy, Vol 14, No.2.

10 GLA Demography 2009.

11 GLA Demography 2009.

12 GLA, 2009, London housing market report – March 2009.

13 Sassen, S., 2001, The Global City.

14 GLA (2009) Focus on London.

15 GLA (2009) Focus on London.

16 GLA (2009) Focus on London – The headline regional GVA series has been calculated using a five-year moving average.

17 Headline = 5 point moving average.

18 2007 provisional.

19 Care should be taken in interpreting these results as London is compared against entire countries and it is therefore not a like-for-like comparison.

20 Eurostat compile nominal output data and adjust it using 'Purchasing Power Parities' (an estimate of the long-term equilibrium exchange rate of two currencies).

21 Fishing and agriculture has been excluded from Figure 3.3.

22 GLA Economics (2007), Working Paper 21, *The GLA's interim metro area dataset*.

23 Productivity figures should be interpreted with care as measures of output have been adjusted both for variations in local prices and in using a measure based on the composition of output rather than the composition of the consumption basket. The GLA dataset uses what are called producer-based PPP's (Purchasing Power Parity), and these differ from the PPPs supplied by Eurostat because the 'basket' is defined by what a city produces, not what it consumes. This ensures that if a City specialises in a particular product and sells it at keen prices – as, for example, with business services in London – this competitiveness is recognised and the city is not recorded as having a low output, simply because its products are cheap.

24 The metro area dataset will be updated in a forthcoming GLA Economics publication.

25 London Economics (2003), 'London and Foreign Direct Investment – Case for London Technical Report 2' GLA Economics, London.

26 Between 1990 and 2007 the UK has maintained a share of about 9 per cent of the world's total stock and 21 per cent of the EU 15's stock of inward FDI (UNCTAD 2008). Over the same period, the UK's share of FDI flows was more volatile, but averaged 8 per cent of world flows and 22 per cent of EU 15 flows (UNCTAD 2008).

27 The Ernst & Young (June 2009) *European Attractiveness Survey 2009 Reinventing European growth*.

28 Ernst & Young (2008) *European Investment Monitor*.

29 Taylor P.J. in association with P. Ni, B. Derudder, M. Hoyler, J. Huang, F. Lu, K. Pain, F. Witlox, X. Yang, D. Bassens and W. Shen, 2008, *Measuring the World City Network: New Developments and Results*.

30 *Global Financial Centres Index* (2009) prepared by Z Yen and published by the City of London Corporation.

31 Cushman and Wakefield, *'European Cities Monitor'*.

32 See also Box 1.1 in Chapter 1.

33 Cushman and Wakefield, 'European Cities Monitor'.

34 OECD, 2006, *Competitive cities in the Global Economy*.

35 LSE 2008, *'London's Place in the UK economy 2008-09'* City of London Corporation, London.

36 PriceWaterhouseCoopers (2007) *Cities of opportunity: Business-readiness indicators for the 21st century*.

37 Vickers, P. and Bekhradhia, B., 2007, '*The economic costs and benefits of international students*' Higher Education Policy Institute, July; and LSE 2007 *'The impact of recent immigration on the London economy.'* City of London Corporation London.

38 Owens, J. (2008) *The Competiveness of the UK Tax System, presented at CBI Tax Conference: A Case for Change? Corporation Tax in a Globalised Economy London*, 13th October 2008.

39 These are: top rates of personal income tax, corporate income tax rates, social security contributions, and consumption taxes. Important measures are the tax wedge and the average effective rate of corporations' tax.

40 This measure includes provisions for depreciation. Other assumptions made for this calculation include an economic depreciation rate of 12.25%, inflation of 3.5%, real interest rate of 10% and expected rate of economic profit of 10% (implying a financial return of 20%).

41 Recent changes to tax rates will impact on London's tax competitiveness – refer to Chapter 6 for further discussion of potential changes in tax rates.

42 BAK Basel 2007, BAK Taxation Index 2007: Effective Tax Burden of Companies and on Highly Qualified Manpower.

43 Hajkova, D., Nicoletti, G., Vartia, L. and Kwang-Yeol Yoo, 2006, *Taxation and Business Environment as Drivers of Foreign Direct Investment in OECD Countries*, OECD Economic Studies No. 43, 2006/2.

44 OECD 2004, OECD Employment Outlook 2004.

45 London Chamber of Commerce and Industry (March 2008) London Business Manifesto 2008.

46 OECD 2004, OECD Employment Outlook 2004.

47 London and Paris are the largest cities in Europe based on population measures. Determining which the largest city is depends on how the city boundaries are defined.

48 City type activities include financial services such as fund management and corporate finance as well as related activities and professional services such as insurance and legal services (Corporation of London, 2004). In addition, recent research commissioned by the City of London Corporation found that the UK's share of wholesale finance across the EU was 36.3% in 2008.

49 Taylor P.J. in association with P. Ni, B. Derudder, M. Hoyler, J. Huang, F. Lu, K. Pain, F. Witlox, X. Yang, D. Bassens and W. Shen, 2008, *Measuring the World City Network: New Developments and Results*.

50 The Ernst & Young (June 2009) *European Attractiveness Survey 2009 Reinventing European growth*.

51 Eurocontrol. (May 2008) *Trends in Air Traffic, Volume 4 - More to the Point: Business Aviation in Europe in 2007*.

52 This is based on flight departures. When measuring by passenger number, Heathrow is the busiest airport in Europe.

53 CAA, 2009.

54 Eurostar Group Limited, 2009, 'Eurostar reaches record traveller numbers thanks to boost from High Speed 1' Press Release.

55 This is based on National Insurance Number registration data prepared by DWP.

56 As noted earlier, many individuals commute into London on a daily basis. This may mean that large numbers of those moving out of London may actually continue to work in London.

57 LSE 2008, *'London's Place in the UK economy 2008-09'* City of London Corporation, London.

58 Financial Services Skills Council (2006) 'Graduate Skills and Recruitment in the City' City of London Corporation, London.

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61 UBS (August 2009) *Price and earnings*.

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63 Based on LFS data for 2007.

64 Vertovec, S. (2002), *Transnational Networks and Skilled Labour Migration*, Conference paper, presented at: Ladenburger Diskurs "Migration" 14-15 February.

65 Turok, I. (2004). '*The Distinctive City: 'Quality' as a Source of Competitive Advantage*'. Unpublished monograph. University of Glasgow, Glasgow; OECD, 2006, *Competitive cities in the Global Economy*; and LSE 2008, *'London's Place in the UK economy 2008-09'* City of London Corporation, London.

66 Mayhew, Dame Judith. (2002, Fall) *Strategies for managing urban growth and revitalisation. Real estate issues*.

67 GLA Biodiversity Strategy.

68 TfL (Transport for London) 2006, *'Business Plan 2006/07-2009/10'*, London.

69 TfL (Transport for London) 2009, *'Business Plan 2009/10-2017/18'*, London.

70 HM Treasury, 'UK international financial services – the future', May 2009.

71 Ibid.

72 IFSL Research, 'International Financial Markets in the UK', May 2009.

73 Ibid.

74 HM Treasury, 'UK international financial services – the future', May 2009.

75 London Development Agency, 'Understanding the economic performance of London's sectors', December 2007.

76 Financial Services Authority, 'The Turner Review: A regulatory response to the global banking crisis', March 2009. See Chapter 6 for more details.

77 GLA Economics, 'London's Economic Outlook: Spring 2009', April 2009.

78 Full details of GLA's long-run employment projection and projections by sector will be set out in a forthcoming GLA Economics working paper.

79 Originally 1 per cent per annum but later revised by Stern to around 2 per cent per annum.

80 McKinsey & Co.: Sustainable Urban Infrastructure: London edition – a view to 2025.

81 Ernst & Young for LDA: Prospectus for London, the low carbon capital: detailed report (2009).

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83 The Munich Re rankings looked at 50 cities in total.

84 Urban areas generate their own microclimate, known as the 'urban heat island'. This refers to the warmer temperatures experienced in cities compared with the rural areas around them.

85 TfL Cooling the Tube September 2008.

86 See for instance: GLA, 2008, *London: Winning in a Changing World. Review of the Competitiveness of London's Financial Centre*; Bischoff, W., Darling A. (May 2008) *UK international financial services - the future. A report from UK based financial services leaders to the Government*; CRA International (2008) *The Impact of Taxation on Financial Services Business Location Decisions*, City of London Corporation, London, February.

87 HM Treasury, April 2009, Budget 2009: *Building Britain's Future*, and HM Treasury, May 2009, *UK international financial services – the future*.

88 FSA, March 2009, *The Turner Review. A regulatory response to the global banking crisis*.

89 (Lord) Turner, A (2009) The Economist's Inaugural City Lecture, 21 January 2009.

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93 Based on PESA data, at the start of 2008, public sector net debt was equivalent to 43 per cent of GDP. By 2014, this Figure will rise to 79 per cent of GDP, according to HM Treasury estimates.

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102 See for instance: LDA, *London Annual Business Survey 2007 Summary report*; GLA, 2008, *London: Winning in a Changing World. Review of the Competitiveness of London's Financial Centre*; London First (December 2006), *Getting London to Work*; GLA (2009), *Annual London Survey*; BAK Basel (2008) – Västsverige / Göteborg: *Quality of life as a location factor for highly qualified people;* London Councils (2006/7), Survey of Londoners.

103 Due to the size of the investment and running costs, it is generally considered efficient for public transport systems to operate at full capacity in relation to passenger numbers.

104 See also London Assembly (2009), *The Big Squeeze. Rail overcrowding in London*.

105 Modelling transport and the economy in London, December 2007, Volterra Consulting Ltd and Colin Buchanan and Partners Ltd.

106 GLA Economics (2005), *Time is Money. The economic effects of transport delays in Central London*

107 For instance see: GLA, 2008, *London: Winning in a Changing World. Review of the Competitiveness of London's Financial Centre* and London First (2008), *Imagine a World Class Heathrow*.

108 York Aviation (2008) *Aviation Services and the City*, City of London Corporation, London.

109 See also Cushman & Wakefield, European Cities Monitor and MasterCard 2008, *Worldwide Centers of Commerce Index 2008* for example.

110 GLA Demography 2009.

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121 Kaplanis, I. (2007) The Geography of Employment Polarisation in Britain. Institute for Public Policy Research, London.

122 Housing in London: The evidence base for the London Housing Strategy Nov 2008 Figure 1.2.7.

123 Data from Communities.gov.uk "Rents, lettings and tenancies: numbers of households on local authorities' housing waiting lists, by district: England 1997-2008".
The numbers on local authorities' social housing waiting lists have also been rising outside of London over the past decade but at a slower rate. In London they have grown at an average rate of 6.3% per annum between 1997 and 2008. For the Rest of England, the annual average growth rate over the same period was 4.9%.

124 Housing in London: The evidence base for the London Housing Strategy Nov 2008 Figure 1.3.4.

125 Housing in London: The evidence base for the London Housing Strategy Nov 2008 Figure 1.4.4.

126 Housing in London: The evidence base for the London Housing Strategy Nov 2008, Figure 1.4.5.

127 Note: the proportion of private renters receiving housing benefit is higher in other UK regions than in London, but the absolute number is highest in London. This is possible because London has a much larger private rental housing market than other regions as well as a private rented market that covers tenants at all levels of incomes rather than being one concentrated largely towards lower income households as is largely the case elsewhere in the UK.

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Vietnamese

Nếu bạn muốn có văn bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

Turkish

Bu belgenin kendi dilinizde hazırlanmış bir nüshasını edinmek için, lütfen aşağıdaki telefon numarasını arayınız veya adrese başvurunuz.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

Hindi

यदि आप इस दस्तावेज की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি (কপি) চান, তা হলে নীচের ফোন্ নম্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

Urdu

اگر آپ اِس دستاویز کی نقل اپنی زبان میں چاھتے ھیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

Arabic

إذا أردت نسخة من هذه الوثيقة بلغتك، يرجى الاتصال برقم الهاتف أو مراسلة العنوان أدناه

Gujarati

જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઈતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાધો.

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