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Growing Together II: London and the UK economy

MAYOR OF LONDON

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Foreword

As a recent Centre for Cities report highlighted, "London's success is a good thing for the national economy". This report sets out why that is the case showing that London is an internationally competitive centre for global business services, bringing trade to London and the UK as a whole, and supporting professional services jobs across the country.

The fact that London is intimately connected with the rest of the UK can be seen in any area of London's activity: a pound invested in London can drive jobs and growth around the country. For instance, it is the need for new homes in London that will fill the order books of building supplies firms in the Midlands. When Transport for London needs to upgrade the Tube, that means jobs for train builders in Derby; jobs for sleeper manufacturers in Stafford; jobs for wheel makers in Manchester; jobs for escalator makers in Market Harborough.

When London grows the rest of the country grows.

Moreover, the economic activity conducted in London generates significant revenues for public finances. Over the last decade or so London has contributed more than £12 billion each and every year (over and above what it has received in public expenditure) to the UK's public finances.

This shows why the government should invest in London's future for the good of the whole of the UK. But rather than rely on central government for investment, London wants to better manage such investment through the greater devolution of powers. To that end I welcome the Prime Minister's recent statement following the Scottish referendum where he referred to further empowering "our great cities". Providing London with fiscal freedoms does not come at the detriment of other regions but can in fact help London to generate more jobs and growth across the country.

I want London to be the best big city to live in - not just because that is the best thing for Londoners, but because we are competing with rival cities around the world and winning that competition will bring benefits for Londoners and the UK alike.

Boris Johnson
Mayor of London

Executive summary

The relationship between London's economy and that of the rest of the UK has been debated for some time. Evidence in this paper shows that activity and investment in London results in economic activity in other UK regions: as London grows the rest of the UK grows.

In economic terms, the main economic driving force for at least the last three decades or so has been globalisation – the increasingly interrelated nature of the international economy. Globalisation has led to a concentration of activity in areas of comparative advantage around the world. In London, this has led to a specialisation in professional services; areas in which London is internationally competitive.

This sectoral specialisation has also led to a spatial concentration - with a myriad of businesses located close to one another in the centre of London. This concentration drives significant agglomeration economies – benefits that extend to the wider economy beyond the benefits that the individual firms themselves derive. These economies further underpin London's international comparative advantage with research suggesting that the areas in which London specialises are those that benefit most from agglomeration economies.

As a result, there is a significant level of economic activity in London, including significant international trade in services. This activity, rather than being at the expense of the rest of the UK, supports and complements activity in the rest of the UK. Investment and activity in London generates activity in the rest of the UK. London and the rest of the UK enjoy a positive relationship in terms of economic growth; when London grows, the rest of the UK grows.

> **"London's success is a good thing for the national economy. It is a global city that generates a great amount of economic opportunity … Constraining London's growth will reduce national economic growth, and much of the investment that would have gone to the capital may go elsewhere in the world, rather than elsewhere in the UK. It is for this reason that the Government should progress the recent recommendations by the London Finance Commission to devolve more powers, such as tax raising, down to the capital. - Centre for Cities 2014."**

It is also argued that London is a drain on the UK in terms of sucking talent and public expenditure away from the rest of the UK. In terms of talent, while it is true that there is a significant net inflow of young people into London, there is a net outflow of older, well qualified people. Indeed, London experiences a net outflow in terms of domestic migration; more people leave London for other regions of the UK than come to London from other regions of the UK. Therefore, it is not clear that London is acting to suck talent from other parts of the UK; indeed it could be argued that London attracts young people, educates them and provides valuable work experience while 'exporting' very productive, valuable, older workers.

In terms of public expenditure, the argument is often focused on transport expenditure. While it is true that London receives more than the UK average (on a per person basis) in transport expenditure - transport is key to London's international competitiveness; London's transport system helps generate the significant agglomeration economies – which are essential to the sectors in which London specialises. Therefore, to not invest in London's transport system would risk London's comparative advantage which could ultimately lead to a loss of business to the UK as a whole, not just to London. Moreover, when looking at public expenditure, the levels of tax raised should also be considered. Thus, London contributes significantly more to the UK's public finances than it receives.

Overall, London is on many measures a successful economy – internationally competitive in a number of areas. It is an asset to the UK. While more could be done to support economic activity in the rest of the UK, diverting resources from London will damage London and, in consequence, the rest of the UK.

Introduction

The impact of London's economy on the rest of the UK has been debated for some time. For some commentators the strength of London's economy has been seen as a problem.

The purpose of this report is to set out the economic forces that are likely to drive London's economy so as to better understand the relationship between London and the rest of the UK.

Chapter 1 provides an overview of the global economic forces that drive the process of economic specialisation and which have led to London's current industrial structure. The chapter looks at London's current specialisations and the international trade which has both driven and derives from this.

Chapter 2 looks at the spatial implications of this specialisation, looking at the factors which attract businesses and labour to London and which leads to significant agglomeration economies in London.

Chapter 3 illustrates that London's trade is not just international – there is significant trade with other UK regions; the more international trade London engages in, the more trade there is likely to be with the rest of the UK. Indeed, the chapter illustrates that as London grows, so the rest of the UK grows; there is a correlation between growth in London and the other UK regions.

Chapter 4 looks at some practical implications of London's relationship with the rest of the UK – particularly commuting and domestic migration. This chapter looks at the benefits to both London and the rest of the UK of flows of people both in and out of London.

Chapter 5 highlights that this specialisation and international competitiveness results in a significant amount of economic activity in London which has a fiscal benefit for the UK as a whole.

The three appendices (Export of services estimation methodology, Contribution of commuting to the London economy, and Impact of commuters on the demand for goods and services) provide more detail on different aspects of the main report.

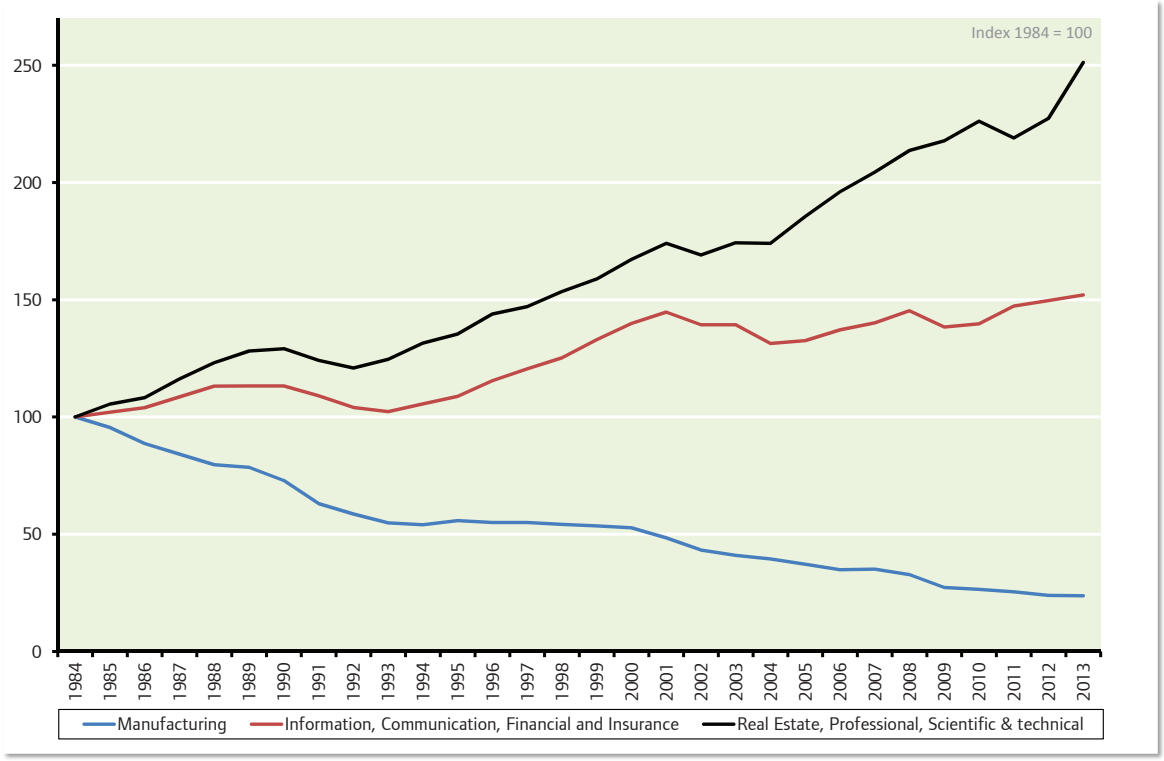
1. Specialisation and international trade

London's economy has been shaped by globalisation – the increasingly connected and integrated nature of the international economy. This integrated international economy has, in large part, arisen through increases in trade over time.

Openness to trade, both exports and imports, strengthens productivity – the key to an economy's prosperity. One of the ways 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. A larger market also increases the returns to innovation, another spur to productivity, but perhaps most important is the increased competition that openness to trade brings. Essentially, openness to trade increases productivity by allowing different countries and/or regions to concentrate on different areas of activity, focusing on their respective comparative advantage.[1]

As a result, globalisation has led to structural change in the UK economy, as well as across the world; resources have moved from less productive to more productive uses. Figure 1.1 highlights the structural change seen in London over the last three decades – a shift away from manufacturing and towards professional business services.

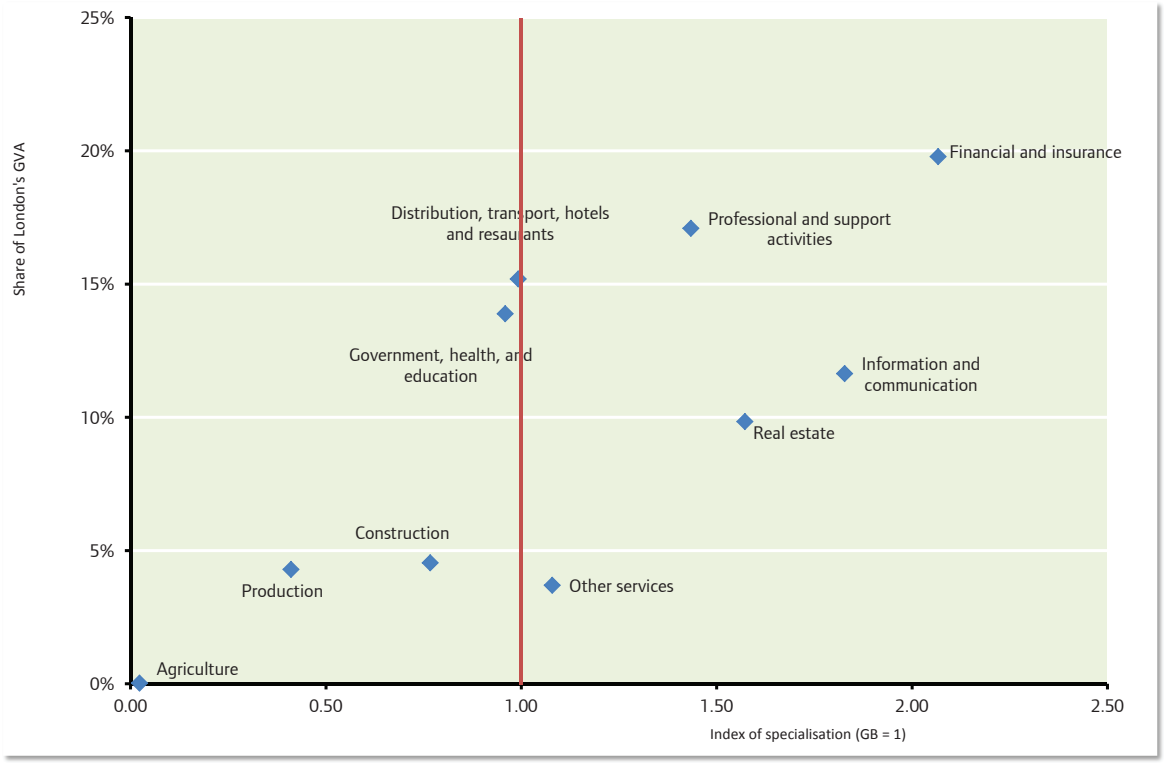
Figure 1.1: London's employment in selected sectors over time, Index: 1984 = 100



Source: 1996 to 2013: ONS Workforce Jobs series; before 1996: GLAE Economics using various ONS sources and modelling assumptions

Figure 1.2 shows the areas that London is currently specialised in – the areas that the forces of globalisation have led London to specialise in. If London reflected the same industrial structure as Great Britain as a whole then all the sectors would fall on the vertical red line in Figure 1.2. The chart shows that economic activity in London is concentrated in financial services, information and communication and professional and real estate activities.

Figure 1.2: London's index of specialisation & share of London's total output, 2012



Source: Business Register and Employment Survey - ONS, UK Regional Accounts - ONS

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 1.1, it can be seen that London specialises in such things as securities broking/fund management, media activities – London is strong in 'cultural services' – and advertising for example. Its employment is not concentrated in sectors such as manufacturing, the primary industries and construction. These are areas where the rest of the country has a greater comparative advantage than London.

Table 1.1: London's industrial structure and main specialisations, 2012

Sector	London employee jobs (rounded to the nearest 100)	Share of total London employee jobs	London share of GB employee jobs	Index of specialisation
Total London economy	**4,446,500**	**100.0%**	**16.6%**	**1**
K : Financial and insurance activities	356,300	8.0%	34.4%	2.1
of which:				
6430 : Trusts, funds and similar financial entities	8,000	0.2%	69.6%	4.2
6630 : Fund management activities	21,800	0.5%	68.5%	4.1
6612 : Security and commodity contracts brokerage	36,400	0.8%	67.4%	4.1
6499 : Other financial service activities, except insurance and pension funding, n.e.c.	17,500	0.4%	52.7%	3.2
6619 : Other activities auxiliary to financial services, except insurance and pension funding	50,300	1.1%	39.9%	2.4
6419 : Other monetary intermediation	141,600	3.2%	33.6%	2
6622 : Activities of insurance agents and brokers	29,500	0.7%	27.0%	1.6
6629 : Other activities auxiliary to insurance and pension funding	20,400	0.5%	25.0%	1.5
J : Information and communication	313,400	7.0%	30.4%	1.8
of which:				
6020 : Television programming and broadcasting activities	21,000	0.5%	81.3%	4.9
6391 : News agency activities	8,300	0.2%	80.1%	4.8
5912 : Motion picture, video and television programme post-production activities	8,000	0.2%	72.1%	4.3
5911 : Motion picture, video and television programme production activities	27,300	0.6%	57.3%	3.4
5814 : Publishing of journals and periodicals	19,500	0.4%	44.2%	2.7
5811 : Book publishing	10,800	0.2%	39.3%	2.4
5813 : Publishing of newspapers	14,200	0.3%	28.0%	1.7
6202 : Computer consultancy activities	69,900	1.6%	26.1%	1.6
6209 : Other information technology and computer service activities	29,200	0.7%	25.5%	1.5
6201 : Computer programming activities	28,100	0.6%	23.9%	1.4

M : Professional, scientific and technical activities	537,400	12.1%	26.9%	1.6
of which:				
7021 : Public relations and communication activities	9,000	0.2%	56.5%	3.4
7312 : Media representation	8,600	0.2%	48.6%	2.9
7311 : Advertising agencies	42,600	1.0%	45.1%	2.7
7320 : Market research and public opinion polling	22,100	0.5%	44.9%	2.7
7111 : Architectural activities	23,500	0.5%	40.4%	2.4
7410 : Specialised design activities	12,900	0.3%	31.1%	1.9
7010 : Activities of head offices	66,900	1.5%	30.7%	1.8
6910 : Legal activities	80,000	1.8%	30.6%	1.8
6920 : Accounting, bookkeeping and auditing activities; tax consultancy	83,900	1.9%	28.1%	1.7
7022 : Business and other management consultancy activities	94,400	2.1%	29.1%	1.7
L : Real estate activities	111,400	2.5%	26.2%	1.6
of which:				
6832 : Management of real estate on a fee or contract basis	31,900	0.7%	35.8%	2.2
6831 : Real estate agencies	41,900	0.9%	31.5%	1.9
S : Other service activities	108,300	2.4%	20.9%	1.3
of which:				
9412 : Activities of professional membership organisations	11,200	0.3%	45.0%	2.7
9411 : Activities of business and employers membership organisations	4,600	0.1%	37.4%	2.2
9491 : Activities of religious organisations	15,800	0.4%	28.3%	1.7
N : Administrative and support service activities	459,900	10.3%	20.6%	1.2
of which:				
8230 : Convention and trade show organizers	5,700	0.1%	32.3%	1.9
8010 : Private security activities	56,200	1.3%	31.9%	1.9
7912 : Tour operator activities	7,800	0.2%	30.9%	1.9
7911 : Travel agency activities	14,300	0.3%	25.7%	1.5
7810 : Activities of employment placement agencies	31,500	0.7%	24.3%	1.5
8121 : General cleaning of buildings	96,600	2.2%	24.4%	1.5
8299 : Other business support service activities n.e.c.	44,900	1.0%	24.6%	1.5
R : Arts, entertainment and recreation	119,000	2.7%	18.0%	1.1
of which:				
9001 : Performing arts	14,600	0.3%	39.5%	2.4
9003 : Artistic creation	8,500	0.2%	37.0%	2.2
9102 : Museum activities	9,000	0.2%	32.8%	2
9200 : Gambling and betting activities	23,100	0.5%	23.7%	1.4
9313 : Fitness facilities	8,400	0.2%	22.7%	1.4

H : Transportation and storage	217,700	4.9%	18.0%	1.1
of which:				
5110 : Passenger air transport	37,500	0.8%	51.7%	3.1
4931 : Urban and suburban passenger land transport	48,300	1.1%	37.6%	2.3
5223 : Service activities incidental to air transportation	12,800	0.3%	28.9%	1.7
4910 : Passenger rail transport, interurban	11,500	0.3%	24.5%	1.5
5221 : Service activities incidental to land transportation	17,100	0.4%	23.0%	1.4
I : Accommodation and food service activities	335,700	7.5%	18.5%	1.1
of which:				
5629 : Other food service activities	10,000	0.2%	37.0%	2.2
5621 : Event catering activities	52,100	1.2%	25.4%	1.5
5610 : Restaurants and mobile food service activities	167,200	3.8%	23.0%	1.4
O : Public administration and defence; compulsory social security	216,000	4.9%	16.0%	1
P : Education	370,200	8.3%	14.6%	0.9
G : Wholesale and retail trade; repair of motor vehicles and motorcycles	558,300	12.6%	13.1%	0.8
of which:				
4729 : Other retail sale of food in specialised stores	6,800	0.2%	30.5%	1.8
4634 : Wholesale of beverages	9,600	0.2%	27.70%	1.7
4645 : Wholesale of perfume and cosmetics	6,000	0.1%	25.30%	1.5
Q : Human health and social work activities	450,600	10.1%	12.6%	0.8
F : Construction	152,400	3.4%	12.8%	0.8
of which:				
4110 : Development of building projects	19,500	0.4%	27.9%	1.7
E : Water supply; sewerage, waste management and remediation activities	19,100	0.4%	10.7%	0.6
B : Mining and quarrying	4,500	0.1%	7.0%	0.4
C : Manufacturing	110,300	2.5%	4.8%	0.3
D : Electricity, gas, steam and air conditioning supply	5,200	0.1%	4.8%	0.3
A : Agriculture, forestry and fishing	800	0.0%	0.4%	0
Note: 4 digit SIC codes are included where the code accounts for around 5,000 or more employees in London and has an index of specialisation greater than or equal to 1.4				

Source: Business Register and Employment Survey

While the index of specialisation in Table 1.1 outlines London's specialisms in a domestic context, it is in many of these areas that London is also internationally competitive.

According to surveys by consultancy Z/Yen, published since 2007,[2] London has been one of the leading global financial centres (alongside New York, Hong Kong and Singapore). London has maintained its competitiveness through being an open market. For instance, London recently became the location for the first clearing bank outside of Asia for the Chinese currency – the Renminbi (RMB). London also has aspirations to become an Islamic finance hub – an ambition announced at the first World Islamic Forum held outside the Muslim world – in London.[3] As will be illustrated in more detail later, London's international competitiveness in this area is not at the expense of the rest of the UK, rather it supports or contributes to activity in the rest of the UK; around two-thirds of people employed in financial and professional services work outside London.[4]

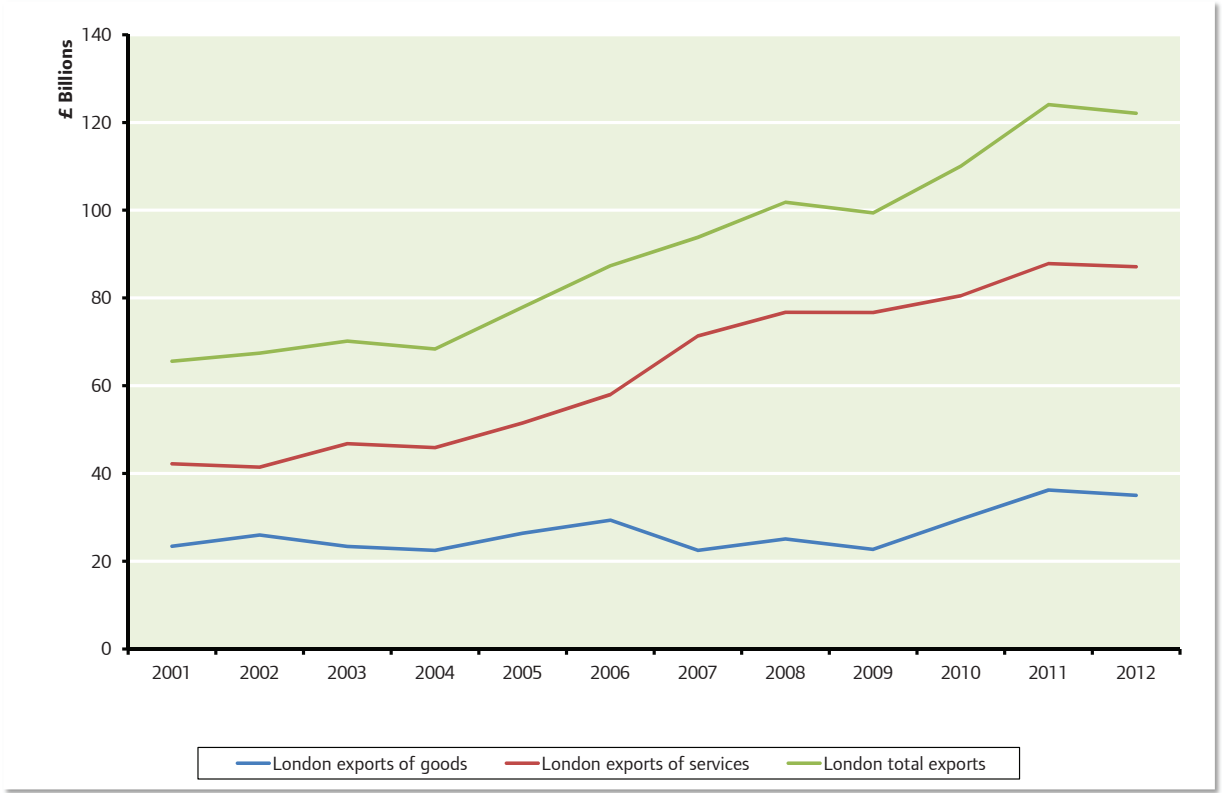
London is also a leading world city for international tourists. According to the Mastercard Global Destination Cities Index for 2014, London was the most visited city in the world. The Association of Leading Visitor Attractions (ALVA) finds that the top ten attractions nationally are all in London, suggesting London as a city is an attraction hub without which many international tourists would not visit the UK. London is also home to one of the world's premier shopping streets, Oxford Street, where a quarter of all visitors are from overseas,[5] revenue which in the absence of overseas tourists would most likely be lost to the UK as a whole.

In tourism, as with many other areas, London is not categorically competing with the rest of the UK but rather with the rest of the world. The 2012 Olympic and Paralympic Games, hosted by London, is one such example where London competed internationally rather than against other UK cities for the opportunity to host the event, following which there was a 1 per cent increase in international visitors to the UK and a 4 per cent increase in visitor spend.[6,7] A 2012 London & Partners survey found that only 12 per cent of international tourists would have made a trip to the UK without a visit to London included in their itinerary.

London's international competitiveness in these markets is evidenced by the significant level of exports that it achieves. HM Revenue and Customs (HMRC) trade statistics[8] provide data broken down by regions on trade in goods, however there is no official data source which provides the equivalent data for services.

GLA Economics estimates that the total value of London's exports in 2012 was £122.1 billion up from £65.6 billion in 2001 (see Figure 1.3). This increase occurred via both goods and services; exports of goods rose by £11.6 billion to £35.0 billion, exports of services rose by £44.9 billion to £87.1 billion. Exports of services make up 71.3 per cent of total London exports, up from 64.3 per cent in 2001.

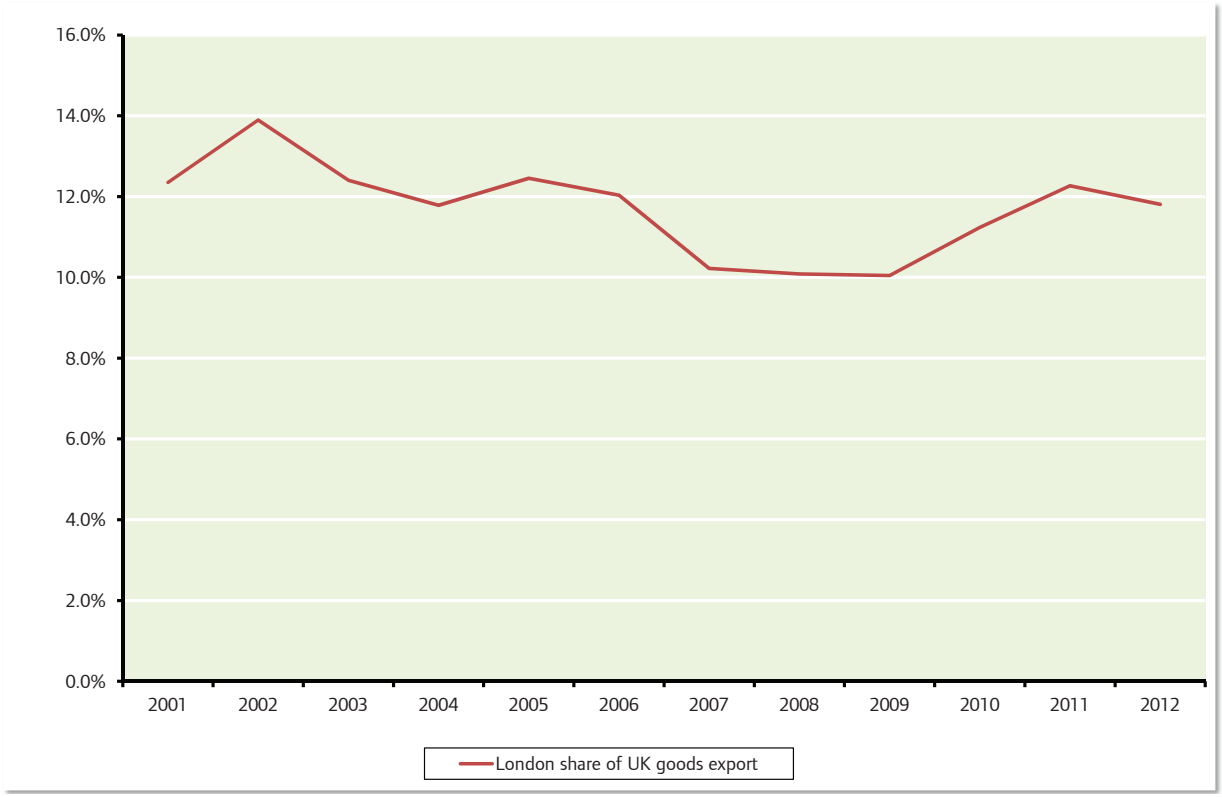
Figure 1.3: London's exports



Source: Regional Trade Statistics HMRC, ONS Pink Book, GLA Economics

Data on London's exports of goods is taken from the HMRC Regional Trade Statistics. In 2012 London exported £35.0 billion of goods, making up 11.8 per cent of the UK total (£296.3 billion). London's share of UK's export of goods is shown in Figure 1.4. In 2001 London's export of goods, £23.4 billion, made up 12.4 per cent of the UK total (£189.4 billion).

Figure 1.4: London's share of UK goods exports



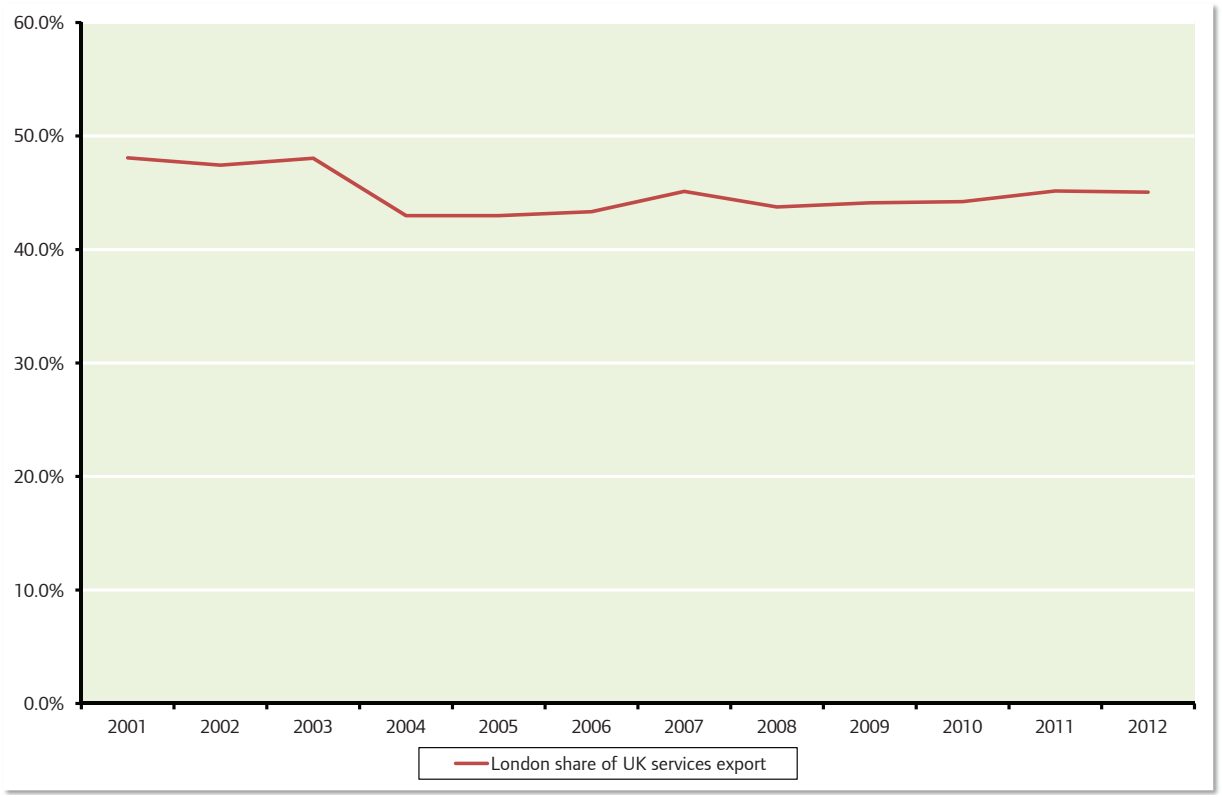
Source: Regional Trade Statistics HMRC

The destination of London's goods exports can be quite volatile from year to year. The USA remains the single largest country destination, while the European Union is London's largest trading partner.

Data on London's export of services is less readily available. The Department for Business, Innovation and Skills (BIS) previously produced estimates for some services using ONS data from the International Trade in Services (ITIS).

For this paper it has been necessary to project the BIS estimates forward using a number of assumptions (see Appendix A for more details). GLA Economics estimates that in 2012 London exported 45.0 per cent of all UK service exports. This is equivalent to a total export value of £87.1 billion. This compares to 48.1 per cent of all UK service exports in 2001, £42.2 billion, as presented in Figure 1.5.

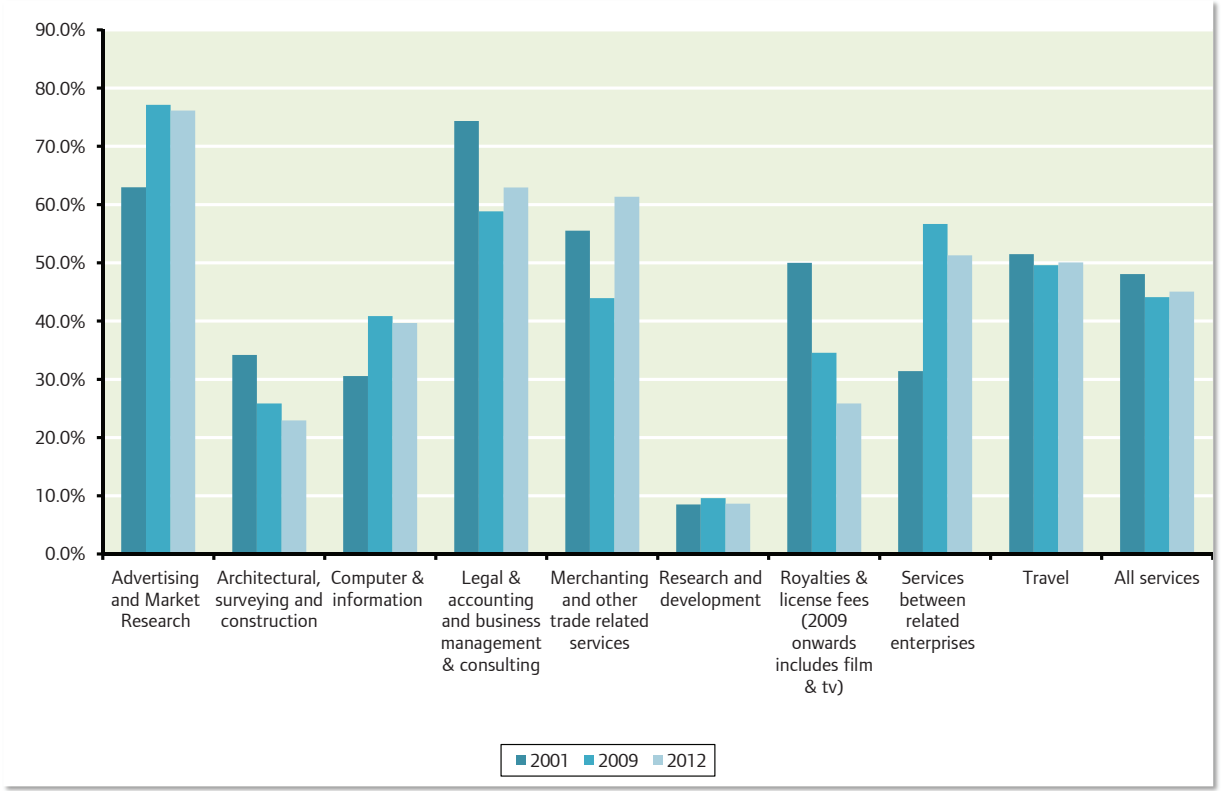
Figure 1.5: London's share of UK services exports



Source: GLA Economics derived from ONS Pink Book and BIS estimates

This paper focuses on the trend over time for the products estimated by BIS which represent between 42.0 and 52.0 per cent of London's total estimated service exports. Figure 1.6 displays how London's share of UK exports is estimated to have changed over time for different services.

Figure 1.6: London's share of UK services exports by sector over time



Source: GLA Economics derived from ONS Pink Book and BIS estimates

2: Spatial specialisation and agglomeration

The sectoral specialisation outlined in the previous chapter has also, to a degree, manifest itself in a spatial specialisation or concentration. Particular (and many) functions of London's economy have tended to locate in certain areas of London – particularly central London.

Central London offers a range of factors that are not found in combination in many other places. Table 2.1 displays the rankings achieved by London in the last six years for which the Cushman and Wakefield European survey of factors important to business location decisions has been run.[9] On a range of factors, businesses see London as the best place in Europe to locate – with the top one of these being availability of qualified staff.

Table 2.1: Attractiveness of London to business

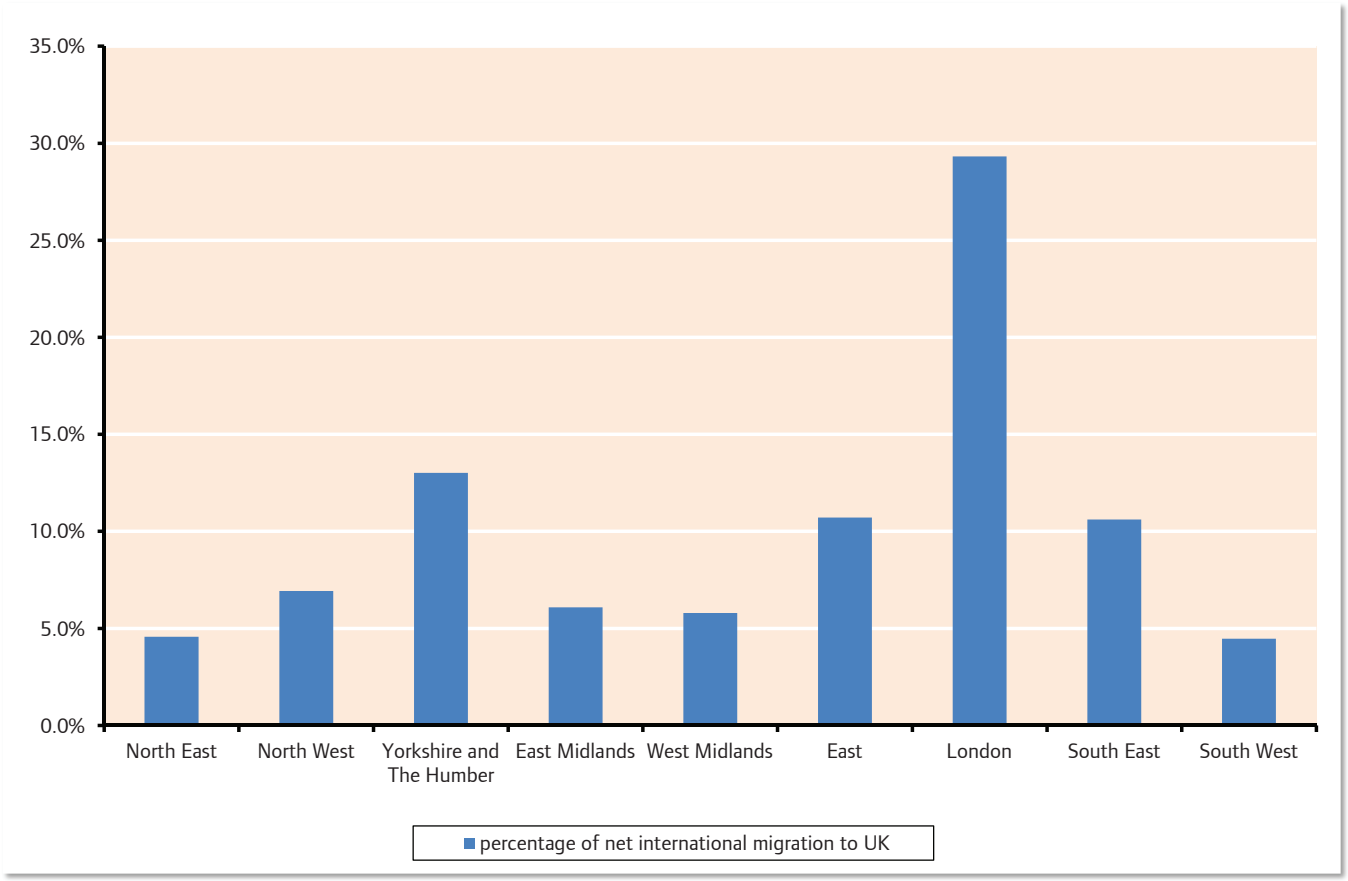
	2011	2010	2009	2008	2007	2006	2011 Leader
Best city to locate a business	1	1	1	1	1	1	London
Availability of qualified staff	1	1	1	1	1	1	London
Easy access to markets	1	1	1	1	1	1	London
Quality of telecommunications	1	1	1	1	1	1	London
External transport links	1	1	1	1	1	1	London
Cost of staff	30	29	28	29	25	16	Bucharest
Climate for doing business	3	2	4	5	2	5	Dublin
Language spoken	1	1	1	1	1	1	London
Office space - value for money	24	26	23	24	18	29	Warsaw
Internal transport	1	1	1	1	1	1	London
Availability of office space	10	4	2	5	2	1	Berlin
Quality of life	10	10	11	14	11	7	Barcelona
Freedom from pollution	25	25	29	27	29	26	Stockholm

Source: European Cities Monitor, Cushman & Wakefield (2006-2011)

London's attractiveness to businesses is evidenced in inward investment figures. According to UNCTAD, in 2013 the UK was the number one country in Europe for foreign direct investment (FDI); globally it was second only to the USA. The number of projects secured across the UK (including London) increased by 14 per cent in 2013/14.[10] The attractiveness of London to FDI can be beneficial to the rest of the UK as companies expand their operations beyond the confines of London. More than half of the companies surveyed by Think London said they had used London as a "springboard" for expansion into other parts of the UK and Europe.[11]

London's attractiveness to people is illustrated by significant increases in population in the last couple of decades. A significant factor in London's population increase has been international migration. Indeed around 30 per cent of total net international migration to the UK between 2003 and 2012 has been to London, as displayed in Figure 2.1.

Figure 2.1: Net International Migration, 2003 – 2012 (percentage of UK total)

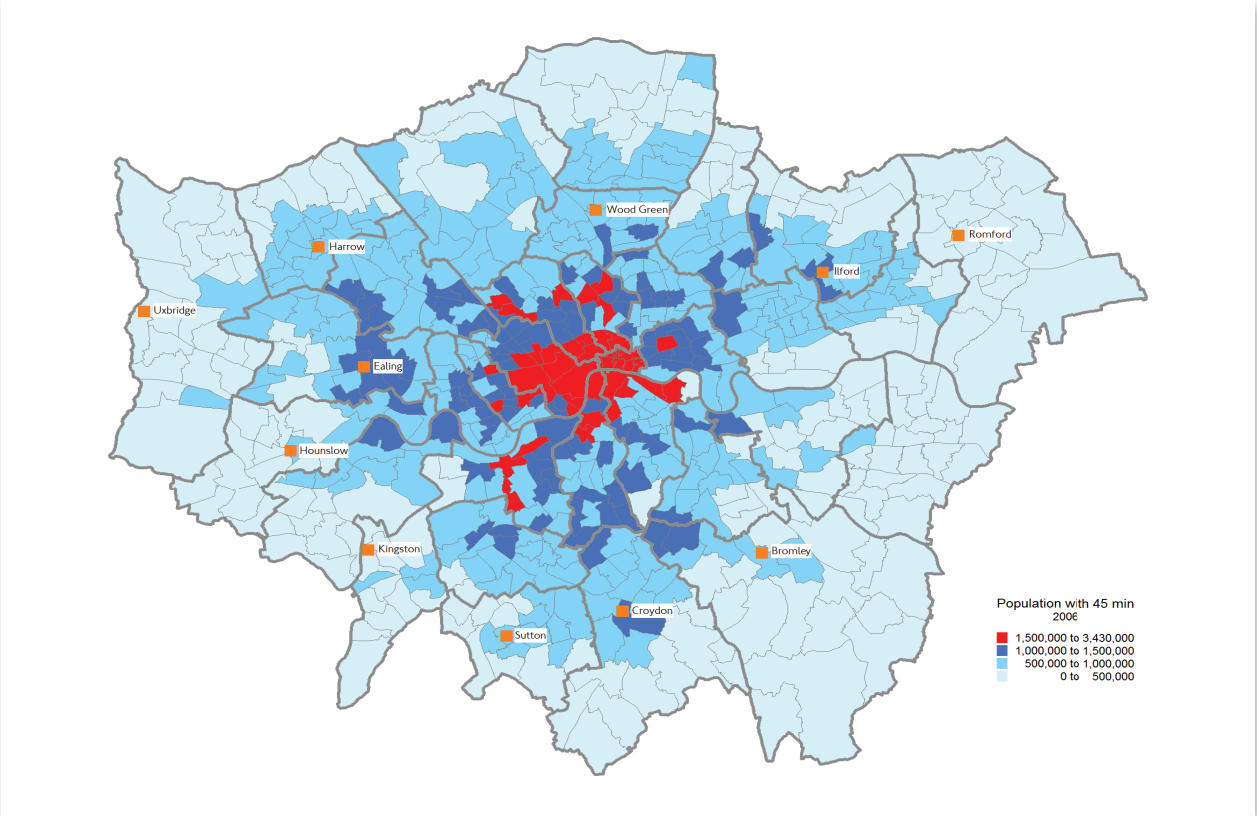


Source: ONS

Between 2009 and 2012, higher education was the most common reason for immigration to the UK. More recently work-related reasons have overtaken study as the main reason to immigrate to the UK. Almost 60 per cent of the work-related visas issued in 2013 were either a high-value or skilled worker visa.[12]

Businesses located in London are able to access multitudes of potential workers due to London's transport system. The map in Figure 2.2 displays the number of people who could get to the particular highlighted ward within 45 minutes by public transport. It shows that at least 1.5 million people could get to the red areas within 45 minutes – illustrating the accessibility and attractiveness of central London. This emphasises the importance of London's radial transport system to its economic success. Maintaining London's transport network is crucial to the continuing productivity and international competitiveness of London's economy.

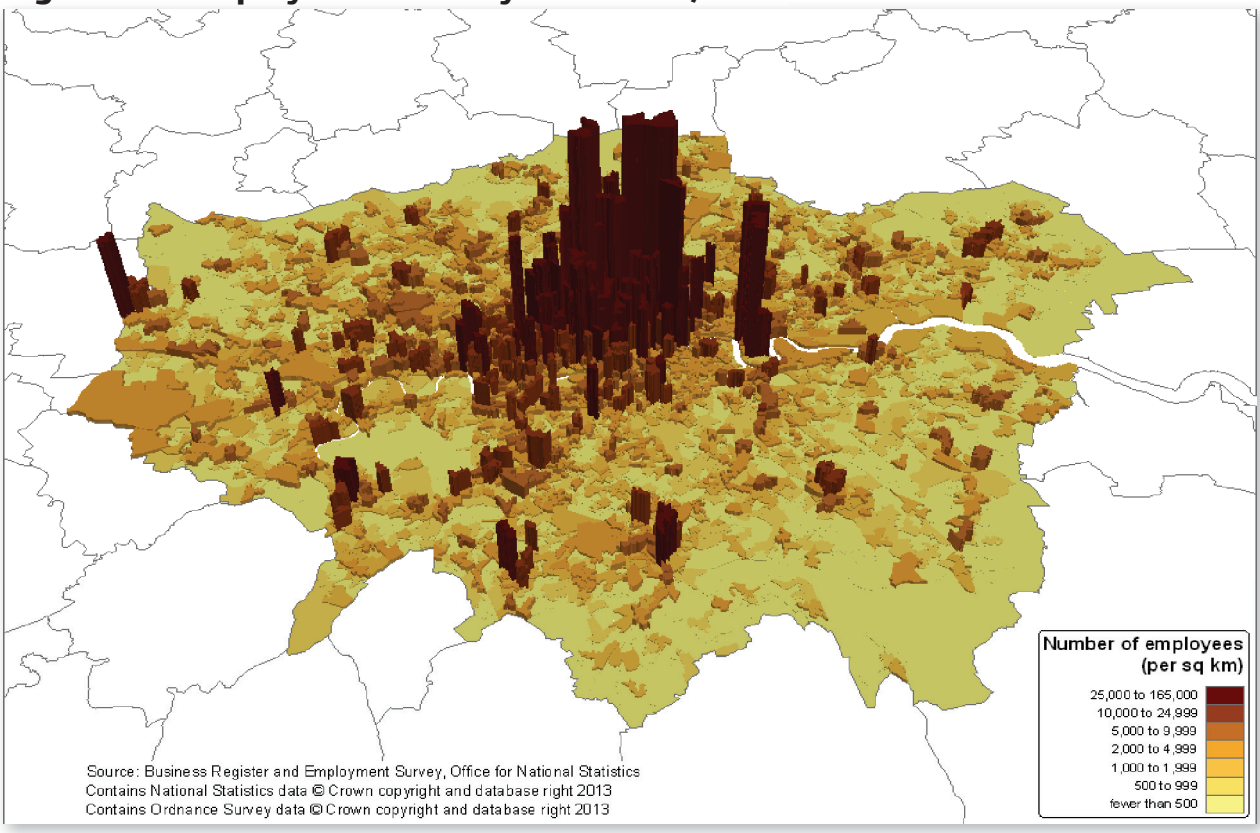
Figure 2.2: Number of residents living within 45 minutes public transport travel time to central London



Source: Transport for London, 2009

And as a result of all these factors, there is a concentration of employment at the centre of the city of London, as demonstrated in the employment density map Figure 2.3.

Figure 2.3: Employment density in London, 2012

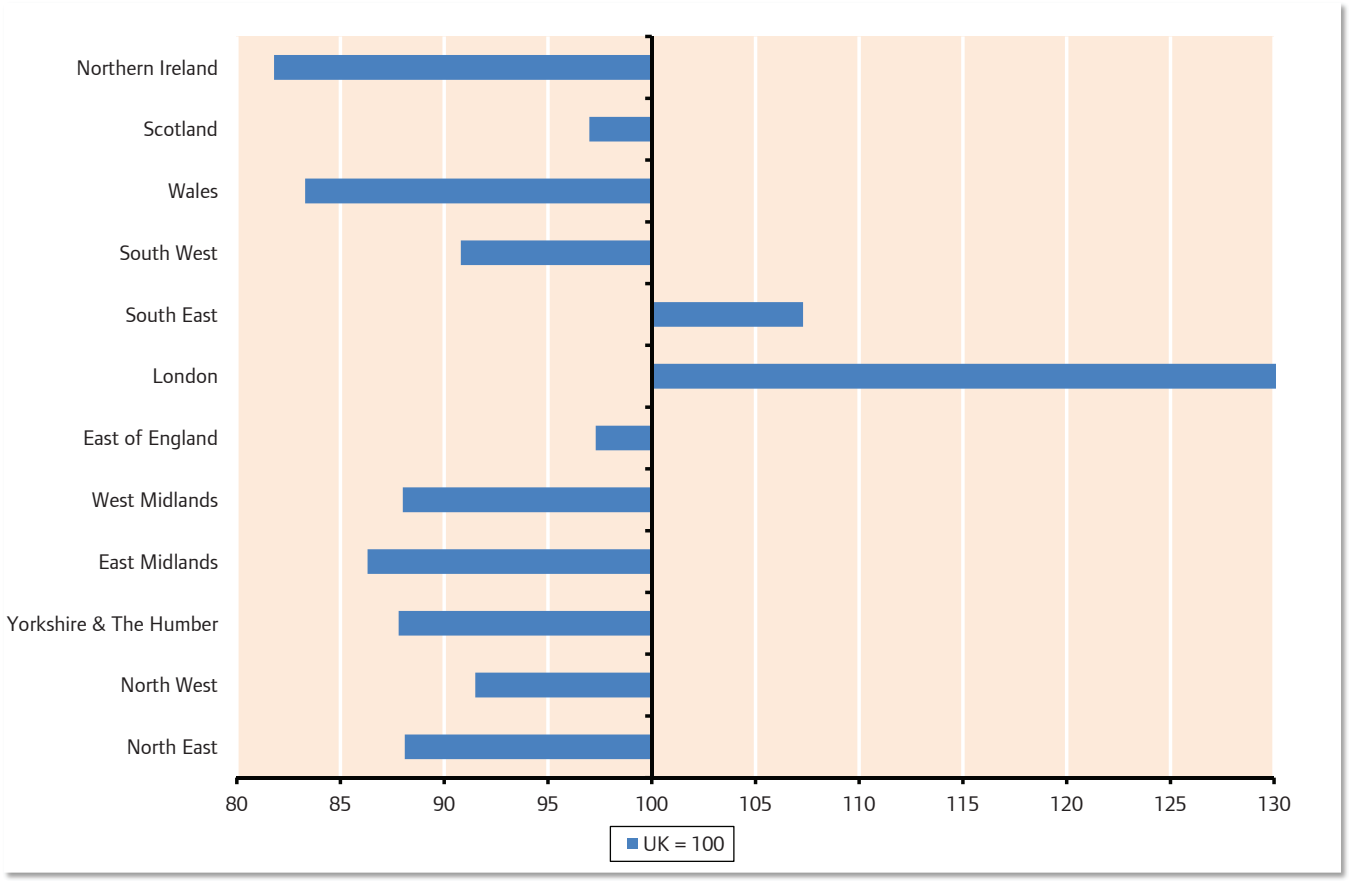


Source: Business Register and Employment Survey, ONS

In essence the preference revealed by companies' business location decisions is that they want to locate near the centre – near to one another - to benefit from better access to input and/or output markets. This is one of the key reasons for 40 per cent of the world's largest 250 companies basing their European headquarters in London. London's nearest rival is Paris with 8 per cent, rather than Birmingham or Manchester.[13]

This competition for space in the centre of London puts upward pressure on the price of land and means businesses in London have to be very competitive to survive. This competition drives productivity and this is reflected in ONS productivity figures which show that London's economy is over 30 per cent more productive than the UK average (see Figure 2.4).

Figure 2.4: London's productivity in comparison to other regions and UK average, 2012



Source: Regional Economic Indicators, ONS

This concentration of businesses at the centre of London brings benefits to the economy over and above those that accrue to the individual firms themselves: so-called agglomeration benefits. These agglomeration benefits are the positive externalities which arise when specialised economic activity takes place in a spatial concentration – such as in central London – as displayed in Figure 2.3. The four key elements of agglomeration are: labour, specialised inputs, knowledge and the market.

Such agglomeration benefits 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 spill over effects such as the rapid transfer of innovation and knowledge.

As shown earlier, the phenomenon of agglomeration is supported through the maintenance of, and extensions to, the public transport network. The implementation of Crossrail and HS2 will improve the access that firms have to both people and markets, which – given the economies of agglomeration and high levels of productivity in London – will bring about benefits well in excess of the initial investment. Moreover, there is evidence to suggest that some sectors benefit more from agglomeration economies than other sectors.

This analysis suggests the sectors that benefit most from agglomeration economies are finance and insurance and business services, areas in which London specialises.[14]

The economies of agglomeration have a degree of circular causality – existing spatial concentration results in forces that encourage further spatial concentration. The productivity benefits of high employment density, within industries, across geography and over time, are found in cities across the world. 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. The implementation of Crossrail and HS2 will advance this accessibility further.

This international competitiveness means that on many measures London is a very successful economy. It accounts for over one-fifth of the UK economy and one-third of the UK's exports of services. It has a larger economy than many European countries and has a higher level of income per head than any other UK region.

This success has led to many to argue for the spoils to be shared out more equally across the UK as a whole. Indeed, some have argued for some of the businesses, or sectors, that operate in London to be 'shared out' around the UK in an attempt to level the amount of economic activity across the UK.

> **"Maintaining and enhancing these agglomeration benefits will require increased spending on infrastructure such as transport, electricity supply and internet access into the future, enabling London's increasing population the opportunity to access London's jobs and simultaneously giving London's businesses access to a large pool of well qualified labour…Cities and the economic clusters they accommodate rely on a combination of infrastructure investments, which are not independent of one another. If London government had the autonomy to invest in its own priorities, it is likely it would be able to assess and deliver the correct balance.[15]"**
> **– London Finance Commission**

While at one level this wish is certainly attractive, economic theory would suggest it is largely a false choice. Sharing out the businesses or sectors that operate in London would lead to such businesses losing many of the benefits that they seek by locating in London, in close proximity to one another: access to a deep pool of well qualified labour, access to complementary inputs, even access or proximity to competitors. Moreover, the nature of many of the businesses in London is such that if they were to look to relocate elsewhere the choice would be another international city elsewhere rather than another city or location in the UK.

3: London's regional trade and growth linkages

London's trade is not just international, there is significant trade with other UK regions. The more international trade London engages in, the more trade there is likely to be for the rest of the UK. This chapter estimates the domestic trade balance between London and the rest of the UK.

GLA Economics previously published estimates of London's trade balance with the rest of the UK in 2005.[16] There is no official source of data available on trade in goods and services between regions in the UK. The annual national input-output supply and use tables published by the ONS provide a framework displaying the relationship between components of value added, industry inputs and outputs, and product supply and demand at the UK level. An equivalent table is not available on a regional basis.

We estimate inter-regional trade flows between London and the rest of the UK using imperfect assumptions to scale down the national input-output (I/O) table, creating an estimated I/O table for London (see Box 1 for more detail). While this I/O table is likely to be imperfect, because of the heroic assumptions needed to derive it, arguably it is sufficient to provide an illustrative view of London's trade flows with the rest of the UK.

Box 1

The approach taken to scale down the national input-output table to a regional level is to apply London's GVA share of total UK GVA by industry. For example, if the London GVA for industry X is £10 million and the UK GVA for industry X is £40 million, then London's proportion of UK's total GVA for industry X is 25 per cent. This approach is applied to production and intermediate consumption. A more tailored approach is necessary with regard to household demand, government spending and gross fixed capital formation, ie, final demand.

a) Household demand is assumed to be proportionate to the level of London's GVA or London's share of UK population (depending on the sector considered);

b) Government spending is assumed to be in line with the level of identifiable government expenditure (as published by HM Treasury);[17]

c) Gross fixed capital formation is also assumed to be proportionate to London's GVA.

Such assumptions are necessary because the proportion of spending by Londoners, central government and businesses that is paid to London firms is dependent on the type of industry and representation within London.

The multiple steps set out in Box 1 produce an illustrative input-output supply and use table for London which includes: supply of goods and services, intermediate consumption and final demand. Using these values an estimate of the trade flows and trade balance between London and the rest of the UK can be estimated, as in Table 3.1 using the last available data (2011).

Table 3.1: Estimate of the trade of goods and services between London and the rest of the UK, 2011

Industry Sector (£ billion)	Regional Exports	Regional Imports	Trade Balance
Agriculture	0.2	2.8	-2.7
Production	45.4	91.9	-46.5
Construction	17.7	17.6	0.1
Distribution, transport, hotels and restaurants	29.2	18.7	10.6
Information and communication	35.6	29.9	5.6
Financial and insurance	53.8	28.9	24.9
Real estate	40.2	24.1	16.1
Professional and support activities	19.8	8.3	11.5
Government, health & education	59.8	50.8	9.0
Other services	14.6	14.1	0.5
Total	**316.2**	**287.0**	**29.2**

Source: GLA Economics based on data from ONS

This simple example, based on the heroic assumptions, provides an illustrative view of the likely inter-regional trade between London and the rest of the UK. The table suggests that London imports a significant level of goods and services from the rest of the UK.

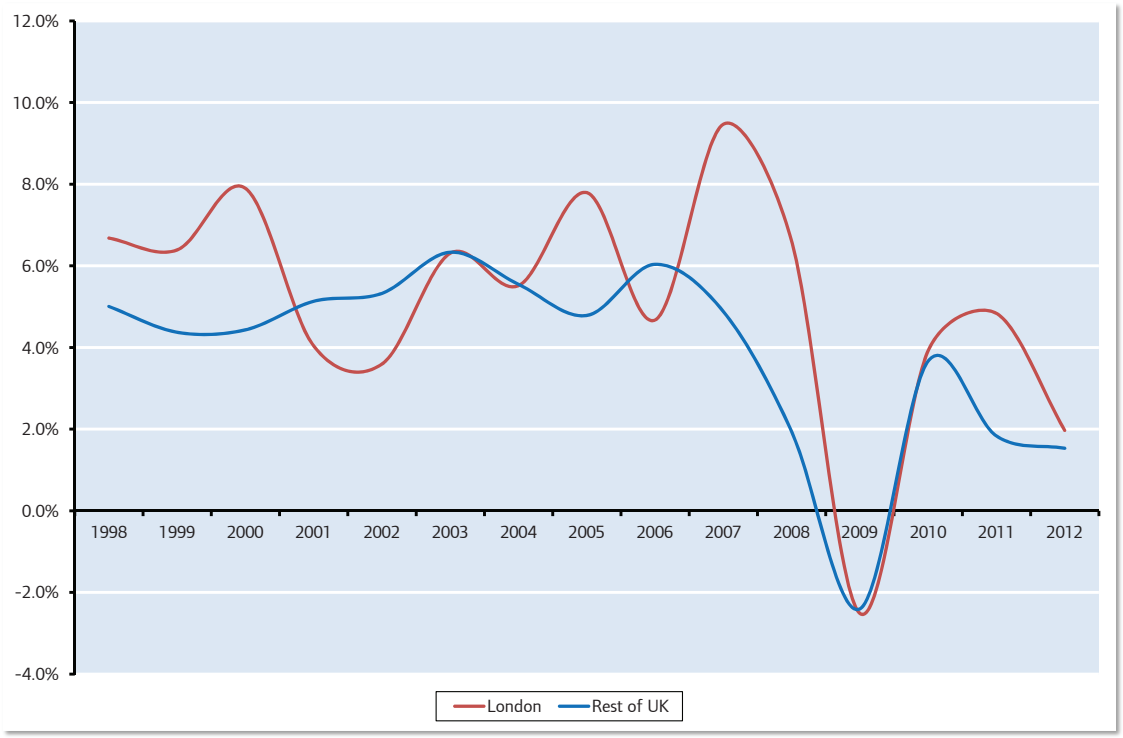
One such example of this is in construction. A 2013 report by London First[18] found that office developments in central London alone contribute an average of £1.7 billion in GVA and over 34,000 jobs per year. Central London office developments account for less than 10 per cent of total construction output in London. However, the office developments in central London generate almost twice as much GVA and jobs outside London as they do inside London. The GVA and jobs generation which occurs outside London results from the impact on the first tier of suppliers receiving the expenditure relating to the construction, the indirect impact on the supply chain beneath those suppliers, and the induced impact resulting from employees on site and along the supply chain spending their money in the economy.

Another such example is in transport. In May 2013, a new manufacturing plant in Northern Ireland was opened creating 50 new jobs, 18 apprenticeships and sustaining 220 jobs as a result of an order for 600 buses to be built for London's public transport network.[19] This highlights how investment in London, in this instance London's transport system, benefits the economy of the UK as a whole. Moreover, Transport for London (TfL) figures show that over 60 per cent of TfL spending through their supply chain goes to suppliers outside London.

As a result of the inter-regional trade between London and the rest of the UK, and as illustrated in the examples above, it can be seen that activity or investment in London will result in economic activity in other regions. Perhaps unsurprisingly this means that when London grows the rest of the UK tends to grow as well. London and the rest of the UK grow together – not at the expense of each other.

Figure 3.1 presents the relationship between growth in London's economy and that of the rest of the UK between 1998 and 2012. It is clear that the economic cycle of the rest of the UK and London is broadly synchronised, although London's economy would appear to be subject to more volatility in its output.

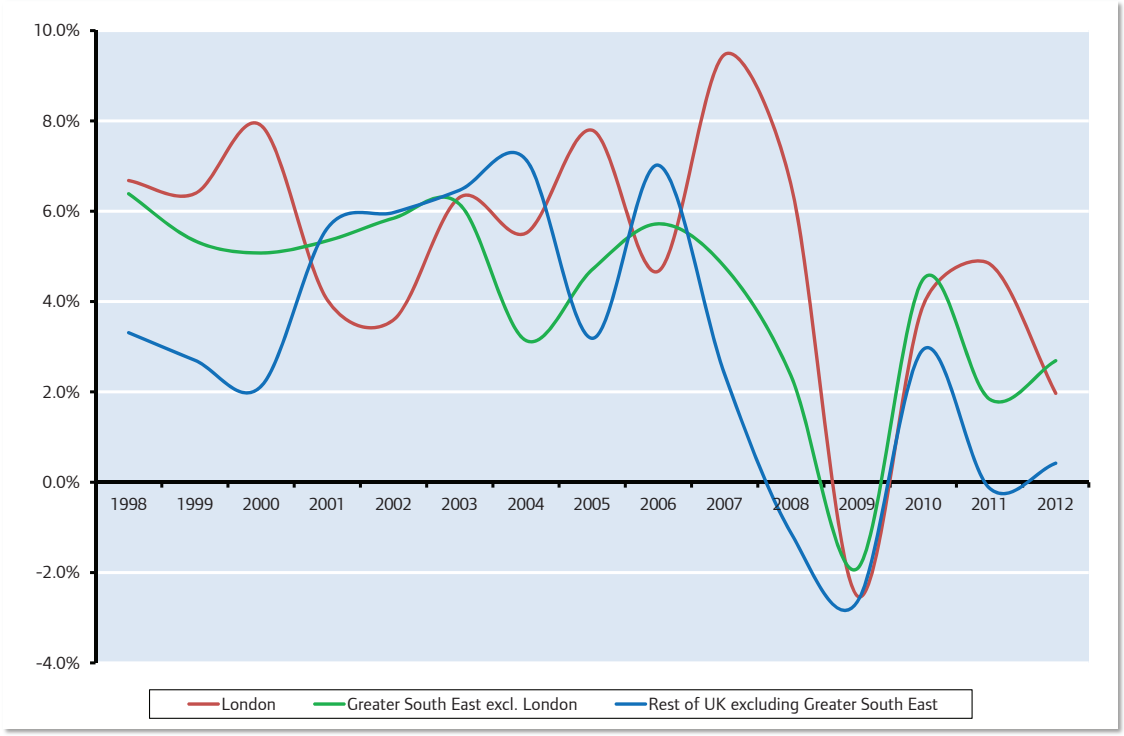
Figure 3.1: Annual nominal GVA growth for London and the rest of the UK, 1998 to 2012



Source: Office for National Statistics

This positive relationship between economic activity in London and elsewhere holds quite strongly for the Greater South East, in particular, as one would expect (see Figure 3.2). This correlation, while a little weaker, also holds for the relationship between London's output and the rest of the UK excluding the Greater South East.

Figure 3.2: Annual nominal GVA growth for London, the South East, East of England and the rest of the UK excluding the Greater South East, 1998 to 2012



Source: Office for National Statistics

A further way of assessing the positive economic relationship between growth in London and other parts of the UK is to examine the overall correlation between growth rates in London and elsewhere in the UK. This is shown in Table 3.2. If it was the case that London tended to grow at the expense of other regions then the correlation coefficient between growth in London and the other regions of the UK would be negative. Alternatively, if London and the other parts of the UK tend to grow or contract together, then there would be a positive correlation coefficient. As can be seen below the correlation between London and other UK regions' growth rates is positive.

Table 3.2: Correlation between London's year on year growth rate of quarterly GVA and various regions and nations of the UK's growth rates, 1998 to 2012

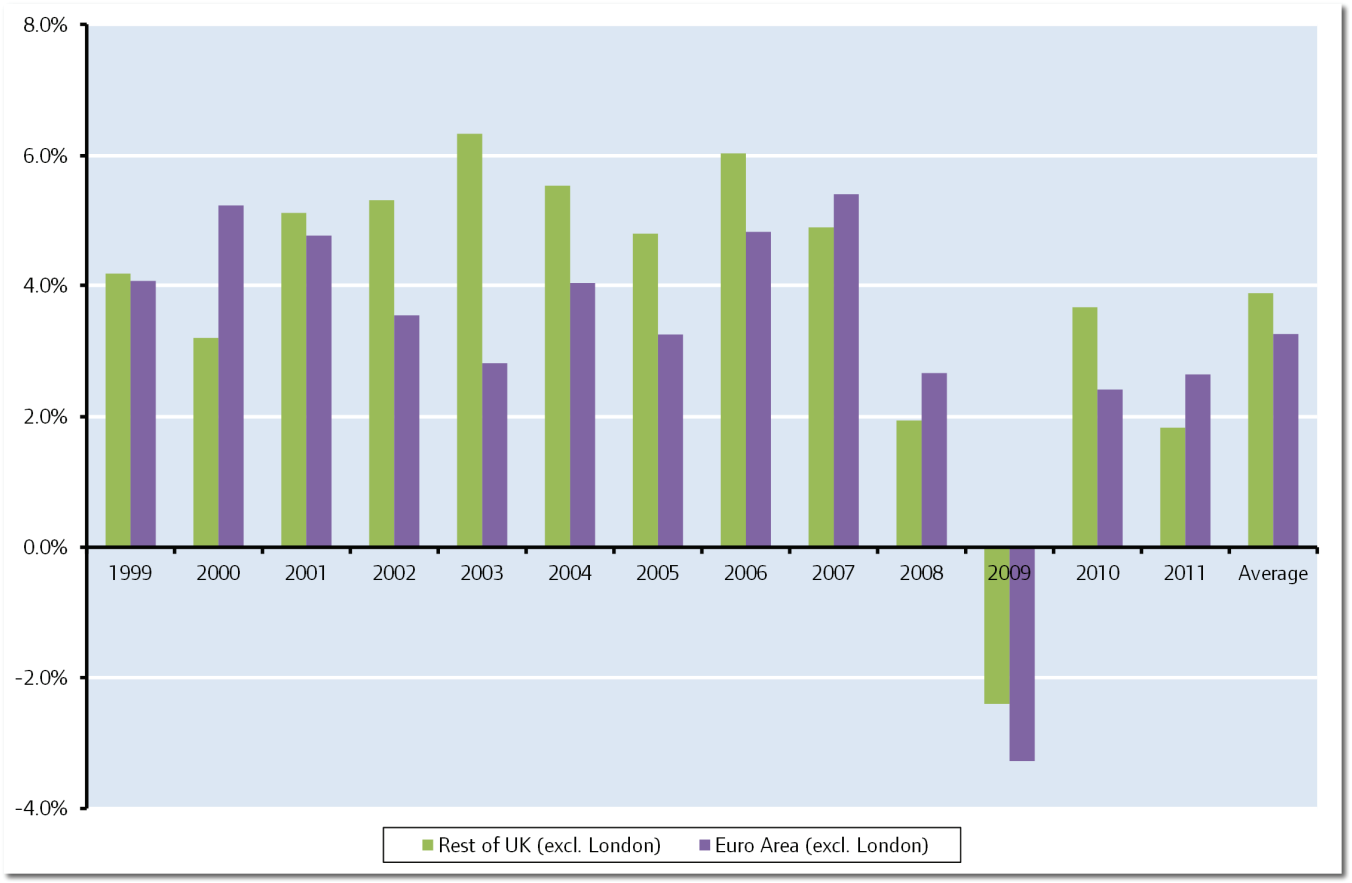
	Economic growth data		
Nation/Region	ONS income approach	ONS production approach	Experian Economics
South East	0.61	0.51	0.67
East of England	0.62	0.60	0.78
South West	0.54	0.71	0.71
East Midlands	0.58	0.60	0.48
West Midlands	0.46	0.43	0.71
Yorkshire and Humberside	0.49	0.70	0.69
North East	0.41	0.22	0.59
North West	0.31	0.46	0.60
Wales	0.51	0.39	0.51
Scotland	0.47	0.29	0.74
Northern Ireland	0.66	0.79	0.73

Source: GLA Economics calculations on ONS data and Experian Economics data

The comparison between multiple sources provided in Table 3.2 establishes the position that the relationship of growth rates between London and the other UK regions is positive. This would suggest that far from London's growth being at the expense of the rest of the UK – or London 'draining' the rest of the UK – the two tend to grow together.

Moreover, if London's growth were at the expense of the rest of the UK we might expect the growth of the UK (excluding London) to compare unfavourably with competitors (with London dominating UK growth). However, between 1999 and 2011 the UK experienced a strong level of economic growth even when excluding London. This is even more striking when comparing against the UK's closest rival, the Euro Area. OECD gross value added (GVA) figures show that on average over the period 1999 to 2011, the UK (excl. London) grew by almost 4 per cent, while the Euro Area (excl. London) grew by just 3.3 per cent. This can be seen in Figure 3.3. London's international competitiveness is illustrated when comparing on this scale, growing at an average of almost 6 per cent over the same time period.

Figure 3.3: Average GVA growth comparison - UK (excl. London) and the Euro Area (excl. London), 1999 to 2012



Source: OECD

4: Commuting and migration

While there is a significant net inflow of young people into London, there is a net outflow of older, well qualified people. Indeed, London experiences a net outflow in terms of domestic migration; more people leave London for other regions of the UK than come to London from other regions of the UK. Some of those who migrate out of London (in particular to the South East or East of England regions) may commute back into London for work.

Commuting

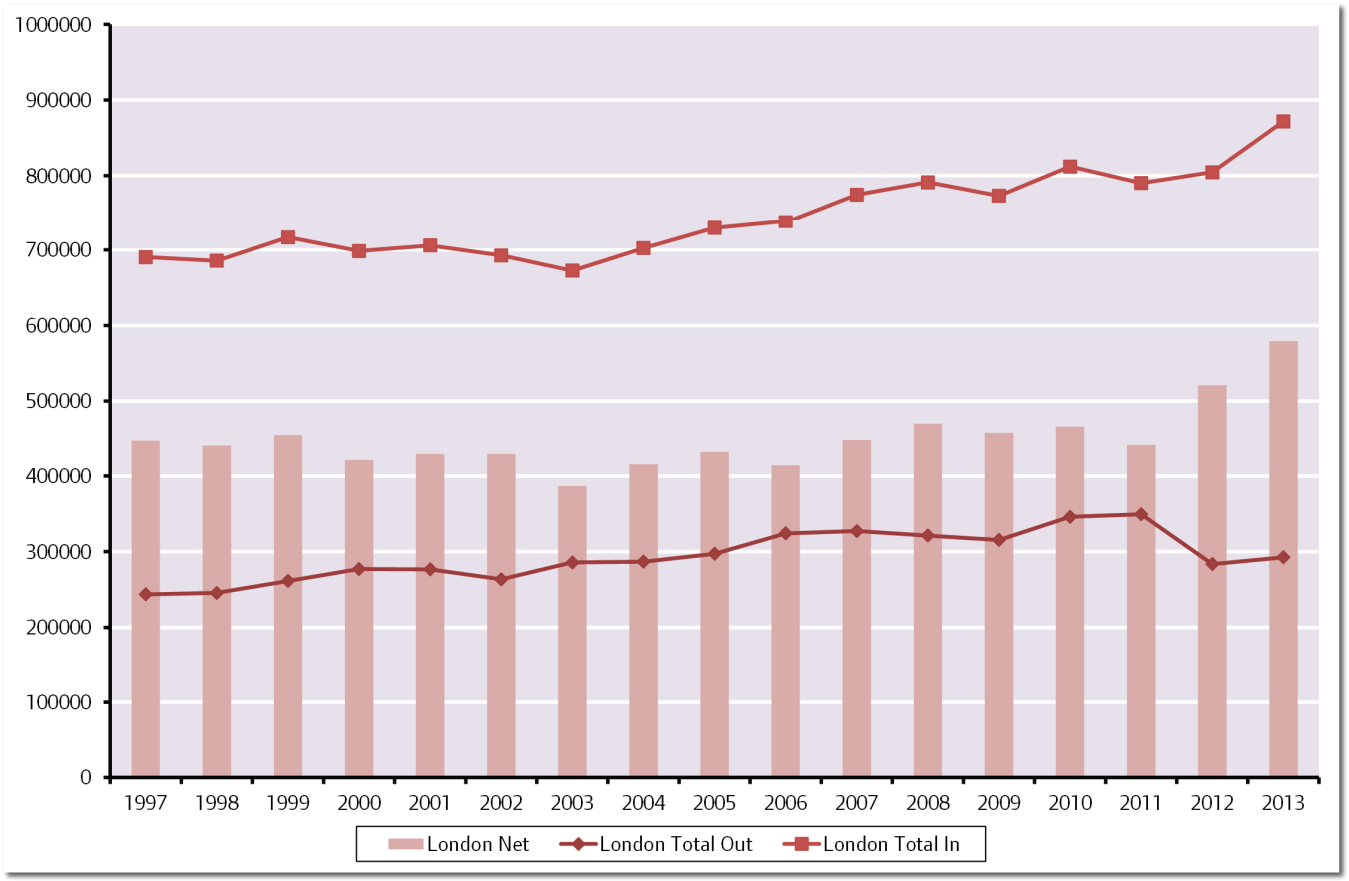
As noted earlier, in order to bring about the concentration of employment in London's central business district and to benefit from the economies of agglomeration, large numbers of people commute into central London on a daily basis.

By March 2014, the total number of workforce jobs in London exceeded 5.5 million.[20] Given the job opportunities which London offers and its ability to attract talent and innovative businesses, it is not surprising that commuting[21] is considered as one of the most substantial interactions between London and the other parts of the UK. Without these workers London firms would not be able to derive the significant agglomeration benefits from locating in London.

The vast majority of commuters into London come from the neighbouring regions of the South East and East of England. According to the latest Labour Force Survey (LFS),[22] in 2013 the South East alone accounted for 51 per cent of commuters into London; with the East of England providing another 40 per cent; the other UK regions accounted for 9 per cent of total commuters into London.

According to the LFS,[23] around 870,000 people commuted into London for work in 2013. Compared to the 2001 data, this represents an increase of 24 per cent, up by about 165,000 from 705,000. Out commuting by Londoners also increased between 2001 and 2013 from 280,000 to 295,000 – an increase of 15,000 or around 6 per cent. As a result, net commuting into London has increased over the same period to 580,000, up 35 per cent from 430,000 in 2001.

Figure 4.1: In, out and net commuting to London, 1997 to 2013



Source: Labour Force Survey (Spring quarters 1997-2013) and GLA Economics calculations

Table 4.1 reports the share of commuters into London for each of the UK regions, as well as in-commuters as a share of employed Londoners (independent of whether they are out-commuters or not) and as a share of the total number of workers in London.

Table 4.1: Commuters into London by UK region

Region of residence	Commuters into London (%)	Share of employed residents in the region of origin (%)	Share of workers in London (%)
South East	50.7	10.3	9.9
East of England	40.4	12.1	7.9
South West	2.5	0.9	0.5
East Midlands	2.1	0.8	0.4
West Midlands	1.2	0.4	0.2
Scotland	1.1	0.4	0.2
North West	0.9	0.2	0.2
Yorkshire & the Humber	0.7	0.3	0.1
North East	0.2	0.2	0.0
Wales	0.1	0.1	0.0
Northern Ireland	0.1	0.1	0.0
Total number of in-commuters	**100**	**3.4**	**19.4**

Source: Labour Force Survey (Oct-Dec 2013)

At the same time, the majority of the Londoners who commute to other regions for work do so in the South East (53.0 per cent) and in the East of England (30.2 per cent). Londoners working in the South East

represent around 4.0 per cent of all working in the region and 4.2 per cent of the total number of London's employed residents.

Table 4.2: Out-commuters by UK region of work

Region of work	Out-commuters from London (%)	Share of employed residents in London (%)	Share of workers in region of destination (%)
South East	53.0	4.2	4.0
East of England	30.2	2.4	3.5
South West	4.3	0.3	0.5
Scotland	3.5	0.1	0.3
North West	2.1	0.1	0.2
West Midlands	1.9	0.3	0.2
East Midlands	1.7	0.2	0.2
Yorkshire & the Humber	1.5	0.1	0.2
Wales	1.3	0.1	0.2
North East	0.7	0.1	0.3
Northern Ireland	0.0	0.0	0.0
Total number of out-commuters	**100**	**7.8**	**1.2**

Source: Labour Force Survey (Oct-Dec 2013)

One way of estimating the economic value that commuters contribute to the London economy, is to examine the regional output figures, which are calculated on two different bases: workplace and residence. The former allocates output according to where workers work and the latter according to where they live. Hence, the difference between the figures on the two bases for London gives an estimate of the output generated by net commuters into London. On this basis, using the latest available estimates of regional output, net commuting into London in 2012 accounted for £34.3 billion of output or about 12 per cent of the London economy. Since according to the LFS in 2012 commuting into London was 49 per cent higher than net commuting, this suggests that in-commuters in 2012 contributed around £51 billion to the London economy.

Alternatively, it could be assumed that commuters' contribution to the London economy is the same as their share of employment located in London. On this basis, using the LFS 2012 figures, a similar estimate of the economic contribution of commuters for 2012 is identified. In-commuters are estimated to produce around £59 billion (with net commuting estimated to account for around £39 billion). Hence, taking these estimates together it is not unreasonable to conclude that in-commuters to London contributed between £51 and £59 billion to the London economy in 2012.

While these estimates consider the economic value of commuting to the London economy, commuters will also spend at least part of their income where they live – contributing to areas outside London. GLA Economics estimate that spending by in-commuters to London in the region where they live amounts to £16.4 billion, the majority of which, £14.9 billion, is spent in the Greater South East (excluding London) where the majority of commuters into London live. At the same time, workers living in London but working anywhere else in the UK are estimated to spend around £1.0 billion in the region where they work. Again the majority of the spend, £0.8 billion, is spent in the Greater South East.

These data illustrate once again how London's economy is closely linked to the rest of the UK, in this instance particularly the Greater South East region. London's economy, through its radial transport network, draws on a significant number of workers from outside its administrative boundaries. Such commuting also bonds London with the rest of the UK through integrating its housing and labour markets with those in the surrounding regions. Commuting links between London and surrounding areas plus the pattern of housing and job locations across the Greater South East mean that there are high degrees of overlap between local labour and housing sub-markets.

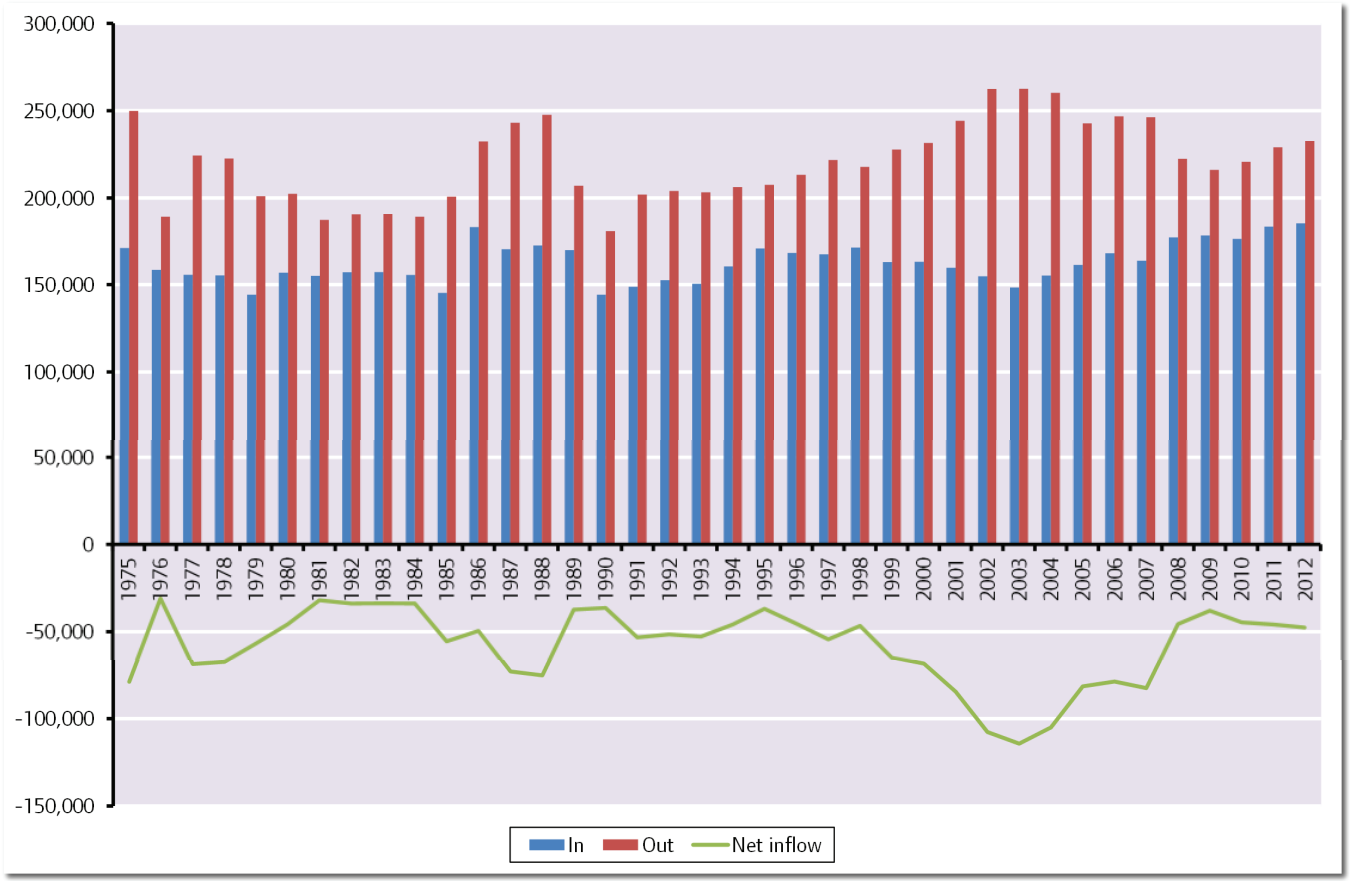
Consequently, the impact of shifts in the supply of or the demand for labour or housing originating in London will ripple across much of the Greater South East. Equally, such shifts originating outside London will impact on the London housing and labour markets.[24] The strength of these ripple effects will be dependent on the magnitude and nature of the commuting links between London and its surrounding regions.

Migration

Migration and commuting are closely linked. An individual living in one region of the UK who obtains a job in another region can either commute to the other region or alternatively s/he can move residence to the other region – in other words, migrate. In this section the term 'migration' is used to denote movement by individuals or households across regional boundaries (the ONS defines 'internal migration' as 'residential moves between different local authorities').

In the years 1975 to 2012, domestic migration from the rest of the UK into London averaged 160,000 per annum. Over the same period average annual outward domestic migration from London was 220,000. Thus on average over this period London lost a net 60,000 people to the rest of the UK each year (see Figure 4.2 and Table 4.3).

Figure 4.2: Domestic migration in and out of London (1975 – 2012)



Source: Office of National Statistics

This domestic population net outflow is offset (partly and in some years wholly) by a net inflow of migrants to London from outside the UK. In the five years to 2012, London received, on average, a net inflow of 110,000 people each year from outside the UK.

Table 4.3: Average annual inflows and outflows between London and other UK regions (1975 to 2012)

Migration to and from London by origin and destination			
(Average 1975 to 2012)	To London	From London	Net Balance
North East	5,000	3,900	1,100
North West	13,100	10,900	2,200
Yorkshire and Humberside	10,000	8,600	1,400
East Midlands	9,900	11,200	-1,300
West Midlands	11,500	10,000	1,500
East	29,700	56,500	-26,800
South East	52,600	85,400	-32,800
South West	15,400	21,100	-5,700
Wales	5,500	5,600	-100
Scotland	7,900	6,900	1,000
Northern Ireland	1,800	1,700	100
Total	162,400	221,800	-59,400

Source: ONS migration statistics

Table 4.3 shows that most migration to and from London is between London and its neighbouring regions of the East and South East. Such 'local' migration accounts for over half of all migration to London and nearly two-thirds of migration from London. This pattern of the majority of migration with a region's neighbours is common to most of the UK's regions and the devolved administrations. For example focusing on the East region, in 2011/12, 70.5 per cent of migrations into the East were from its bordering regions (East Midlands, South East and London) and 63.7 per cent of migrations from the East were to its bordering regions. Again this helps illustrate the 'ripple-like' way in which London's economy, in this instance through migration, is linked with the rest of the UK economy – in effect linked through ever expanding chains of substitution.

Table 4.4: Reasons for moving within UK, 2009-2013 (%)

	All Moves	Same Region	Different Region
Job-related	8.0	5.4	28.8
Partnership	8.4	9.0	3.3
Other family	15.5	15.9	12.0
Education	8.6	7.0	21.1
Housing	41.2	44.6	14.3
Area	11.8	11.5	14.2
Other	21.0	21.8	14.2

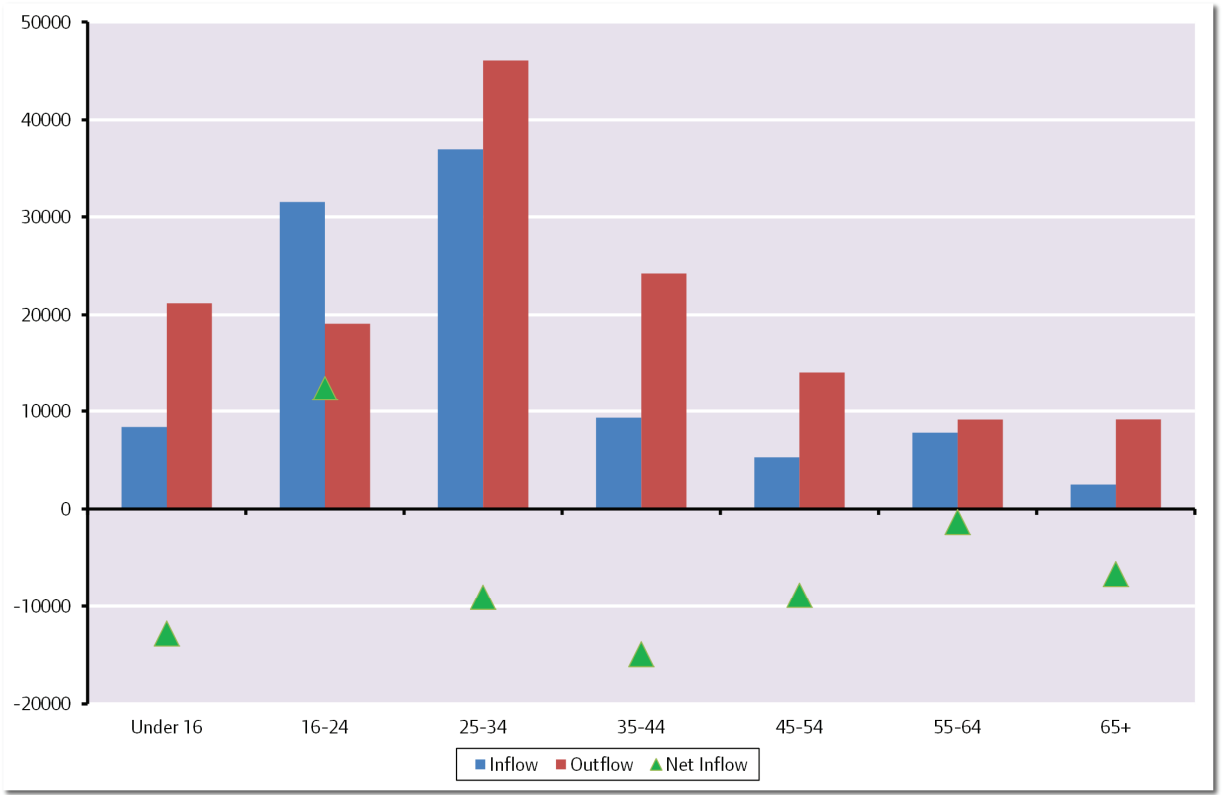
Source: Understanding Society

An important reason for moving between regions is education, cited by 21.1 per cent of the respondents who moved between regions (see Table 4.4). This reflects the common practice for university students to enrol in a university away from their home city. London is an important higher education centre for students domiciled in other UK regions. It attracts around 62,000 such students to do full-time first degrees and around 110,000 full-time students in total.[25]

However, the main reason cited for migrating between regions is 'job-related'. Moreover, research finds that particularly for the young, the availability of employment encourages migration.[26]

Figure 4.3 illustrates that London sees a net inflow of people at the younger age group (16-24) – most likely for university and/or the start of their working careers. However, Figure 4.3 also shows that, at older age groups – and, as seen earlier, in total terms – London loses more people to other regions than it gains.

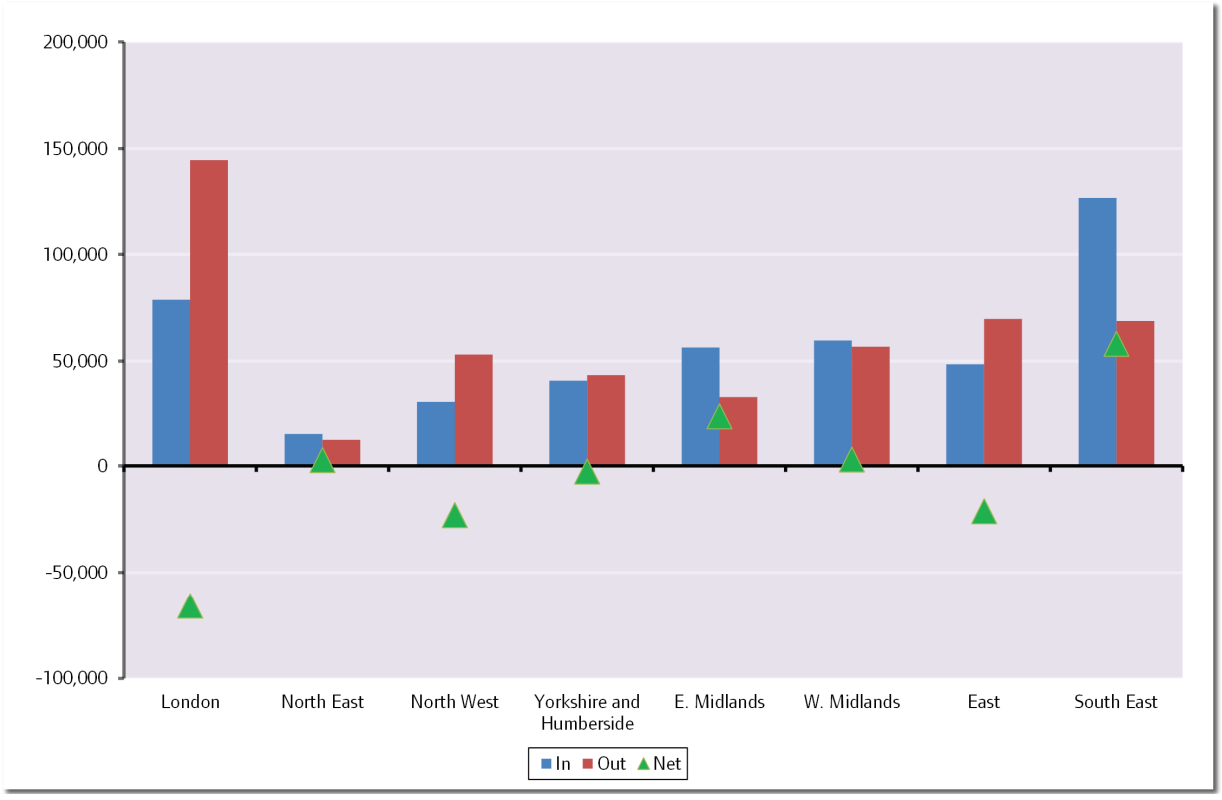
Figure 4.3: Domestic migration to and from London by age group, year to June 2012



Source: Office of National Statistics, Moves within the UK

Indeed Figure 4.4 illustrates that London sees a net outflow of individuals in managerial and professional occupations.

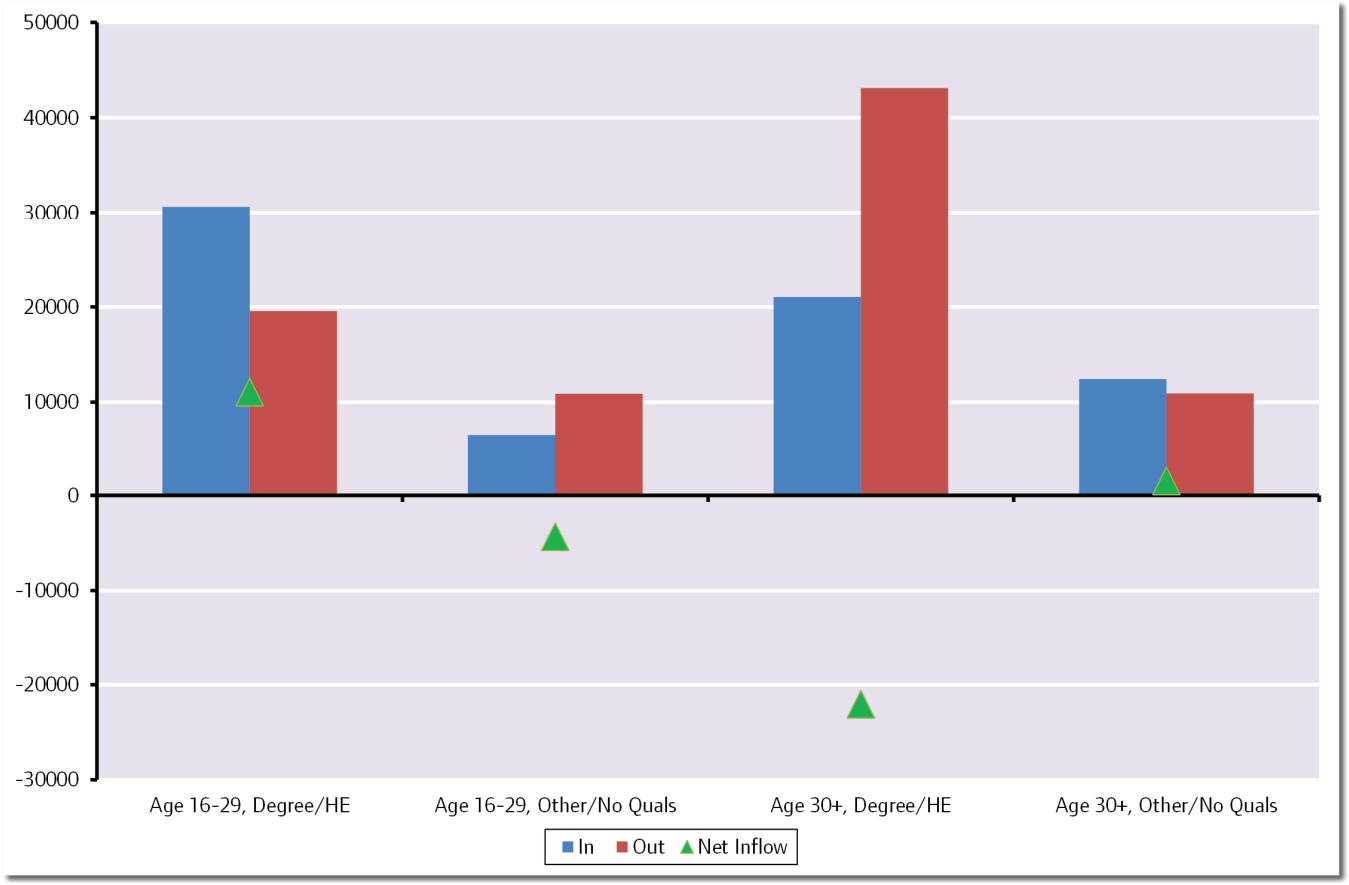
Figure 4.4: Domestic migration by individuals in managerial and professional occupations, 2011/12



Source: GLA Economics calculations based on ONS LFS (spring 2013) and ONS domestic migration statistics (2012)

This is also illustrated by Figure 4.5 which shows that in 2011/12, London received a net inflow of young people with a degree or other further education qualifications as their highest qualification. However, the chart also shows that there is a net outflow from London (of some 20,000) of people aged over 30 with a degree or other further education qualifications as their highest qualification.

Figure 4.5: Domestic migration to and from London by age and highest qualifications, 2011/12



Source: GLA Economics calculations based on ONS LFS (spring 2013) and ONS migration statistics

Indeed other research has found that migrants that move between regions have both higher individual earnings and higher household income by comparison with those who do not move.[27] Other research has emphasised the boost given by regional migration to individuals' careers.[28]

These data are consistent with the idea that London is a value-adding 'incubator' for talented young people. Those talented young people come to London to study or for their first jobs and career advancement, then as they grow older and gain the highly valuable work experience, they migrate to other parts of the UK, which then benefit from their gained skills, acquired knowledge and accumulation of disposable income.

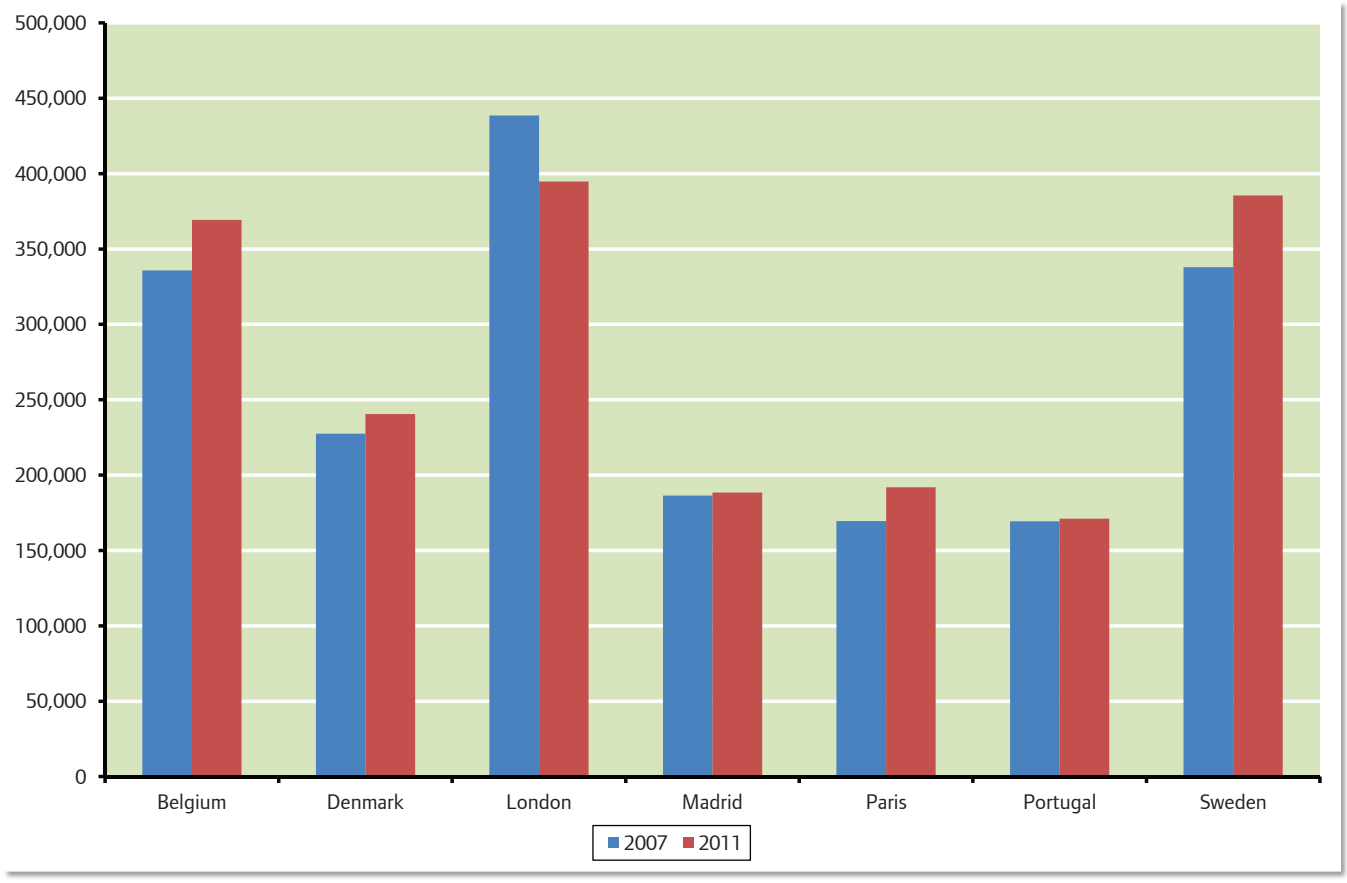
Fielding (1992)[29] first developed this concept by showing, for example, that migrants to the South East between 1971 and 1981 were around two and a half times as likely to have gained entry to professional, managerial or technical jobs than the residents of England and Wales overall.

5: London's contribution to the UK's public finances

London's economy is larger than that of Sweden or Belgium and almost as large as Paris and Madrid combined.

London makes up just over a fifth of the UK economy, a smaller proportion relative to Dublin (42 per cent of Ireland's economy) or Stockholm (30 per cent of Sweden's economy) for instance.

Figure 5.1: Gross Domestic Product (GDP) Millions of Euro



Source: Eurostat

Table 5.1: Percentage Share of Country GDP in Purchasing Power Standard

Country (NUTS Capital City Area)	Percentage Share of Country GDP (Purchasing Power Standard, 2010)
Ireland (Dublin)	42.2
Portugal (Lisbon)	31.8
Sweden (Stockholm)	29.7
Austria (Vienna)	26.4
Romania (Bucharest)	22.6
UK (London)	**21.2**
Belgium (Brussels)	19.0
Spain (Madrid)	17.9
France (Paris)	9.6
Germany (Berlin)	4.0

Source: Eurostat

The level of economic activity that occurs in London means that London generates significant levels of taxation. Indeed, London contributes significantly to the UK's public finances as shown in Table 5.2, illustrating estimates of the amount of taxation raised in the past decade or so. It shows that in 2010/11, London generated over £100 billion in tax revenue.

Table 5.2: Revenue, expenditure and balance for London, 1999/00 to 2010/11 (£ billion)

Tax Year	Revenue (Resident)	Revenue (Workplace)	Average Revenue	Expenditure	Balance
1999/00	60.6	67.7	64.1	47.8	16.3
2000/01	66.0	74.2	70.1	51.1	19.0
2001/02	66.0	73.9	69.9	55.1	14.8
2002/03	65.8	72.8	69.3	60.1	9.2
2003/04	69.9	77.2	73.5	64.5	9.1
2004/05	78.5	85.7	82.1	69.0	13.1
2005/06	84.1	92.2	88.1	73.5	14.6
2006/07	91.8	100.7	96.3	77.3	18.9
2007/08	99.2	109.0	104.1	81.8	22.3
2008/09	93.5	103.6	98.6	88.8	9.7
2009/10	91.1	99.6	95.3	95.5	-0.1
2010/11	97.8	106.6	102.2	97.1	5.1

Source: Oxford Economics/City of London Corporation[30]

Table 5.2 also sets out public expenditure in London over the past decade. Some commentators argue that too much is spent on London. Most often this argument is made with reference to transport expenditure. For instance, a recent report by IPPR highlighted that significantly more public spending on transport (on a per person basis) occurred in London when compared to the rest of the country. There are two issues here.

First, as shown earlier, transport is a significant contributor to maintaining London's international competitiveness. Reducing expenditure, or investment, in London's transport system risks diminishing London's agglomeration economies – something which delivers more benefit to the economy as a whole than to the individual businesses in London. Diminishing London's attractiveness in this way could lead to a loss to the UK economy as a whole – rather than a redistribution of activity within the UK for the reasons set out earlier.

Second, Table 5.2 illustrates that, overall, London contributes more in taxation than it receives in expenditure; it is a net contributor to the UKs public finances. So while London might receive more public

spending in one area than other parts of the UK, overall, it pays more in taxation revenue than it receives in public expenditure (in part due to the agglomeration economies mentioned earlier).

Table 5.3 presents London's tax revenue and expenditure as a share of London's GVA and on a per head basis.

Table 5.3: Tax receipts, expenditure and balance for London, 2010/11

Tax Year	Revenue (Resident)	Revenue (Workplace)	Average Revenue	Expenditure	Balance
2010/11 (£ billion)	97.8	106.6	102.2	97.1	5.1
2011 GVA (£ million)	303,369	303,369	303,369	303,369	303,369
Share of GVA	32.2%	35.1%	33.7%	32.0%	1.7%
Mid 2011 population	8,204,407	8,204,407	8,204,407	8,204,407	8,204,407
Fiscal contribution per head	£11,920	£12,993	£12,457	£11,835	£622

Note: For simplicity the 2011 GVA figure used for the purpose of calculating shares is the workplace-based estimate of London's GVA. Similarly a single population figure is used in Table 5.3
Source: Oxford Economics/City of London Corporation, ONS, GLA Economics analysis

It is clear from both Table 5.3 and Table 5.4, that London is a net contributor to the UK's public finances and that this has not generally been the case for the majority of UK regions. Of the UK regions only the South East and London made a positive contribution to the UK's public finances in 2010/11 with a net fiscal contribution of 5.3 and 5.1 (£ billion) respectively.

Table 5.4: Regional net fiscal contribution as share of GVA and per head, 2010/11

	Net fiscal contribution 2010/11 (£ billion)	2011 GVA (£ million)	Net fiscal contribution as share of GVA (2010/11)	Mid 2011 population	Net fiscal contribution per head (£)
Wales	-15.0	46,450	-32.3%	3,063,758	-4,896
Scotland	-11.1	10,594	-104.8%	5,299,900	-2,094
Northern Ireland	-10.4	29,063	-35.8%	1,814,318	-5,732
North East	-12.2	41,188	-29.6%	2,596,441	-4,699
North West	-22.9	127,868	-17.9%	7,055,961	-3,245
Yorkshire and Humberside	-16.2	92,457	-17.5%	5,288,212	-3,063
East Midlands	-9.4	79,703	-11.8%	4,537,448	-2,072
West Midlands	-15.5	97,086	-16.0%	5,608,667	-2,764
South West	-12.8	100,392	-12.8%	5,300,831	-2,415
East of England	-3.7	11,427	-32.4%	5,862,418	-631
South East	5.3	196,105	2.7%	8,652,784	613
Greater London	**5.1**	**303,369**	**1.7%**	**8,204,407**	**622**
United Kingdom	-118.9	1,360,925	-8.7%	63,285,145	-1,879

Source: Oxford Economics/City of London Corporation, ONS, GLA Economics analysis

Table 5.5 presents a more long-term look at the net fiscal contribution of UK regions to the UK's public finances. Over a long-run average of between 1999/00 to 2010/11, London has contributed a net figure of over £12.5 billion per year, the highest contributor to the UK's public finances, closely followed by the South East. The only other region to hold a net fiscal surplus over this period was the East of England.

The evidence clearly demonstrates London as an increasingly important revenue generator for the UK as a whole, well in excess of the amount of public expenditure in London. This net contribution is also in spite of London having some significant needs in a number of public expenditure areas, for instance child poverty, overcrowded houses and schools, crime and youth unemployment.

Table 5.5: Net fiscal contribution of UK regions 1999/00 to 2010/11 (£ billion)

	1999/ 2000	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	Long-run Average
Wales	-5.4	-5.9	-6.4	-8.0	-8.5	-9.2	-9.6	-9.4	-9.9	-13	-15.2	-15.0	-9.6
Scotland	-2.8	-1.5	-1.8	-4.4	-6.1	-5.4	-2.6	-3.5	-4.7	-4.6	-14.2	-11.1	-5.2
Northern Ireland	-4.4	-5.2	-5.7	-6.3	-6.6	-7.0	-7.3	-6.9	-7.3	-9.5	-10.7	-10.4	-7.3
North East	-4.6	-4.9	-6.7	-7.3	-6.7	-7.5	-7.6	-6.7	-7.3	-10.3	-12.5	-12.2	-7.9
North West	-4.0	-5.4	-8.3	-10.1	-9.6	-10.5	-10.3	-12.1	-12.6	-18.6	-24.4	-22.9	-12.4
Yorkshire & Humberside	-1.7	-2.7	-4.9	-6.7	-6.6	-7.4	-7.3	-7.4	-8.1	-13.3	-17.6	-16.2	-8.3
East Midlands	1.9	1.4	-0.5	-0.7	-1.9	-2.7	-2.8	-2.3	-2.2	-6.8	-10.1	-9.4	-3.0
West Midlands	0.8	0.2	-2.1	-3.4	-4.6	-5.5	-6.3	-5.5	-6.3	-12.1	-17.1	-15.5	-6.5
South West	1.2	0.2	-0.8	-1.4	-3.1	-4.3	-4.8	-3.7	-4.5	-10.6	-14.3	-12.8	-4.9
East of England	8.3	8.6	8.1	6.7	5.5	5.7	4.1	5.9	6.6	0.0	-4.3	-3.7	4.3
South East	17.6	19.4	17.9	14.7	11.7	11	13.4	15.4	15.8	5.9	1.2	5.3	12.4
Greater London	16.3	19.0	14.8	9.2	9.1	13.1	14.6	18.9	22.3	9.7	-0.1	5.1	12.7
United Kingdom	23.2	23.2	3.6	-17.5	-27.6	-29.7	-26.4	-17.3	-18.1	-83.1	-139.5	-118.9	-35.7

Source: Oxford Economics/City of London Corporation

Appendix A: Export of services estimation methodology

Data on London's export of services is less readily available than data on London's export of goods.

The Department for Business, Innovation and Skills (BIS) previously produced estimates for some services using ONS data from the International Trade in Services (ITIS). For this paper it has been necessary to project the BIS estimates forward using clear and concise assumptions.

Using ONS data from the International Trade in Services (ITIS) the Department for Business, Innovation and Skills (BIS) previously allocated UK exports to regions. The ITIS data, however, only covers part of the UK's services exports estimates in the ONS Pink Book. For some industries, the ITIS data is the source of all or, nearly all, of the corresponding Pink Book category. It is only these industries for which BIS previously produced regional export estimates. As such, BIS estimates cover only around 28 per cent to 38 per cent (between 2001 and 2009) of the UK's exports of services.

Further, the ITIS survey does not record the exact geographical location of the transaction; it records the company's reporting unit (RU) which does not always correspond to the local unit (LU). Instead, BIS link the ITIS data back to the Inter-Departmental Business Register (IDBR), which includes an employment measure for each LU, to apportion the export value of each product within a company to its local units. Where a company has 10 or more LUs (such as those in the communication sector) the transaction is allocated to the RU, which may be the headquarters. Where this happens, the BIS estimates are likely to over-estimate exports from London (given the high share of headquarters located in London).

It should be noted that BIS developed this specific methodology in 2007. Earlier estimates from BIS were constructed using a slightly different method. This means that pre and post 2007 estimates of London's service exports should be compared with caution. Looking at 2007 estimates from BIS using both their old and new methodology, the impact on the results is relatively small.

Further details on the methodology behind the BIS estimates can be found at:
http://www.statistics.gov.uk/articles/elmr/elmr-oct10-brook.pdf

As BIS no longer produce regional export estimates, it was necessary to profile the BIS estimates forward from 2009 to 2012. The first step was to update the raw UK data using the latest update of the Pink Book (2002 – 2012). Applying the previously estimated BIS proportions to the revised UK data (2002 – 2009) produced revised regional export estimates for London.

The next step was to produce an estimate of regional exports for London for 2010 – 2012. This could be calculated in many ways using: a linear trend of London's share of UK exports by sector; a linear trend of London's export estimates by sector; or an average of London's share of UK exports by sector. All three methods were used to produce an average to sense check against.

Given that BIS estimates were constructed differently pre-2007 and post-2007 (as mentioned above), the three methods above were replicated for the data covering the period post-2007.

Applying a three-year fixed average (2007 – 2009) of London's share of UK exports by sector produced the results closest to the average estimate, and hence was the preferred method to profile the 2002 – 2009 estimates forward to 2012.

For the UK as a whole, exports of goods and services have risen by £56.5 billion since 2001, reaching a total of £122.1 billion in 2012. London is a major share of the UK's export of services although it plays a relatively smaller role in the export of goods.

Appendix B1: Contribution of commuting to the London economy

The tables below show the steps into the derivation of the estimates of the value of the economic contribution that commuters make to the London economy.

Table B1: Estimates of Regional Gross Value Added (Income Approach)

Total GVA (£ million) - 2012	
London, residence based	275,044
London, workplace based	309,339
London, net commuting	34,295

Source: ONS, Regional accounts, December 2013 and GLA Economics calculations

By simply subtracting workplace-based GVA figures for London to the residence-based figures, we obtain an estimate of the output generated by net-commuters into London. In other words, net commuting into London in 2012 accounted for around £34.3 billion of output.

1st method: Workplace-Residence approach

Table B2 reports the data used to calculate the economic contribution of in-commuters to the London economy in 2012 (GVA data were not available for 2013 at time of writing). This method assumes that the difference between workplace-based regional output and residence-based regional output can provide us with an estimate of the output generated by net in-commuting into London. This impact is estimated to be equal to about £51 billion.

Table B2: Estimates of in-commuters contribution to the London economy, 2012 – 1st method

LFS, Oct-Dec 2012 - London		GLA Economics calculations	
In-commuters	846,200	In-commuting/Net commuting	49%
Out-commuters	278,900	Net-commuting share of output (£mn)	16,863
Net commuting	567,300	In-commuters contribution to the London economy (£mn)	51,158

Source: ONS, Labour Force Survey (LFS), Oct-Dec 2012 and GLA Economics calculation

The equations below show the step-by-step calculations leading to our estimate (figures may not add up exactly due to rounding).

1. Commuting into London is 49 per cent higher than net commuting:

(in commuters – out commuters) = net commuting
(846,200 – 278,900) = 567,300

((in commuters – net commuters)/(net commuters)) = % difference in commuters – net commuting
((846,200 – 567,300)/567,300) = 49%

2. 49 per cent of output from net commuting is equivalent to £16,863 million:

(% difference in commuters – net commuting x Total GVA London,net commuting) = (49% x 34,295) = 16,863

3. In-commuters in 2012 contributed around £51 billion to the London economy:

(Total GVA London, net commuting + estimated in commuters' share of total GVA London, net commuting) = (34,295 + 16,863) = 51,158

2nd method: Employment share approach

Table B3 reports the figures used to estimate the contribution of commuters to the London economy in 2012. The estimates are based on the assumption that commuters' contribution to the London economy reflects their share of employment located in London. By using this method, in-commuters are estimated to produce around £59 billion (with net commuting estimated to account for around £39 billion).

Table B3: Estimates of commuters contribution to the London economy, 2012 – 2nd method

	Number	Share of London workers (%)	Estimated output (£ million)
Total workers in London	4,453,800	100.0	309,339
In-commuters	846,200	19.0	58,774
Net commuting	567,300	12.7	39,401

Source: ONS, Labour Force Survey (LFS), Oct-Dec 2012; ONS Regional Accounts, 2013, and GLA Economics calculation

The equations below show the step-by-step calculations leading to our estimate (figures may not add up exactly due to rounding).

1. The contribution of in-commuters to the London economy is estimated to be equal to around £59 billion in 2012:

(in commuters as share of London workers x Tot GVA London,workplace based) = in commuters contribution
(19% x 309,339) = 58,774

2. Net commuting is estimated to account for around £39 billion in 2012:

(net commuting as share of London workers x Tot GVA London,workplace based) = net commuting contribution
(12.7% x 309,339) = 39,401

Appendix B2: Impact of commuters on the demand for goods and services

The tables and calculations below are used to estimate the impact of commuters on the demand for goods and services, both in London and in the region of residence. In order to produce these estimates, we apply the methodology developed by Oxford Economic Forecast (OEF). We also use estimates of the number of commuters available from 2013 LFS, the median annual income in London from the ONS 2012 Annual Survey of Hours and Earnings (ASHE), and the results of a Bank of England/NMG Consulting survey on 2012 Household Spending.[31]

According to OEF, "in-bound commuters spend a proportion of their incomes in London, during and after the working day, on items such as lunches, shopping during lunch breaks, post-work entertainment, leisure and recreational activities, and so on. They also spend a considerable proportion of their incomes, earned as part of the London economy, back in the regions in which they live, for example on housing, weekend shopping trips, and so on. Conversely, out-bound commuters support the economies of other regions through their daytime spending" (ibid, p.35).

The OEF combine figures on the breakdown of consumer spending on different goods and services, and, using a series of assumptions on the proportion for each different commodity that is likely to be spent by workers near the workplace as compared to near their home, they come up with the following assumptions:

- 15 per cent of commuters' spending is likely to be in the region of work;
- 85 per cent of commuters' spending is likely to be in the region of residence.

Moreover, we also need to take into account the proportion of income which we expect going into spending. With regards to income, we use 2012 data from the ONS 2012 ASHE, and we take the median annual gross wage for London. Then, we assume that, on average, 75 per cent of someone's income goes into consumer's spending, as suggested by the results of the 2012 Household survey conducted by the BoE and NMG Consulting.

Table B4 reports the parameters and the estimates of commuters spending in London and in the rest of the UK in 2012.

Table B4: Parameters and estimates of commuters spending in London and in the rest of the UK (2012)

	Number	Median Income gross/year (£)	Proportion of income going into spending (%)	Average spending per person/ year (£)	Spending in London (£bn)	Spending in the rest of the UK (£bn)	Total (£bn)
In-commuters	846,200	30,500	75	23,000	2.9 (15%)	16.4 (85%)	19.3 (100%)
Out-commuters	278,300	30,500	75	23,000	5.4 (85%)	1.0 (15%)	6.4 (100%)
Total	1,124,500	n/a	n/a	n/a	8.3 (32%)	17.4 (67%)	25.7 (100%)

Source: ONS, Labour Force Survey (LFS), Oct-Dec 2012; ONS ASHE, 2012, and ONS Regional Accounts, 2013; OEF, 2004, BoE & NMS Consulting, 2012, and GLA Economics calculation

For example, in order to calculate in-commuters' spending in the rest of the UK, we followed the steps outlined below (figures may not add up exactly due to rounding).

1. In-commuters spent on average £19.3 billion in 2012:

average spending per person per year x number of in commuters = total spending by in commuters
23,000×846,200=19,343,000,000

2. In 2012, in-commuters spent on average £2.9 billion in London and £16.4 billion in the region of residence:

in commuters spending in London = total spending by in commuters x 15% and

in commuters spending in the rest of the UK = total spending by in commuters x 85%

19,343,000,000 x 15% = 2,901,000,000 and

19,343,000,000 x 85% = 16,442,000,000

The same methodology is applied to estimate the contribution of out-commuters to London and the other UK regions.

Moreover, we are also interested in estimating how much of the contribution of commuters is to be assigned to the Greater South East, where the majority of commuters into London live and where the majority of Londoners commute to. Table B5 reports these estimates.

Table B5: Contribution of commuters to/from Greater South East (2012)

	% coming from/ commuting to the Greater South East	GVA 2012, Greater South East (£bn)	Spending in the rest of the UK – only excludes London (£bn)	Contribution to economies of Greater South East (£bn)
In-commuters	91%	318.7	16.4	14.9
Out-commuters	81%		1.0	0.8
Total	n/a		17.4	15.7

Source: ONS, Labour Force Survey (LFS), Oct-Dec 2012; ONS ASHE, 2012, and ONS Regional Accounts, 2013; OEF, 2004, BoE & NMG Consulting, 2012, and GLA Economics calculation

The equations below show the step-by-step calculations leading to our estimates.

1. The contribution of in-commuters coming from the Greater South East to the economies of their regions of residence is estimated to be equal to about £15.7 billion in 2012:

(in commuters spending in the rest of the UK
x share of in commuters comingfrom GSE)
+ (out commuters spending in the rest of the UK
x share of out commuters to GSE)
= contribution to the economies of the GSE

(16.4 x 91%) + (1.0 x 81%) = 15.7

Endnotes

1 Comparative advantage relates to the relative cost of producing goods and services. The implication is that areas – like individuals within the labour market – should concentrate on what they do best. It means that various types of economic activity are viable in developed countries and cities with relatively high costs, like London, in spite of the fact that land and labour may be cheaper in many emerging economies such as India and China.

2 Z/Yen Group, 'Global Financial Centres Index', March 2014

3 Prime Minister's Office, 'PM unveils plans for new Islamic index on London Stock Exchange', October 2013

4 TheCityUK 'How financial and related professional services serve the UK', 2014

5 GLA Economics, 'Working paper 53: Tourism in London', 2012

6 London & Partners has an explicit remit to attract international (and only international) FDI projects, students and tourists.

7 A joint UK Government and Mayor of London report, 'Inspired by 2012: The legacy from the London 2012 Olympic and Paralympic Games', July 2013

8 Regional Trade Statistics, HMRC

9 Cushman and Wakefield, 'European Cities Monitor'

10 UKTI 2013/14 Inward Investment Annual Report (see: https://www.gov.uk/government/publications/ukti-inward-investment-report-2013-2014/ukti-inward-investment-report-2013-2014--2)

11 Think London, 'The value of foreign direct investment to London', 2007

12 Home Office, 'Migration statistics'

13 Deloitte, 'London is undisputed business capital of Europe', 2014

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17 HM Treasury, 'Country and regional analysis: 2013'

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19 TfL, 'Mayor heads to Northern Ireland to meet bus workers who benefit from capital's investment', May 2013

20 ONS, Regional Workforce Jobs, March 2014

21 Commuting and commuters here refer to those individuals who reside outside the boundaries of Greater London and travel into London in order to work ("in-commuters"), and those Londoners who travel outside of London in order to work ("out-commuters").

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30 City of London Corporation, 'London's Finances and Revenues', 2012

31 BoE & NMG Consulting, 'Influences on household spending: evidence from the 2012 NMG Consulting survey', 2012

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