1: London's economy, trade and specialisation

1.1 Key points

- London is an international city with a long history shaped by globalisation. The capital's interconnectedness with the global economy has led to increased trade and allowed industrial specialisations to emerge; over time, this has caused significant changes to the structure of London's economy.
- As measured by GVA, London's total economic output was worth around £364 billion in 2014, 6.8 per cent higher than in 2013[1]. In 2014, London accounted for 22.5 per cent of the UK's total GVA, up from 18.9 per cent in 1997.
- In 2014, London's service exports totalled £92.1 billion, with London accounting for over two-fifths of the UK's total export of services. London's largest exporting sectors were in financial services, travel services; and in the real estate and professional, scientific and technical activities sector.
- Europe accounted for 52 per cent of total UK service exports in 2013, with the European Union accounting for around three-quarters of the European continent total.
- London exported around £28.7 billion worth of goods in 2014, a 23 per cent increase on 2003. Therefore London's total exports (goods and services) are estimated to be worth £120.8 billion in 2014.
- The structure of London's economy has changed over the last 40 years, with significant increases in jobs in service sector activities. However the number of jobs in the manufacturing sector in London has fallen by 85 per cent since 1971.
- Between 1971 and 2015, the total number of jobs in London has increased by almost one million. The Professional, scientific and technical activities sector accounts for the largest number of jobs, at 755,000 (or 14 per cent).

- Compared to Great Britain, London is specialised (in terms of jobs) in both the Information and communications sector and the Financial and insurance activities sector. Within these broad sectors there are a large number of significant sub-sectors of particular specialisation within London. In addition to this specialisation, there are significant levels of employment in a number of broad sectors – making for quite a diverse economic structure.
- London has higher levels of labour productivity when compared to the rest of the UK. The GVA per workforce job for London is around 36.5 per cent higher than the UK as a whole.
- In terms of economic output, the Financial and insurance activities sector is the largest single sector in London, generating £68.7 billion of GVA and accounting for 18.9 per cent of London's total economic output.
- The spatial make-up of London's economy shows that other industrial sectors are important to different boroughs. The Financial and insurance activities sector accounts for 66.6 per cent of total output in the City of London; whereas in Hillingdon, the Distribution, transport, accommodation and food sector accounts for 39.7 per cent of output; and in Barking and Dagenham, the Production industries account for 21.2 per cent of total output.
- Through trade and specialisation, London has become a major global city. However, in terms of sheer size, New York and Tokyo generate more total output; whereas cities such as Shanghai and Singapore have been growing faster, with compound annual growth rates averaging over 5 per cent between 2006 and 2014, compared to 2.4 per cent in London.

1.2 An overview of London's economy

London is an international city with a long history shaped by globalisation. There are many reasons which explain how London has developed over time; such as its geographical position, well-established political, legal and regulatory frameworks; through to London's historical position as a location for trade all of which mean London has established itself as a major centre of economic activity (these points are discussed in more detail within Chapter 5). Through becoming more interconnected with other nations, there have been increases in trade, leading to London developing industrial specialisms over time. The role of trade has therefore caused significant changes in the structure of London's economy over time.

London's comparative advantage – referring to the ability to carry out one economic activity more efficiently than another - has shifted over time, as the city has moved its resources from less productive to more productive uses. These developments have not necessarily followed the same pattern as the rest of the UK; London today has greater exports within certain sectors, and different employment specialisms within industries than the rest of the UK (at the same time as there being some sectors where London is less specialised than the rest of the UK).

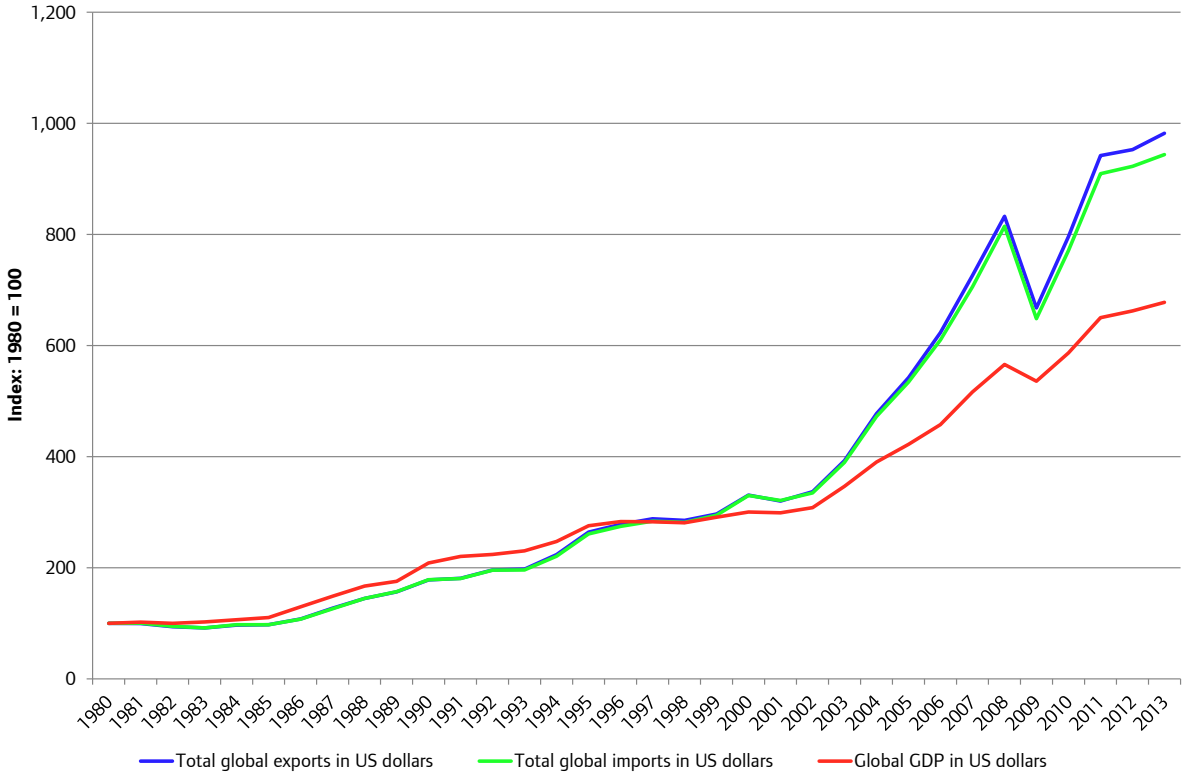
This chapter provides an overview of how London's economy has developed over time and the forces acting upon it. It looks at the role of trade in explaining how activity in London has shifted from lower productivity to higher productivity activities. It also acts as the lead in to the rest of the Economic Evidence Base. The role of trade and shifts in economic activity have led to changes in the spatial nature of activity (which is considered further within Chapter 2), and London's development as a location for business and people are considered within Chapter 5.

1.3 London as a location for trade

Throughout history, London's economy has been shaped by trade – both within the UK and internationally. Figure 1.1 shows the growth of global trade over time. As a result, over time London has developed particular specialisations and comparative advantages, with much of the capital's recent history being shaped by the growth of the City of London as a centre of finance, and the agglomeration of activity and services which have been created through the capital's development as a leading centre for business. London is both an importer and exporter of goods and services, and attracts investment from around the world. London has therefore developed a leading position in the global economy (evidence of which is provided in further detail within Chapter 5).

More generally, openness to trade is vital to any economy since trade grows the size of markets, encouraging specialisations and increasing the returns to innovation, driving growth, and enabling an economy to benefit from new technology. Trade brings greater competition and encourages firms to be as efficient as possible by encouraging economies to exploit their comparative advantage.

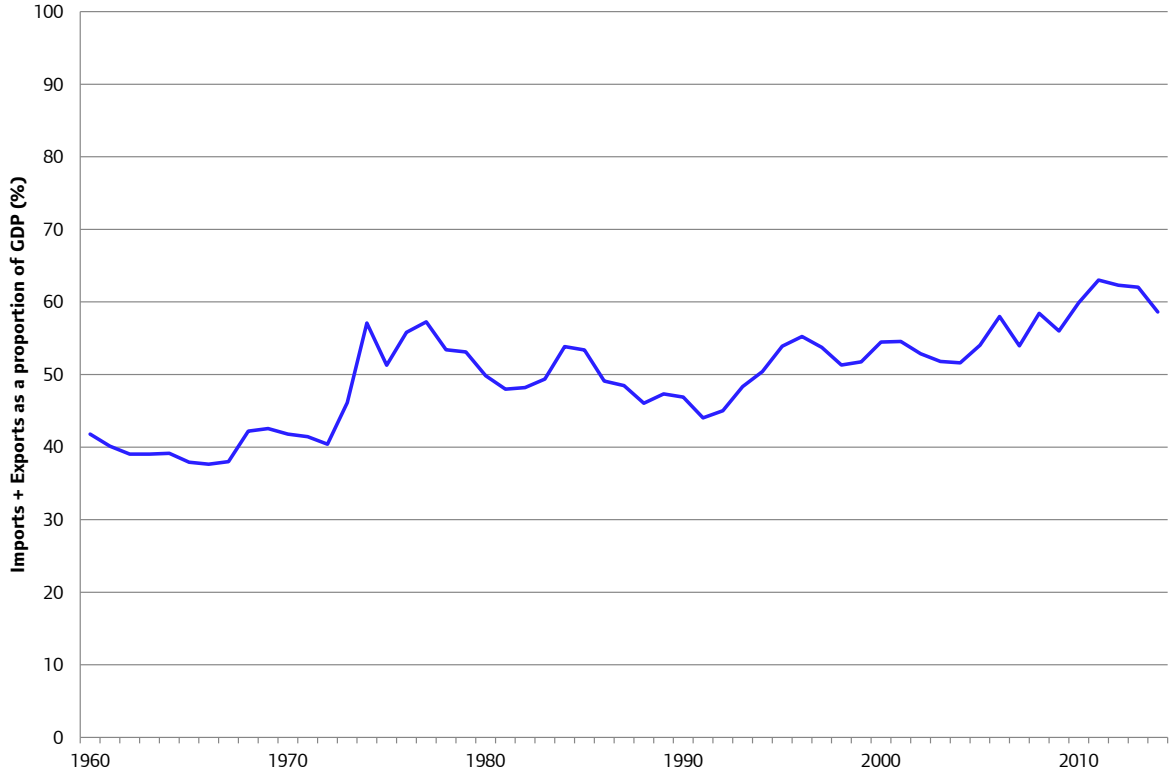
Figure 1.1: Changes in global trade and GDP over time



Source: GLA Economics calculations on data from World Trade Organisation, and IMF.

One way in which the openness of an economy to trade can be measured is by summing total exports and imports of goods and services, and representing the findings as a share of gross domestic product (GDP). Whilst the UK's openness to trade (as measured by trade to GDP ratio) dipped slightly in 2014, as shown in Figure 1.2, in 2013, the last year for which all country's trade and GDP data is available, the UK was ranked third highest among G8 economies (behind Canada and Germany), with a trade to GDP ratio of 61.6 per cent[2].

Figure 1.2: The UK's openness to trade – imports and exports as a percentage of GDP



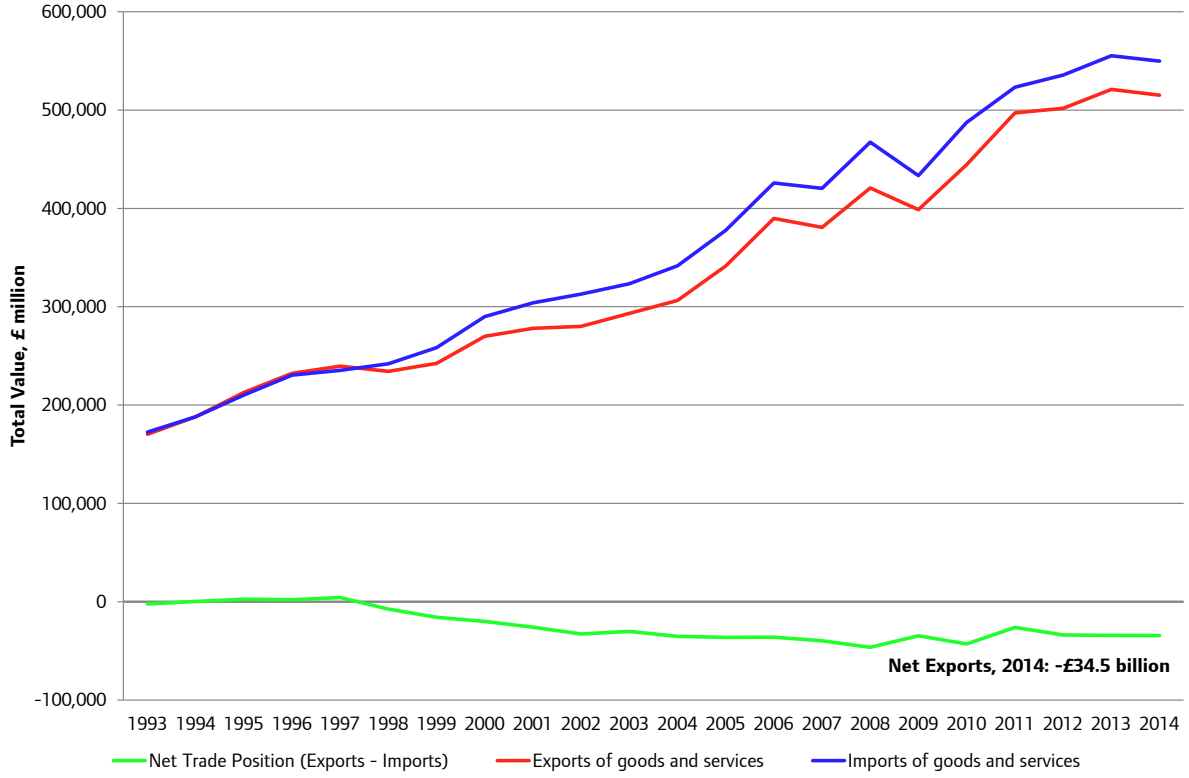
Source: World Bank

1.3.1 London's international trading position

While there are extensive data on the UK's trading position (i.e. levels of imports and exports) directly available from the Pink Book (the annual publication by the ONS that details the UK's balance of payments), data on London's trading position is scarcer, and this section of the chapter will bring together a variety of data to evidence the importance of trade to London's economy.

For the UK as a whole, the absolute levels of trade have been increasing (even when accounting for changes in prices). However, the UK has run a trade deficit for most of the past 20 years. In 2014, the total value of both imports and exports were in excess of £500 billion, with a trade deficit of £34.5 billion, as shown in Figure 1.3.

Figure 1.3: The UK's international trading position



Source: GLA Economics calculations; drawn from Pink Book, ONS

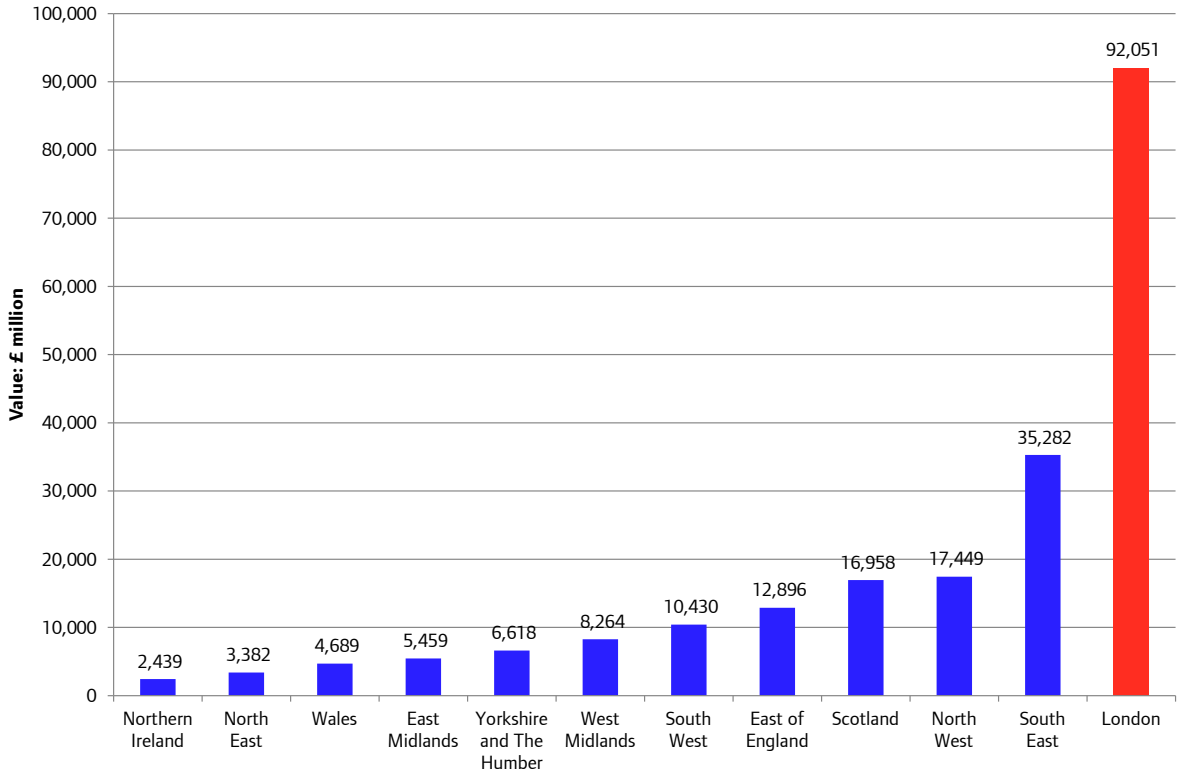
In contrast to the position at the national level, previous analysis undertaken by GLA Economics estimated that London ran a trade surplus. The London Business Survey estimated that businesses exported £28 billion more than they imported in the year to mid-2014. However these statistics and those from the ONS Pink Book are not consistent with one another so some caution is required with this finding.

While data on London's exports of goods are readily available from the HM Revenue and Customs "Regional Trade Statistics" publication, a consistent series of estimates for exports of services has not previously been available. GLA Economics have previously undertaken in-house estimates of the value of service exports (published in GLA Economics Working Paper 69), but this year, the ONS have produced experimental statistics of service exports for all regions and nations of the UK, drawing upon information within the Pink Book as well as data from the International Passenger Survey, the International Trade in Services survey, and the Inter-Departmental Business Register.[3] These new data are only available from 2011 to 2014 and should not be compared with the previous estimates for 2003 to 2010.

1.3.2 London's service exports

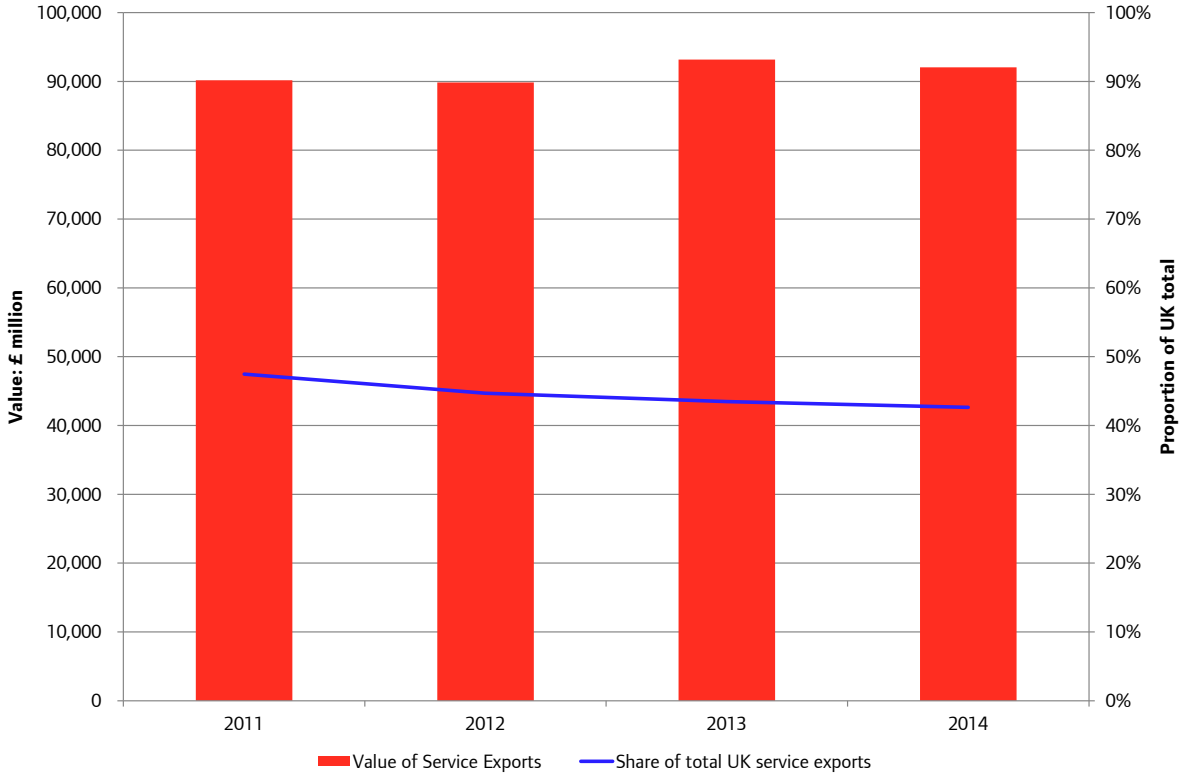
Data from the ONS show the importance of the capital in the UK's total export position. Figure 1.4 shows the level of service exports by region, with London's service exports totalling £92.1 billion in 2014. Whilst this level has stayed reasonably constant, London's total share of UK service exports has fallen by just under five percentage points between 2011 and 2014, standing at 42.6 per cent in 2014 (Figure 1.5).

Figure 1.4: Regional service exports, 2014



Source: Office for National Statistics

Figure 1.5: London's regional service exports, 2011 – 2014



Source: Office for National Statistics

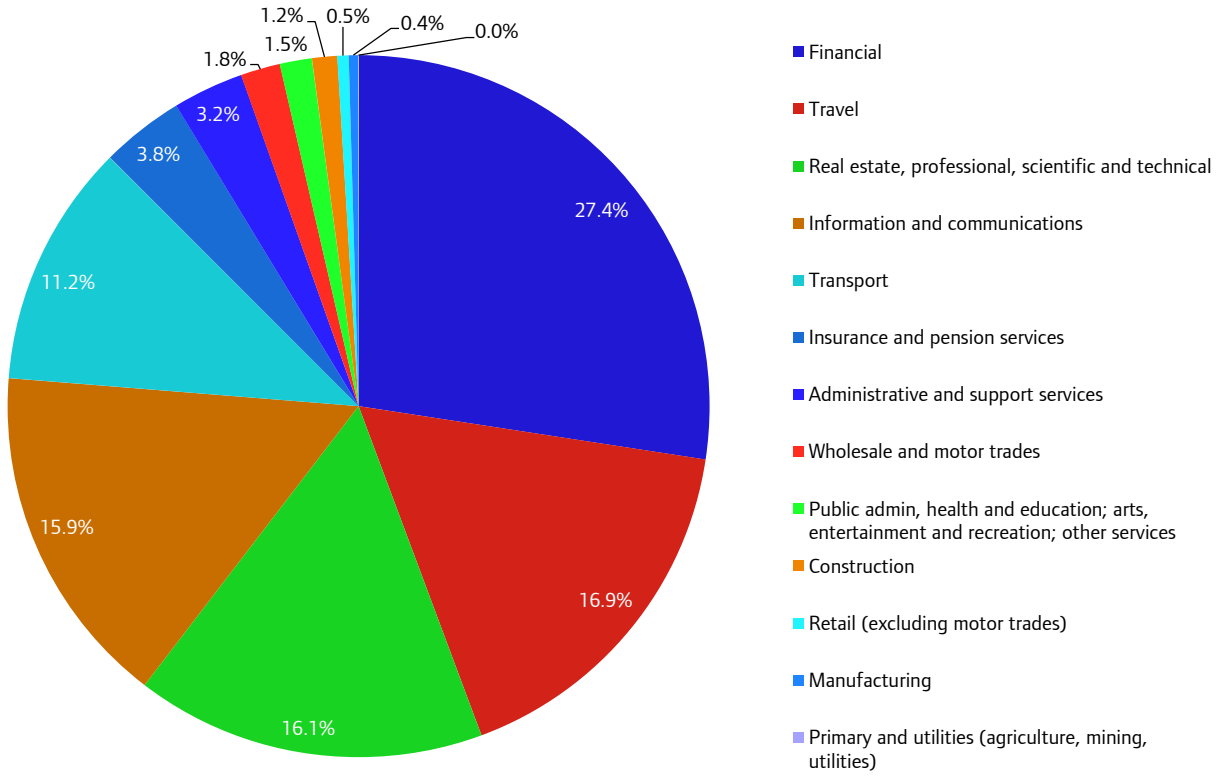
Data from the ONS also provide an indication of the industrial sectors where exports of services are drawn from, and these data are shown in Table 1.1. While the time series runs from only 2011 – 2014, it does provide an indication of the importance of some sectors to London's exports. The Financial services; Real estate, professional, scientific and technical; and, Information and communications sectors accounted for almost 60 per cent of total service exports in 2014 (Figure 1.6).

Table 1.1: London's service exports by industrial sector, 2011 – 2014, £ million

Sector	2011	2012	2013	**2014**
Primary and utilities (agriculture, mining, utilities)	36	66	27	16
Manufacturing	739	784	802	398
Transport	8,723	9,143	9,114	10,320
Travel	11,819	13,018	14,655	15,542
Construction	464	726	819	1,066
Wholesale and motor trades	7,798	3,802	3,132	1,681
Retail (excluding motor trades)	401	394	476	480
Information and communications	11,118	11,792	12,643	14,595
Real estate, professional, scientific and technical	12,950	15,300	15,026	14,834
Insurance and pension services	2,489	3,161	3,076	3,526
Financial	30,739	27,511	28,329	25,247
Administrative and support services	1,959	3,205	3,922	2,991
Public admin, health and education; arts, entertainment and recreation; other services	928	931	1,161	1,355
Total	**90,162**	**89,833**	**93,181**	**92,051**

Source: Office for National Statistics

Figure 1.6: Proportion of London's total service exports, by industrial sector, 2014

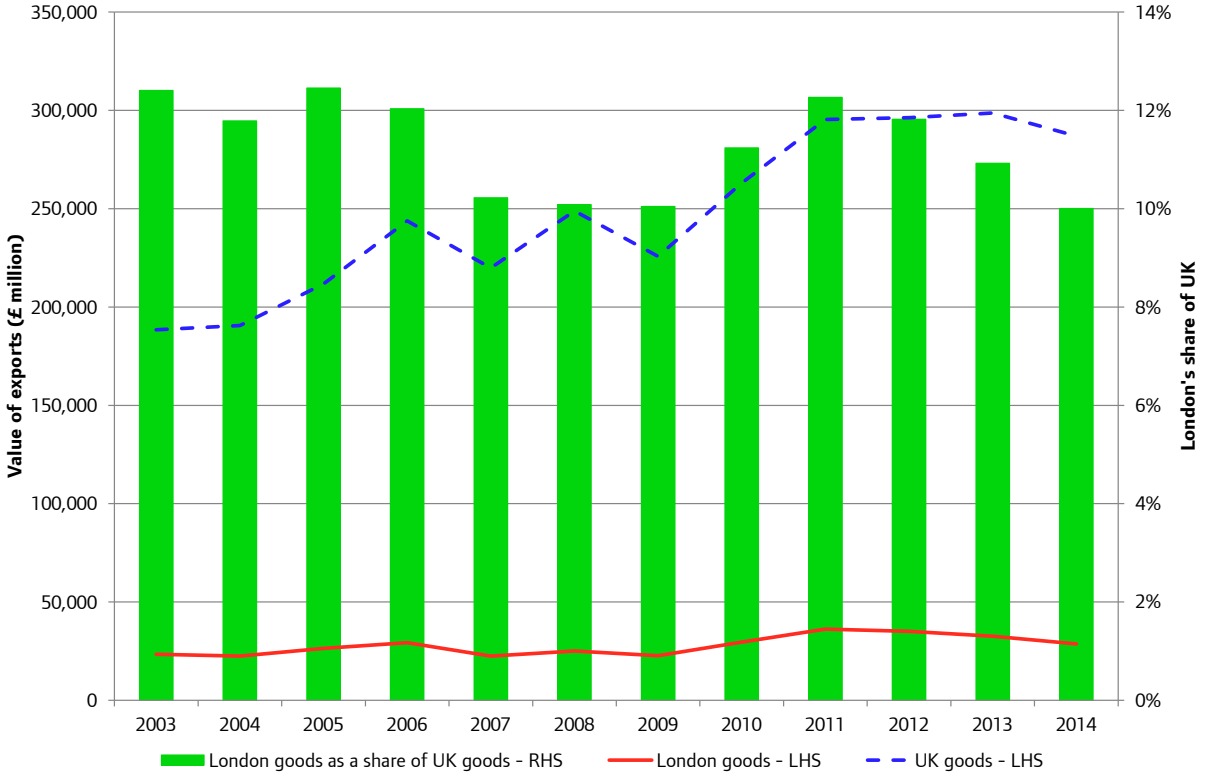


Source: Office for National Statistics

1.3.3 London's trade in goods

In 2014, London exported around £28.7 billion worth of goods, a 23 per cent increase on 2003. UK goods exports exceeded this, growing by almost 53 per cent over the same period. As a result, London's share of total UK goods exports fell slightly between 2003 and 2014 (Figure 1.7).

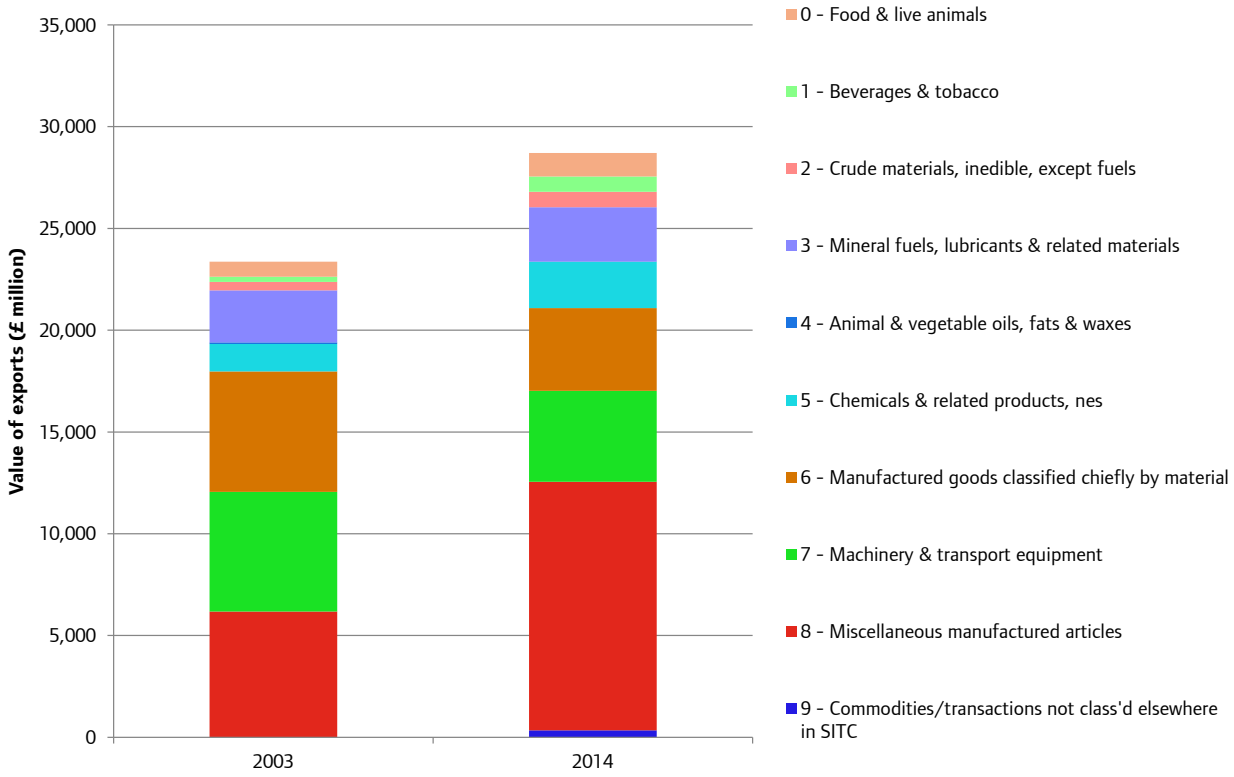
Figure 1.7: London's goods exports as a share of UK (2003 – 2014)



Source: Regional Trade Statistics, HMRC

In 2014, London's strongest goods export sector, valued at £12.2 billion, was 'Miscellaneous manufactured articles', which includes goods such as: clothing; toys and games; and works of art and antiques (Figure 1.8); exports in this category increased by 98 per cent between 2003 and 2014. In contrast, goods exports of 'Machinery and transport equipment' fell by 24 per cent, from £5.9 billion in 2003 to £4.5 billion in 2014. Perhaps unsurprisingly, London's exports of 'Food and live animals' and 'Crude materials' are negligible.

Figure 1.8: London's goods exports by sector (2003 - 2014)

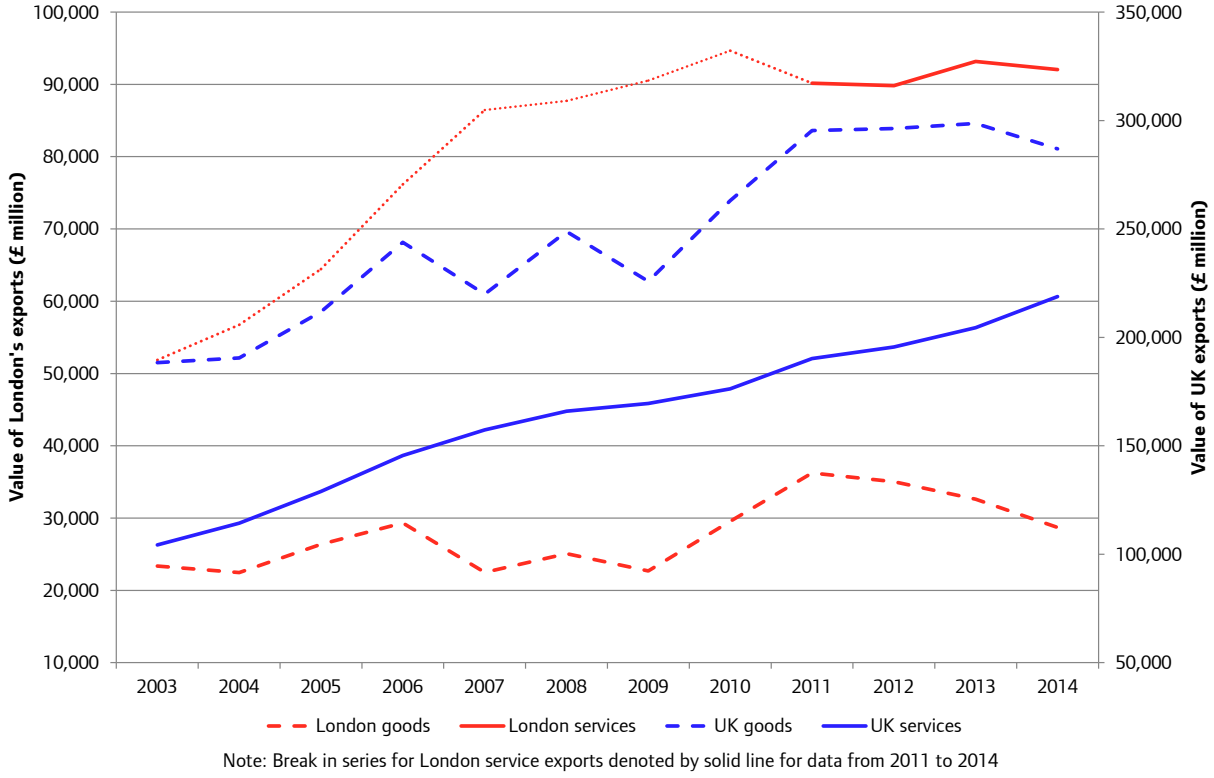


Source: Regional Trade Statistics, HMRC

1.3.4 Summary of London's trading position

The trends in London's exports and imports are very similar to those seen for the UK as a whole, with growth in both goods and service exports. It is estimated that London's total exports stood at around £119.8 billion in 2014, a significant increase over the last decade. However, due to the break in series for service exports from 2011 onwards, it is not possible to say with certainty the total increase over the time period. There has been growth in both services and goods exports, but the growth in goods exports has been relatively modest (Figure 1.9).

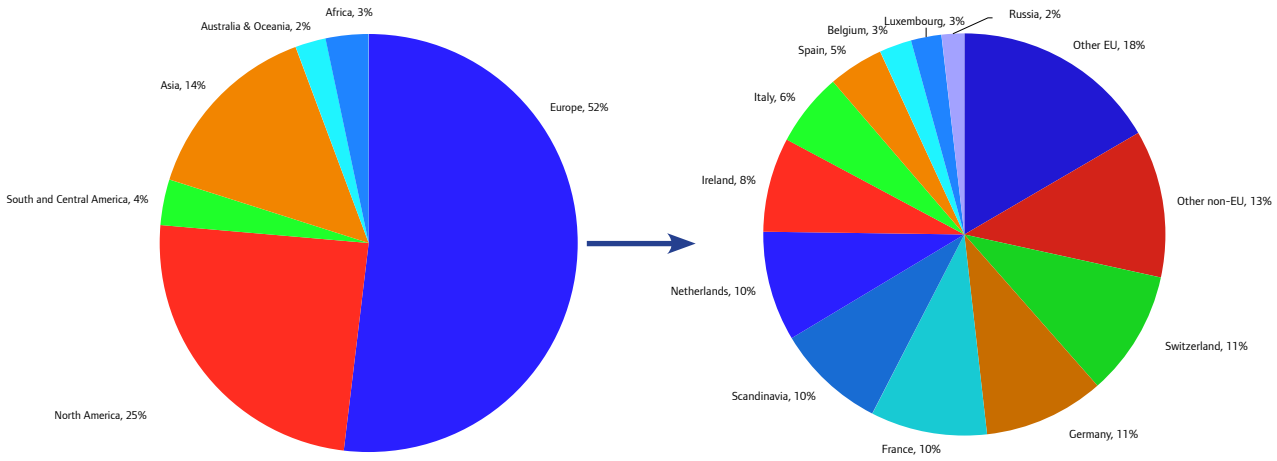
Figure 1.9: London's total exports, 2003 – 2014[4]



Source: Pink Book for UK level service exports data, ONS; GLA Economics

Data from the Pink Book provides detail as to the UK's major trading partners. Figure 1.10 shows that Europe and North America are the UK's largest trading partners, accounting for over three-quarters of total service exports; Europe itself accounted for 52 per cent of total service exports in 2014 (with the European Union accounting for around three-quarters of the European continent total).

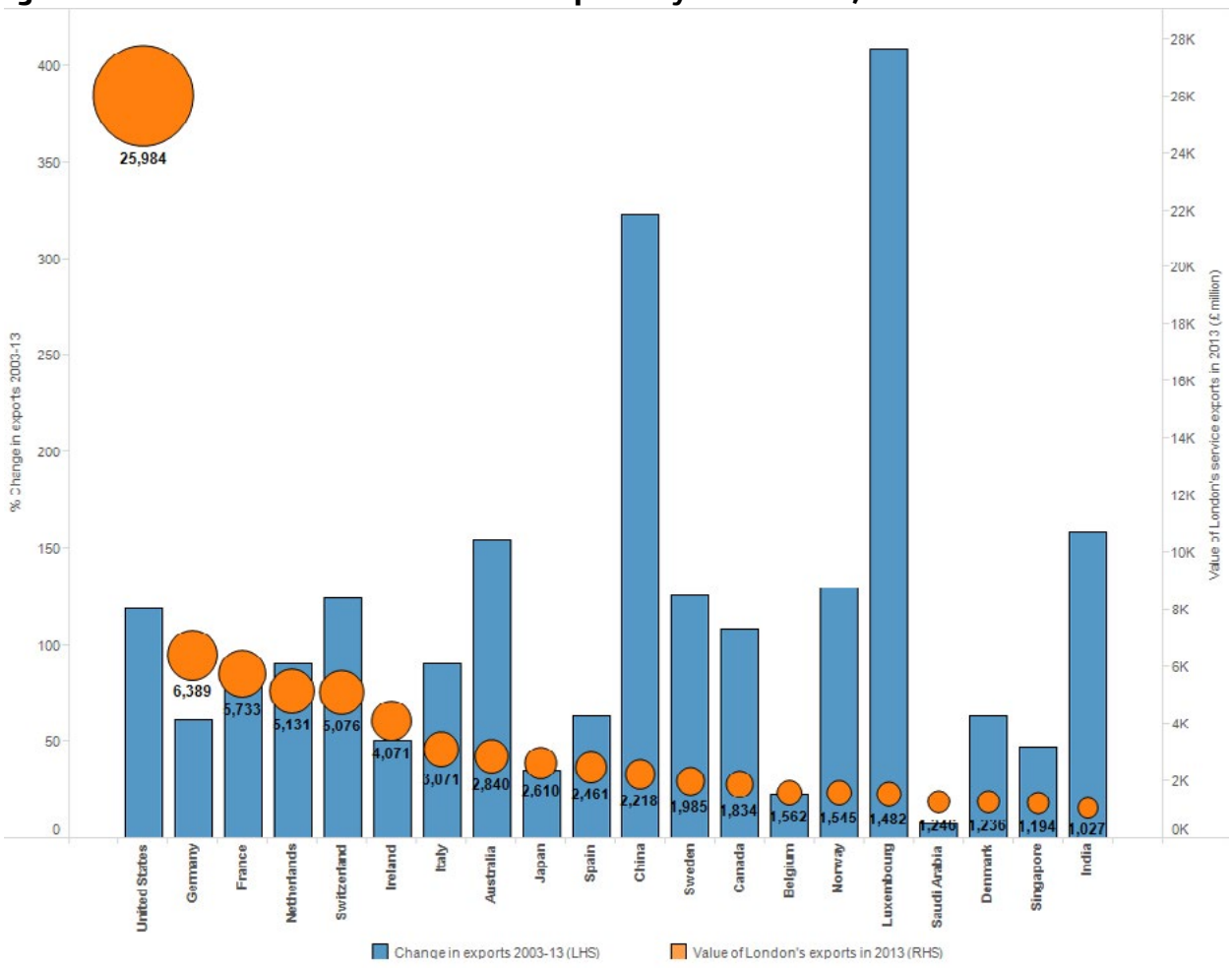
Figure 1.10: UK export of services by destination, 2014



Source: The Pink Book 2015, ONS

Drawing upon previous analysis undertaken by GLA Economics, the United States was estimated by far the largest single export market for the capital, ahead of Germany, France, the Netherlands, and Switzerland. However Figure 1.11 also shows that China and Luxembourg, as well as Australia and India to a lesser extent, have become increasingly important trading partners for the capital (although these nations are significantly behind the United States in terms of the absolute level of service exports).

Figure 1.11: London's estimated service exports by destination, 2013

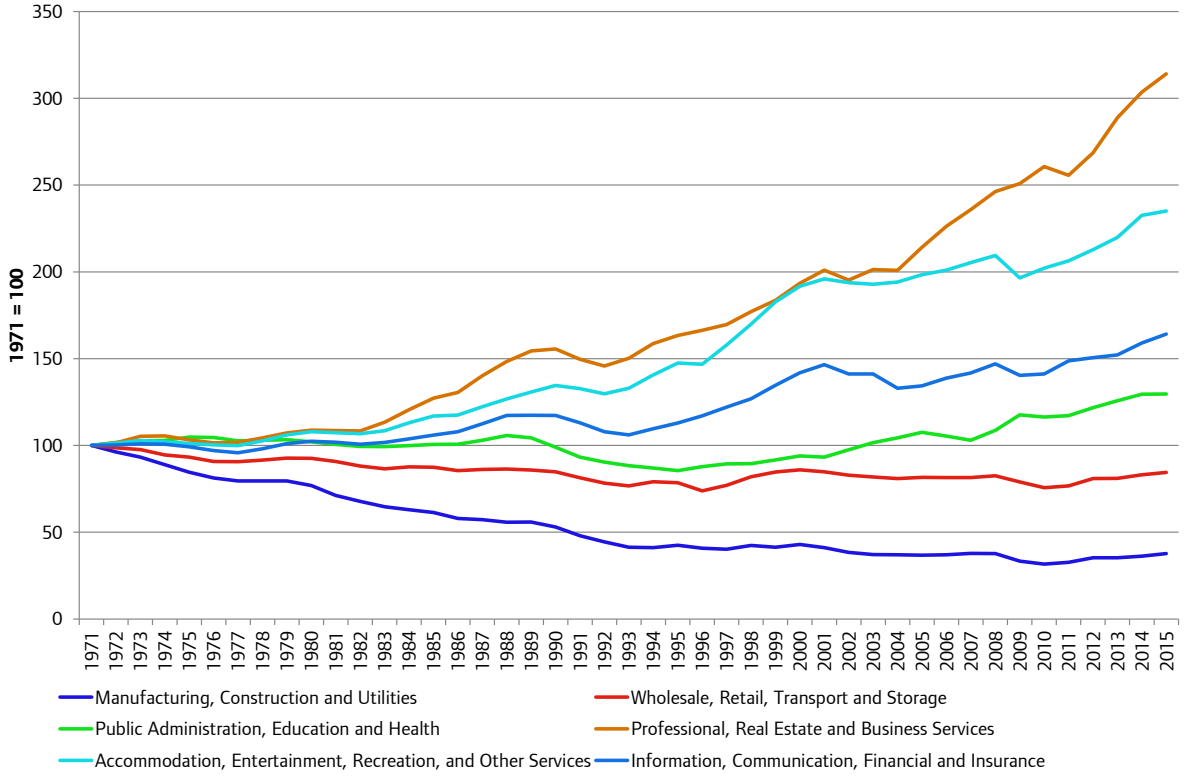


Source: International Trade in Services (ITIS) 2013, ONS, GLA Economics

1.4 London's economic specialisms

As a result of globalisation and trade, London's economy has developed in such a way that it has developed specialisms in certain activities. One way this can be evidenced is looking at how the number of jobs located in London has shifted over time. Figure 1.12 shows how this has changed over the last 40 years, by broad sector of activity. It shows the rise of service sector activity, with the manufacturing sector reducing in its importance as regards the proportion of total jobs in the capital.

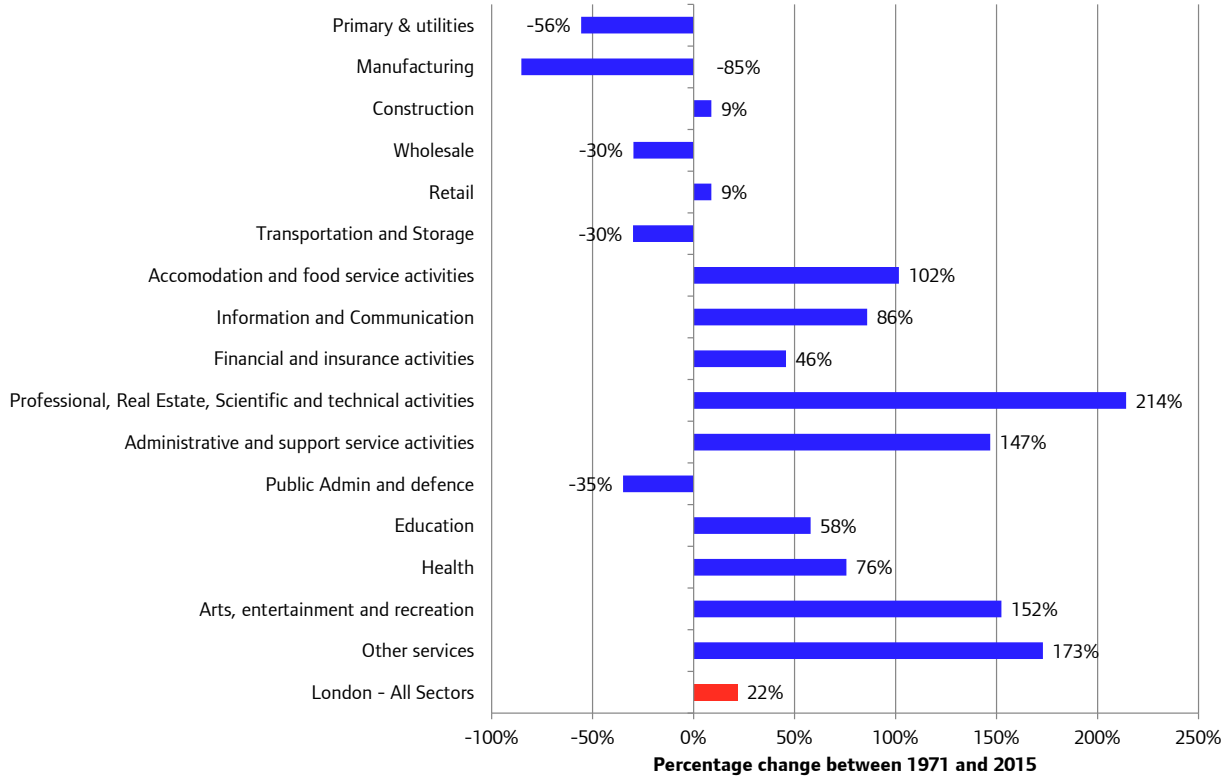
Figure 1.12: Jobs by sector in London, 1971 – 2015



Source: Workforce Jobs, Office for National Statistics; GLA Economics calculations

Figure 1.13 shows there has been a significant rise in the Professional, real estate, scientific and technical activities sector (which has more than trebled over the past 40 years), as well as a rise in Other service sectors more generally. In contrast, there has been a significant fall in more primary sectors, with Manufacturing falling by 85 per cent over the period. To put these figures in context, the total level of jobs in London was 4.55 million in 1971, falling to around 3.8 million by the early 1990s, and rising to 5.538 million in 2015 (Table 1.2).

Figure 1.13: Changes in jobs in London by sector 1971 – 2015



Source: Workforce Jobs, ONS

Table 1.2: Total number of jobs in London by sector, thousands, 1971 – 2015

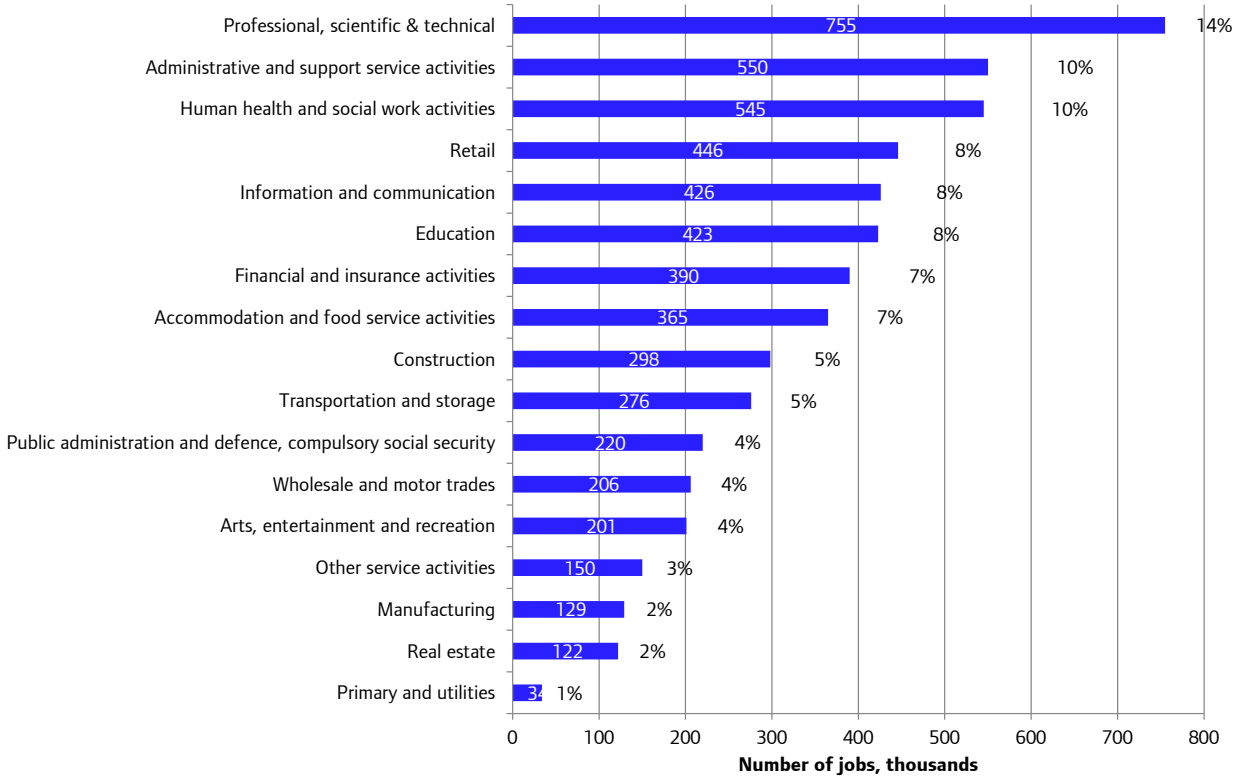
Sector	1971	1996	2011	2015	Change 1971 - 2015
Primary & utilities	77	31	32	34	-43
Manufacturing	872	262	120	128	-743
Construction	274	206	248	298	+24
Wholesale	293	219	185	206	-87
Retail	410	345	401	446	+36
Transportation and Storage	395	247	257	276	-119
Accommodation and food service activities	181	204	321	365	+184
Information and Communication	229	246	373	426	+197
Financial and insurance activities	268	336	367	391	+123
Professional, Real Estate, Scientific and technical activities	279	464	714	877	+598
Administrative and support service activities	223	361	496	550	+327
Public Admin and defence	339	224	223	220	-118
Education	268	228	362	423	+155
Health	310	354	490	545	+235
Arts, entertainment and recreation	80	132	159	201	+121
Other services	55	94	135	150	+95
London total	**4,553**	**3,953**	**4,882**	**5,538**	**+985**

Source: Workforce Jobs, ONS

Looking at London's current industrial structure, the importance of service sector activities to London's economy is further demonstrated. Figure 1.14 shows the total number of jobs in London by sector, and the proportion of total jobs each sector accounts for. Professional, scientific and technical activities is the largest sector of employment, accounting for 755,000 jobs (13.6 per cent of the London total). Despite some perceptions that London's economy is dominated by Financial

services, the sector accounts for around 390,000 (7.0 per cent) of the London total. Indeed, other sectors like Health, Education and Retail all account for a higher proportion of London's jobs and, as shown in Chapter 2, tend to be more spatially spread than jobs in some of London's other service sectors. Figure 1.14 illustrates the diversity of London's economy with a significant number of jobs in a number of different sectors.

Figure 1.14: Jobs by sector in London, as a proportion of total jobs; 2015



Source: Workforce Jobs, ONS

Whilst London's economy is characterised by significant levels of employment across a broad range of sectors, from a wider GB perspective some sectors are particularly concentrated in London. One way of looking at this is through the use of the 'index of specialisation' indictor. The index of specialisation is calculated as follows:

$$\frac{\left(\frac{\text{Sector employee jobs in London}}{\text{All employee jobs in London}}\right)}{\left(\frac{\text{Sector employee jobs in rest of GB}}{\text{All employee jobs in rest of GB}}\right)}$$

An index of specialisation of one means that the same proportion of jobs occur in London as occur in the rest of Great Britain. An index of specialisation of greater than one means that a higher proportion of jobs in that sector are located in London when compared with the rest of Great Britain.[5]

Table 1.3 provides the index of specialisation scores for the 1 digit SIC2007 sections, and shows similar analysis to earlier charts, that London is particularly specialised in service sector industries, with most of these recording scores greater than one. London's most significant specialisations are in Financial and insurance activities; Information and communication; and Professional, scientific and technical activities.

This analysis shows that sectors such as Manufacturing and Primary and utilities which tend to be more land intensive have a low index of specialisation score. The findings also resonate with the earlier trade findings with those areas of significant trade tending to have higher levels of specialisation.

Table 1.3: London's indices of specialisation by 1 digit SIC section, 2014

Sector	London – employee jobs	Share of total London employee jobs	Rest of GB employee jobs	London's share of total GB employee jobs	Index of Specialisation
A,B,D,E: Primary and Utilities	28,700	0.6%	535,400	5.1%	**0.26**
C : Manufacturing	113,300	2.4%	2,241,200	4.8%	**0.25**
F : Construction	144,800	3.1%	1,102,100	11.6%	**0.64**
G : Wholesale and retail trade	594,700	12.6%	3,815,600	13.5%	**0.76**
H : Transportation and storage	227,300	4.8%	1,025,000	18.2%	**1.09**
I : Accommodation and food service activities	358,000	7.6%	1,614,600	18.1%	**1.09**
J : Information and communication	372,800	7.9%	769,700	32.6%	**2.38**
K : Financial and insurance activities	351,900	7.4%	681,400	34.1%	**2.53**
L : Real estate activities	107,600	2.3%	345,900	23.7%	**1.53**
M : Professional, scientific and technical activities	613,900	13.0%	1,638,900	27.3%	**1.84**
N : Administrative and support service activities	490,600	10.4%	1,942,300	20.2%	**1.24**
O : Public administration and defence	220,000	4.6%	1,064,600	17.1%	**1.01**
P : Education	385,700	8.1%	2,191,800	15.0%	**0.86**
Q : Human health and social work activities	483,700	10.2%	3,257,700	12.9%	**0.73**
R : Arts, entertainment and recreation	125,200	2.6%	558,100	18.3%	**1.10**
S : Other service activities	114,600	2.4%	433,700	20.9%	1.30

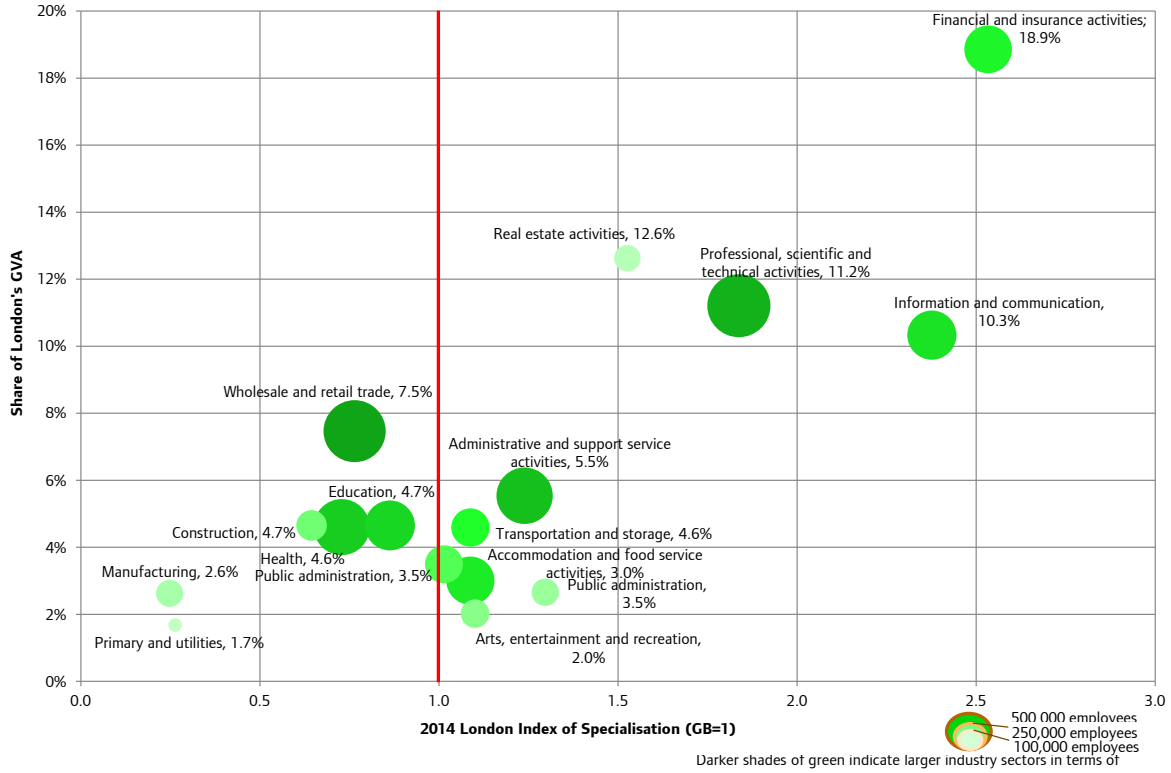
Source: GLA Economics calculations; drawn from Business Register and Employment Survey, Office for National Statistics

This broad sector level analysis can hide specialisations that lie within sectors. Detailed tables are provided in the appendix to this chapter looking at lower level specialisations. The tables show sub-sectors which have an index of specialisation number greater than 1.4 and more than 4,000 employee jobs.

There are a number of areas of activity in which London is highly specialised. Many of the areas in which London has a strong trading performance are also those in which it has a specialisation when compared to the rest of GB. The largest component of service exports, finance, shows a number of areas of specialisation including securities and fund management activities. Another large area of service exports is professional services where specialisations in legal, accountancy, management consultancy, advertising, market research and architecture are apparent. The information and communication sector shows a number of specialisations in London including publishing, motion picture, video and TV programming, computer programming and consultancy. Other areas of specialisation shown in the appendix include air transport, creative, arts and entertainment activities and activities of business, employer and professional member organisations.

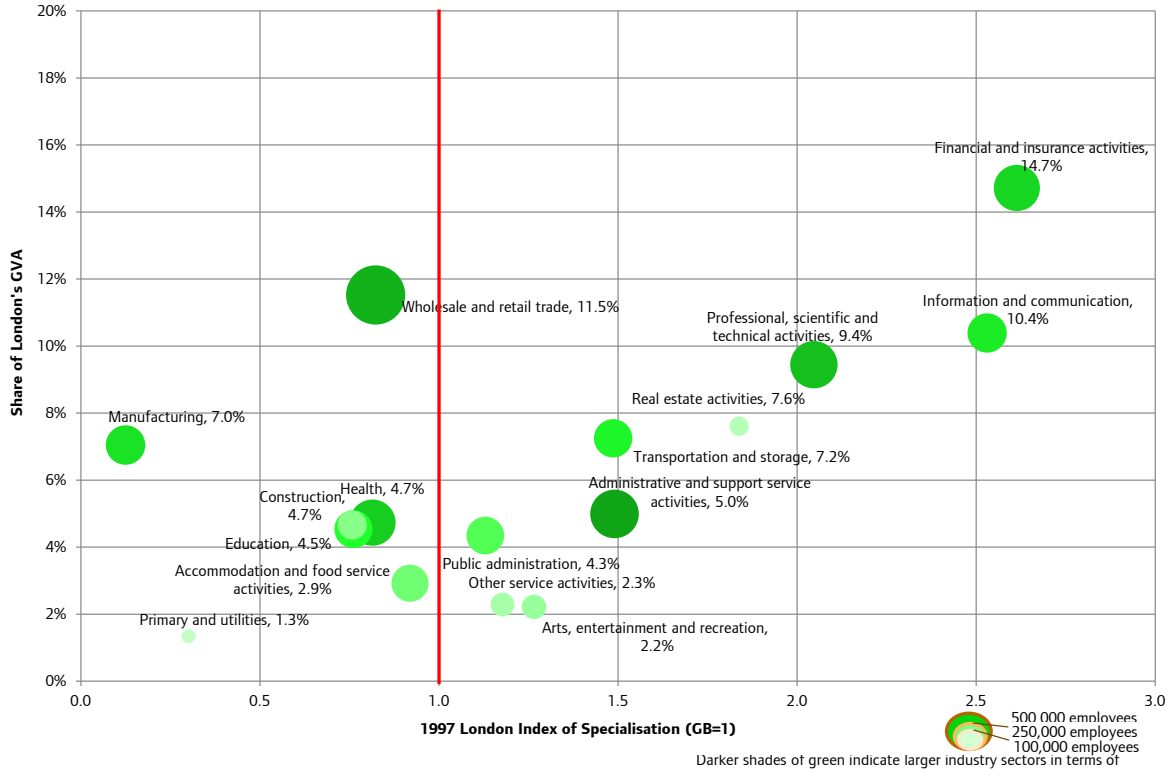
A further way in which London's industrial structure can be understood is through considering the output shares of different sectors. Figures 1.15 and 1.16 compare the importance of individual sectors in terms of output shares (i.e. the proportion of GVA that each sector accounts for) alongside the level of specialisation (in terms of jobs). The size of the circle illustrates the number of employees in that sector. Sectors within the top right quadrants of these diagrams would be considered as highly specialised and contributing significant levels of output. Further analysis of London's economic output is considered in section 1.5.

Figure 1.15: Indices of Specialisation compared to output share, London, 2014



Source: GLA Economics calculations; drawn from Business Register and Employment Survey, and Regional Accounts, both ONS.

Figure 1.16: Indices of Specialisation compared to output share, London, 1997



Source: GLA Economics calculations; drawn from Business Register and Employment Survey, ONS.

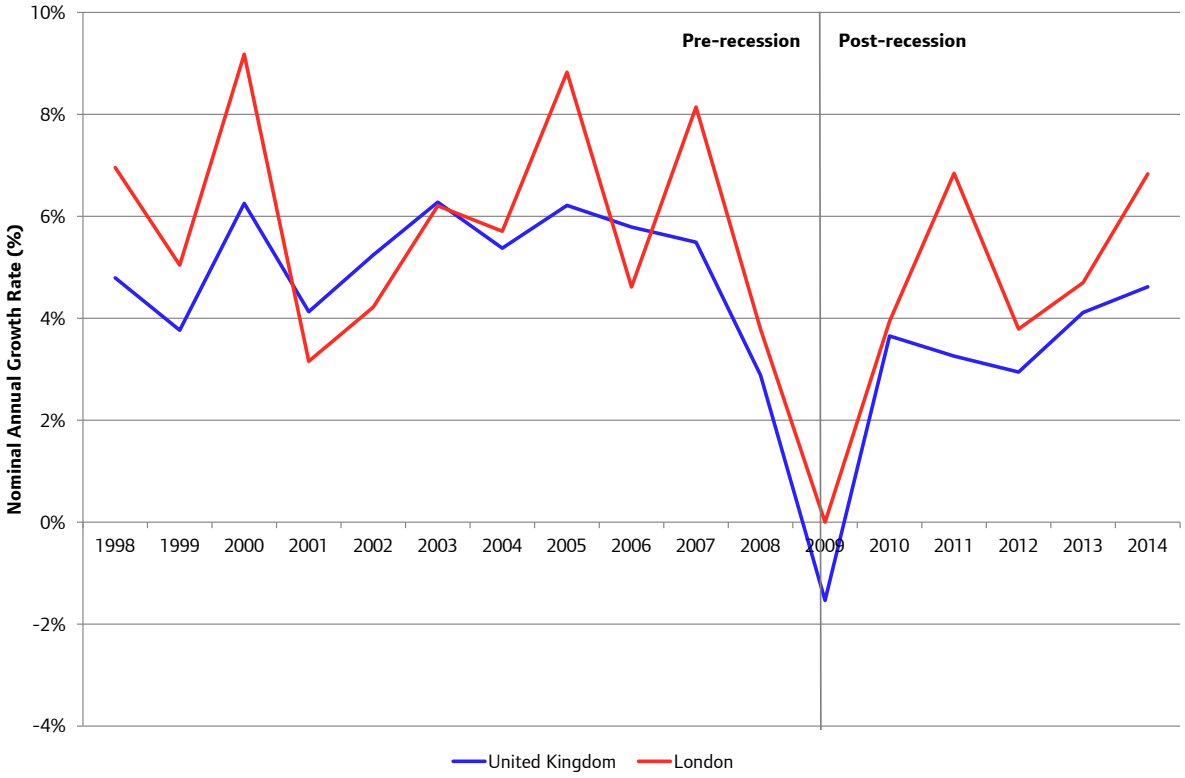
1.5 London's economic output

Focusing more on output, Gross Value Added (GVA) measures the contribution of a sector or industry to the economy and is commonly used as an estimation of GDP and an indicator of the 'state' of the economy[6].

London's total economic output was worth approximately £364 billion in 2014, accounting for 22.5 per cent of the UK's total output, an increase of 6.8 per cent on the previous year[7].

Since 2008, London's GVA has increased 28.9 per cent in nominal terms (i.e. without taking account of inflation), compared to 18.2 per cent for the UK as a whole (Figure 1.17)[8]. The growth in London's nominal GVA accounted for 32.6 per cent of the UK's total GVA increase between 2013 and 2014 (and has never accounted for less than 22 per cent since 2008 with an average of 30.5 per cent between 2010 and 2014, this compares to the 1997 to 2008 average of 23.1 per cent).

Figure 1.17: Nominal growth rates in GVA in London and the UK (1998 – 2014)



Source: Regional Gross Value Added (Income Approach), ONS; GLA Economics calculations

Since the 2008/09 recession, GVA growth has been sluggish by historic standards, whilst employment growth has been uncharacteristically and unexpectedly strong; this has had knock on effects for how productive London appears (see Box 6.1 in Chapter 6). It has been argued that at least some of the strength seen in the labour market has come from increased labour market flexibility and, within that, potentially less stable employment. Similarly, it has been argued that wages have failed to keep up with rising costs of living[9]. The social implications associated with London's economy are discussed in Chapter 10.

1.5.1 London's GVA across sectors

As has been seen through data on London's employment by sector, individual sectors' contribution to overall output growth is not evenly distributed. Table 1.4 shows the change in total output (in nominal terms) of each sector of London's economy between 1997 and 2014.

Table 1.4: London's GVA by sector, 1997 and 2014 (£ million)

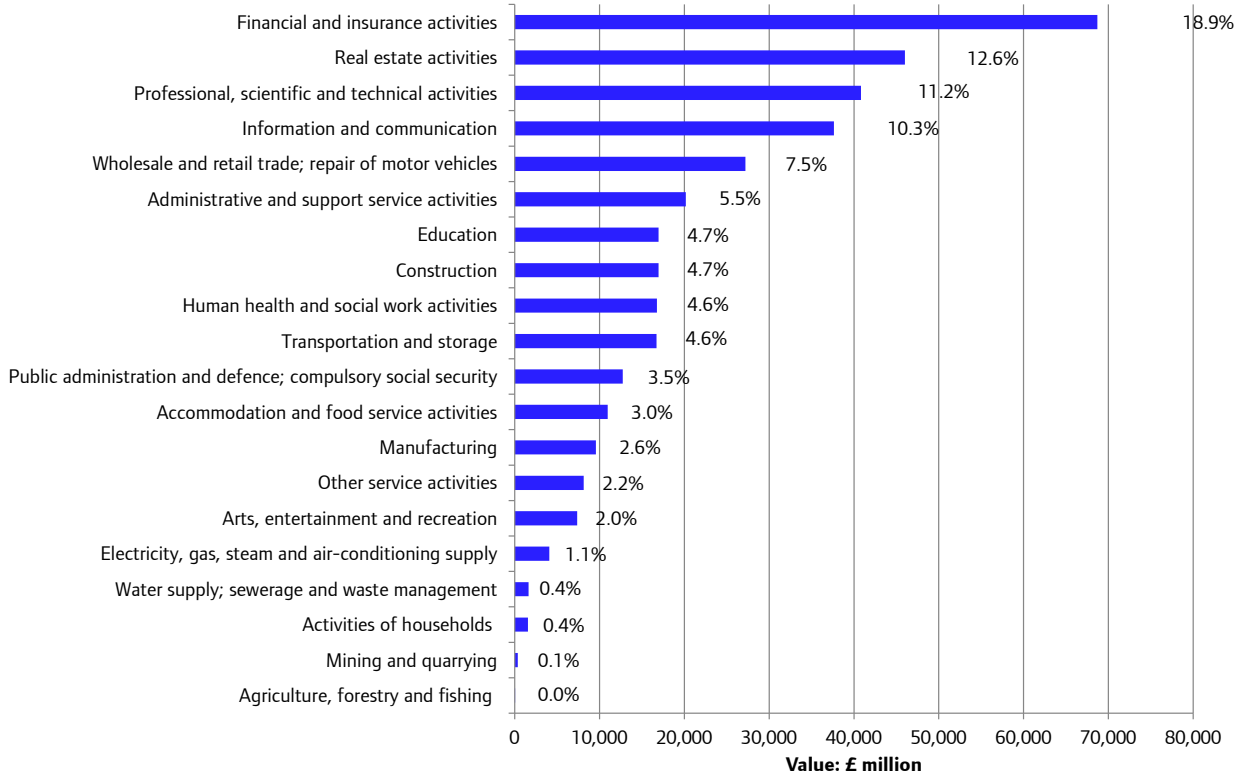
Sector	1997	2014	Change 1997 – 2014
Agriculture, forestry and fishing	39	51	+31%
Mining and quarrying	425	363	-15%
Manufacturing	10,525	9,561	-9%
Electricity, gas, steam and air-conditioning supply	893	4,071	+356%
Water supply; sewerage and waste management	645	1,619	+151%
Construction	6,961	16,948	+143%
Wholesale and retail trade; repair of motor vehicles	17,211	27,193	+58%
Transportation and storage	10,824	16,720	+54%
Accommodation and food service activities	4,363	10,952	+151%
Information and communication	15,521	37,639	+143%
Financial and insurance activities	21,984	68,698	+212%
Real estate activities	11,360	45,998	+305%
Professional, scientific and technical activities	14,106	40,832	+189%
Administrative and support service activities	7,455	20,174	+171%
Public administration and defence; compulsory social security	6,490	12,727	+96%
Education	6,778	16,951	+150%
Human health and social work activities	7,066	16,763	+137%
Arts, entertainment and recreation	3,307	7,363	+123%
Other service activities	2,770	8,120	+193%
Activities of households	644	1,568	+143%
TOTAL	**149,367**	**364,310**	**+144%**

Source: Regional Accounts, ONS.

Based on the total numbers of jobs alone, 'Professional, scientific and technical activities' was the largest sector in London in 2015 (Figure 1.14). However, when measuring economic output by GVA, 'Financial and insurance activities' can be seen to have accounted for just under a fifth of all activity in London (Figure 1.18), thereby constituting London's most significant industry on this basis. GVA figures further show that the value of the 'Financial and insurance activities' industry has grown by 212 per cent since 1997 (Table 1.4). This is the third fastest rate of growth for any industry in London, surpassed only by 'Electricity, gas, steam and air conditioning supply' (356 per cent), and 'Real estate activities' (305 per cent). In 2014, 51.8 per cent of the UK's GVA in the 'Financial and insurance activities' industry was generated in London (up from 42.6 per cent in 1997). Indeed, London's 'Financial and insurance activities' industry alone, made up 4.3 per cent of the UK's total GVA in 2014. 'Professional, scientific and technical activities', 'Real estate activities', and 'Information and communication' all also made sizeable contributions towards London's economy, accounting for 11.2 per cent, 12.6 per cent, and 10.3 per cent of London's total GVA in 2014 respectively (Table 1.5).

The importance of service sector activities, especially in professional and financial services is shown in employment specialisation and total output, as shown in Figure 1.18. The four largest sectors of London's economy accounted for over half of London's total output in 2014.

Figure 1.18: Output by industrial sector, and share of activity, London, 2014



Source: Regional Accounts, ONS.

When looking at the comparative importance of sectors in the economy, Table 1.5 shows how London has developed over time as a centre for business services. Looking at the shares of each individual sector to total output, the Financial and insurance activities sector has an output share that is over 10 percentage points higher than the UK as a whole. On the opposite side, Manufacturing has an output share 8 percentage points lower than the UK as a whole.

Table 1.5: Sector shares of total output, London and the UK, 2014

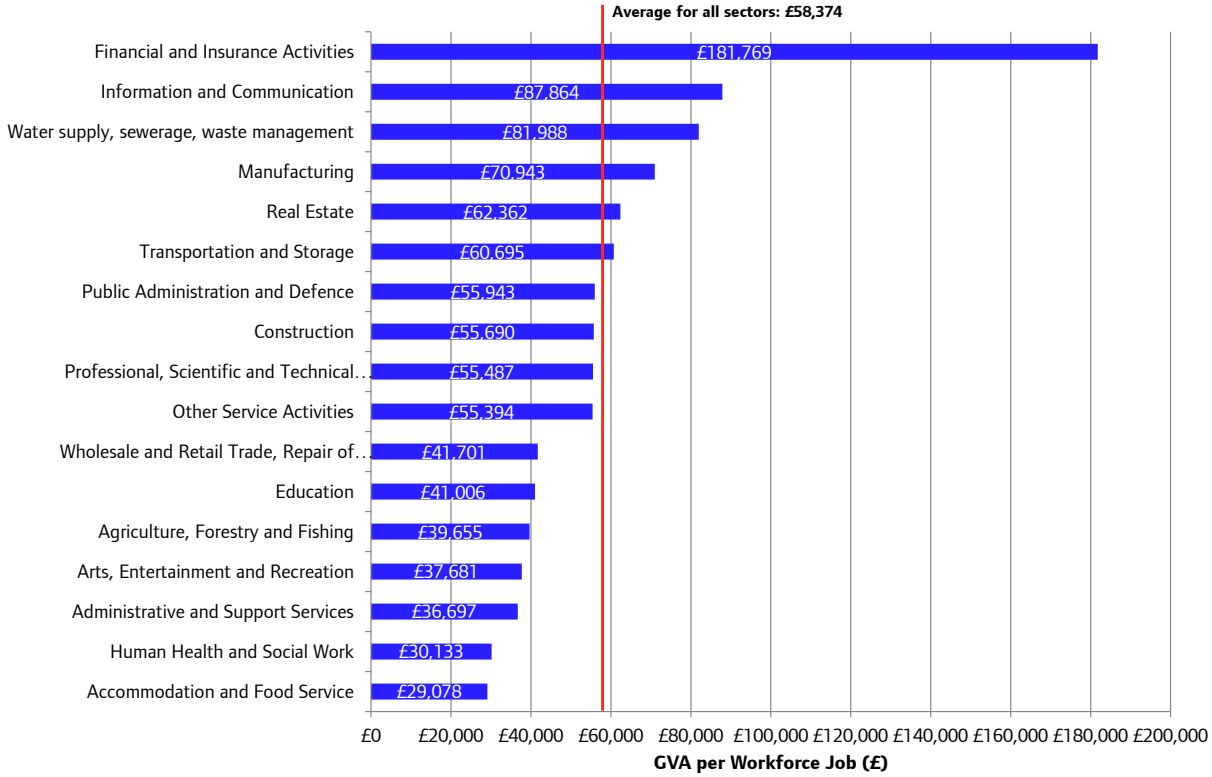
Sector	Share of total London output	Share of total UK output	Difference (percentage points)
Agriculture, forestry and fishing	0.0%	0.7%	-0.7
Mining and quarrying	0.1%	1.6%	-1.5
Manufacturing	2.6%	10.6%	-8.0
Electricity, gas, steam and air-conditioning supply	1.1%	1.5%	-0.4
Water supply; sewerage and waste management	0.4%	1.1%	-0.6
Construction	4.7%	6.2%	-1.5
Wholesale and retail trade; repair of motor vehicles	7.5%	10.7%	-3.2
Transportation and storage	4.6%	4.5%	0.1
Accommodation and food service activities	3.0%	2.9%	0.1
Information and communication	10.3%	6.2%	4.2
Financial and insurance activities	18.9%	8.2%	10.6
Real estate activities	12.6%	11.6%	1.1
Professional, scientific and technical activities	11.2%	7.4%	3.8
Administrative and support service activities	5.5%	4.7%	0.8
Public administration and defence; compulsory social security	3.5%	5.1%	-1.6
Education	4.7%	6.1%	-1.4
Human health and social work activities	4.6%	6.7%	-2.1
Arts, entertainment and recreation	2.0%	1.6%	0.4
Other service activities	2.2%	2.3%	-0.1
Activities of households	0.4%	0.4%	0.0

Source: GLA Economics calculations; drawn from Regional Accounts, ONS.

1.5.2 London's productivity

Combining data on output and jobs provides for an investigation of London's productivity. GLA Economics have previously developed a methodology calculating the productivity of labour (removing the elements of rental incomes included within National Accounting). This analysis finds that sectors such as financial services are highly productive (Figure 1.19), as through trade and specialisation, London has been able to generate significant levels of economic output.

Figure 1.19: Sector level estimates of GVA per workforce job, London, 2014



Source: GLA Economics calculations
Note: This table does not include "mining and quarrying" and "electricity, gas, steam and air conditioning supply", since such physical activities do not generally take place in the capital, recorded output are likely to be the activities of head office functions.

When breaking down further into 2 digit SIC2007 divisions, there are certain sectors which can be seen as highly productive in terms of labour productivity. Table 1.6 shows the top 20 highest GVA per workforce job industry divisions. It shows that some service sector activities (such as financial services, legal and accounting etc.) have very high GVA per workforce job estimates. In addition, there are a wide range of other industry sectors that are included within this list including some manufacturing, warehousing and waste management activiites.

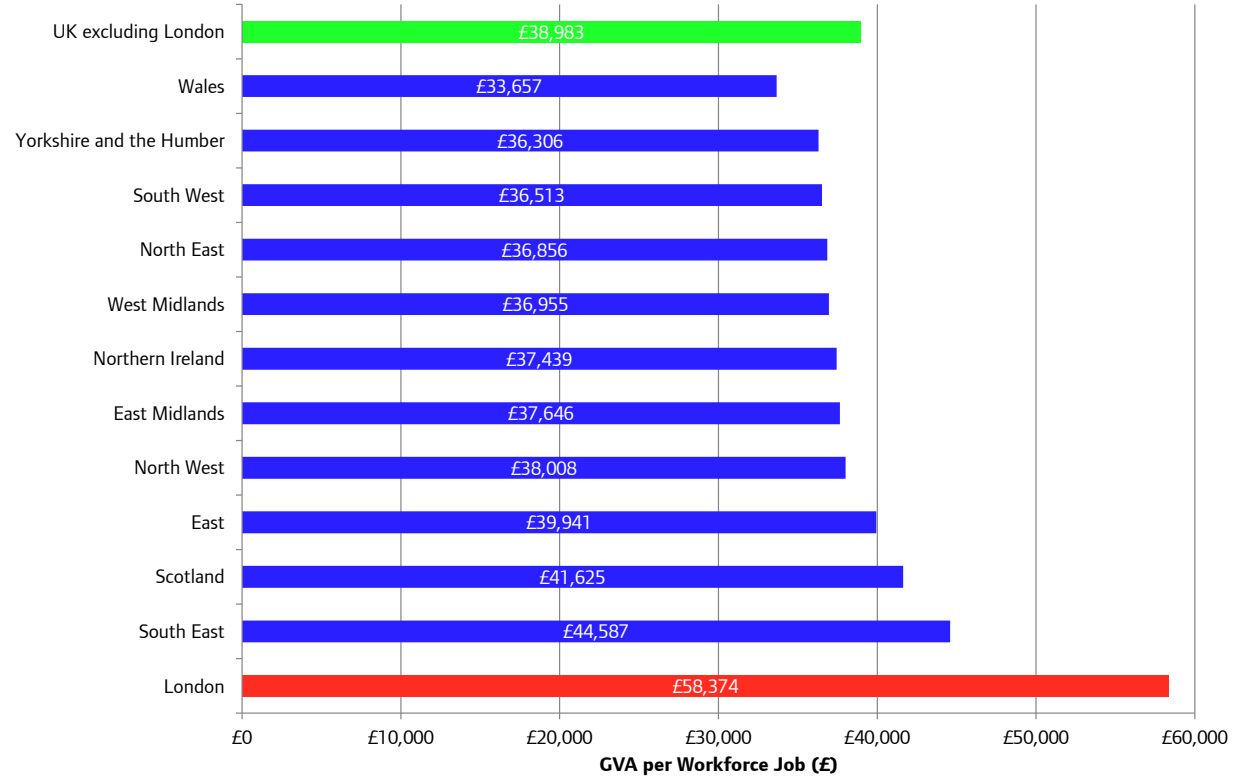
Table 1.6: Highest GVA per workforce job divisions, London, 2014

SIC 1 digit section code	SIC 2 digit division	GVA per workforce job
K	66: Activities auxiliary to financial services and insurance	£199,723
M	69: Legal and accounting activities	£167,705
L	68: Real estate activities	£145,144
E	38: Waste collection, treatment and disposal activities	£125,969
C	31: Manufacture of furniture	£105,053
K	65: Insurance, reinsurance and pension funding, except compulsory social security	£96,840
C	22: Manufacture of rubber and plastic products	£94,227
J	62: Computer programming, consulting and related activities	£94,127
K	64: Financial service activities, except insurance and pension funding	£92,522
J	63: Information service activities	£87,859
H	52: Warehousing and support activities for transportation	£86,685
F	42: Civil engineering	£82,559
J	60: Programming and broadcasting activities	£82,547
H	53: Postal and courier activities	£80,523
F	41: Construction of buildings	£80,489
C	26: Manufacture of computer, electronic and optical products	£78,994
J	61: Telecommunications	£76,585
C	32: Other manufacturing	£73,485
C	33: Repair and installation of machinery and equipment	£73,006
D	35: Electricity, gas, steam and air conditioning supply	£70,419

Source: GLA Economics calculations.
Note: Industry divisions with more than 4,000 employee jobs only

In part due to London being specialised in certain service sector activities, London has GVA per workforce job levels that are considerably higher than the UK as a whole (Figure 1.20). In 2014, it is estimated that London had a GVA per workforce job that was 36.5 per cent higher than the UK as a whole.

Figure 1.20: GVA per workforce job estimates by region/country within the UK, 2014



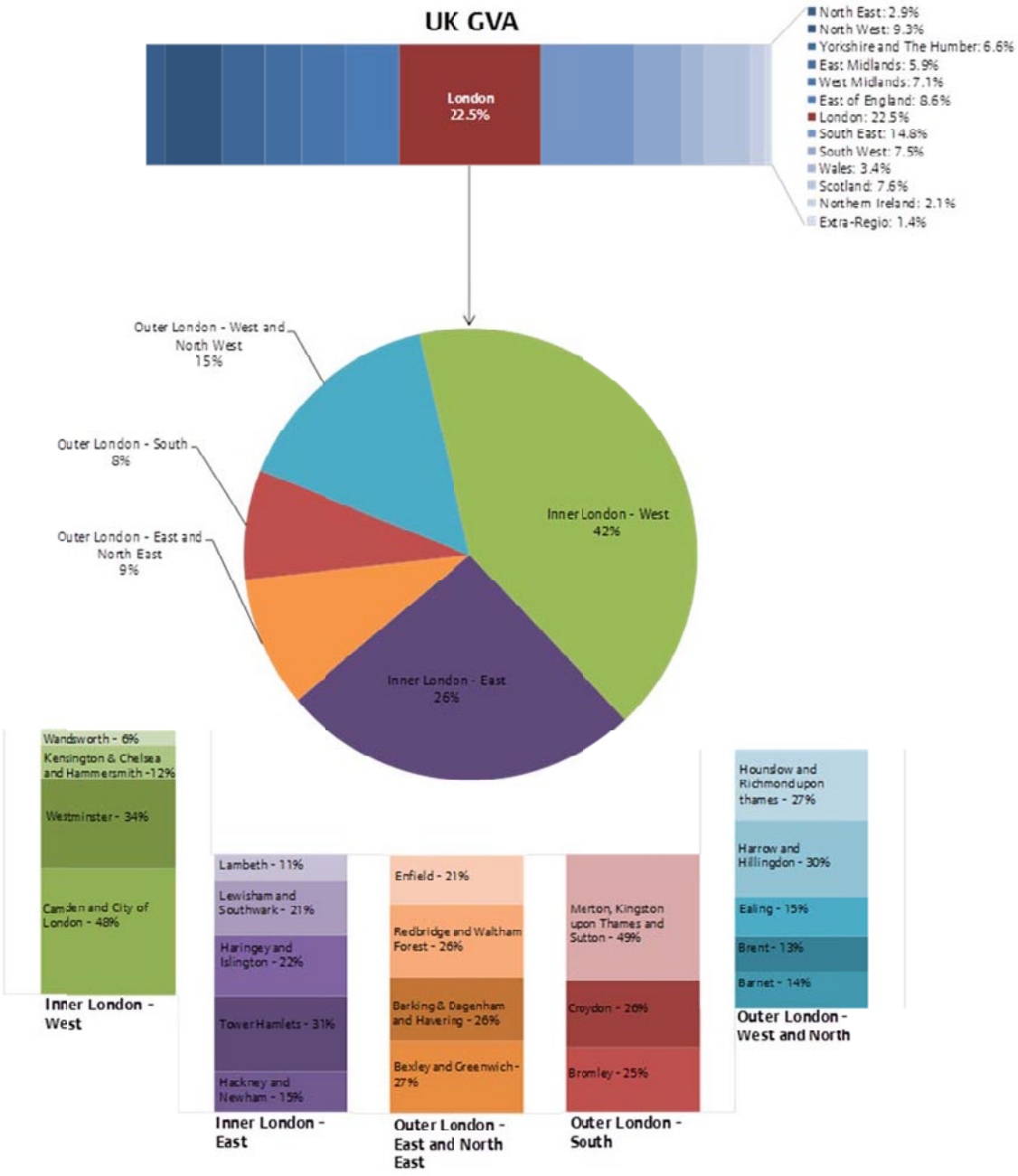
Source: GLA Economics calculations. Rest of UK equals UK excluding extra-regio minus London.

Further analysis of productivity in London is provided within Chapter 6, which provides detail on the outlook for London's economy.

1.5.3 Spatial aspects of London's economic output

In line with its higher productivity, whilst London accounts for 13.3 per cent of the UK's population and 16.5 per cent of the total level of UK jobs, it comprised 22.5 per cent of the UK's total output in 2014, significantly higher than any other region or nation of the UK. Based on the ONS level of geographies (NUTS regions), over 68 per cent of London's GVA was produced in Inner London in 2014, with 42 per cent of London's total GVA produced in Inner London - West alone. Indeed, in 2014 Inner London - West had a higher GVA than all UK regions or nations except for the South East (and, of course, London). The geographical breakdown of headline UK GVA is provided in Figure 1.21.

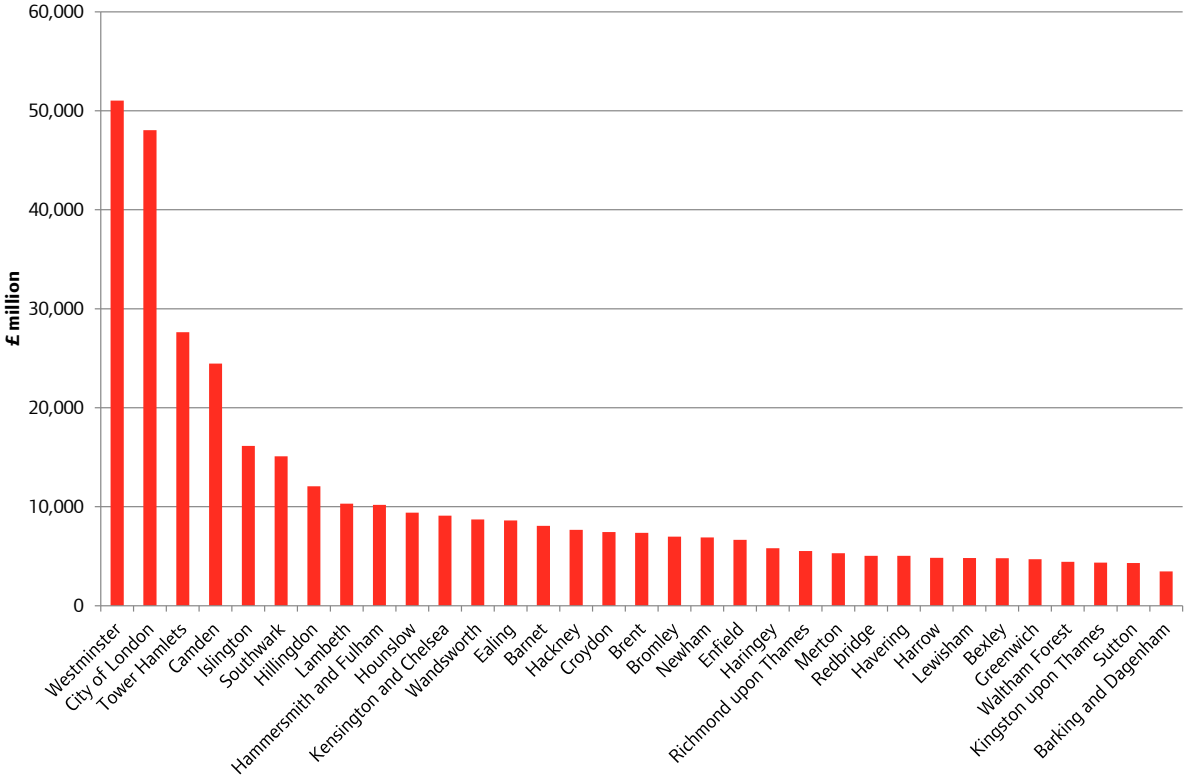
Figure 1.21: UK economic output, broken down by NUTS level geographies, 2014



Source: Office for National Statistics, GLA Economics calculations

At the borough level, Westminster and the City of London are the largest individual boroughs, comprising around £50 billion of GVA each (Figure 1.22). Westminster comprises 14.0 per cent of London's total economic output.

Figure 1.22: London's economic output by borough



Source: Office for National Statistics, GLA Economics calculations

The structure of local authorities' economies in London varies, and these issues are considered in further detail within Chapter 2. However, an examination of the data finds that certain boroughs have shares of output in particular sectors which do not match the London economy as a whole. Table 1.7 shows how in Financial and insurance activities, the City of London and Tower Hamlets – essentially the Central Activities Zone and the Northern Isle of Dogs area (referred to within Chapter 2) – are boroughs where the sector provides the majority of the borough's output.

Table 1.7: Share of total local authority output, Financial and Insurance Activities, 2014

Local authority	Share of total borough output
City of London	66.6%
Tower Hamlets	51.9%
Islington	17.7%
Westminster	16.6%
Camden	12.7%
Bromley	10.0%
Southwark	9.9%
Croydon	9.4%
Hackney	8.9%
Kensington and Chelsea	6.5%
London	**18.9%**

Source: Office for National Statistics, GLA Economics calculations

Within Business services activities, local authorities within Inner London dominate, with almost 30 per cent of Southwark's total economic output in this sector.

Table 1.8: Share of total local authority output, Business Services, 2014

Local authority	Share of total borough output
Southwark	28.8%
Camden	24.0%
Islington	23.2%
Merton	21.6%
Hackney	21.5%
Lambeth	19.9%
Westminster	19.3%
Richmond upon Thames	18.3%
City of London	16.6%
Waltham Forest	16.4%
London	**16.7%**

Source: Office for National Statistics, GLA Economics calculations
Note: Business Services refer to SIC2007 sections M and N.

Distribution, transport and accommodation and food industries are a more important part of economic activity within Outer London. Hillingdon is the borough with the largest proportion of its total economic output within this sector, due in large part to Heathrow airport.

Table 1.9: Share of total local authority output; Distribution, transport; accommodation and food, 2014

Local authority	Share of total borough output
Hillingdon	39.7%
Brent	25.9%
Ealing	24.5%
Havering	24.2%
Enfield	22.8%
Hounslow	22.4%
Newham	21.4%
Bexley	21.2%
Richmond upon Thames	20.7%
Barking and Dagenham	20.6%
London	**15.1%**

Source: Office for National Statistics, GLA Economics calculations
Note: Distribution, transport; accommodation and food refer to SIC2007 sections G, H and I.

While service sector activity was a more important part of the total economic output of Inner London boroughs, production industries (which includes manufacturing) forms a much greater proportion within Outer London boroughs' output, and considerably higher than the average for London's economy as a whole.

Table 1.10: Share of total local authority output, Production industries, 2014

Local authority	Share of total borough output
Barking and Dagenham	21.2%
Bexley	15.8%
Brent	13.4%
Ealing	12.4%
Haringey	12.0%
Newham	10.6%
Enfield	9.4%
Greenwich	8.7%
Waltham Forest	8.2%
Havering	7.9%
London	**4.3%**

Source: Office for National Statistics, GLA Economics calculations
Note: Production industries refer to SIC2007 sections B, C, D and E.

Typically, the proportion of total output provided by public services tends to be higher within Outer London, however it is an important feature of all local authorities given the nature of the services provided.

Table 1.11: Share of total local authority output, Public administration; education; health, 2014

Local authority	Share of total borough output
Lewisham	26.6%
Greenwich	22.8%
Lambeth	22.3%
Redbridge	20.5%
Wandsworth	20.2%
Kingston upon Thames	19.7%
Waltham Forest	19.6%
Newham	18.9%
Croydon	18.6%
Barnet	18.4%
London	**12.7%**

Source: Office for National Statistics, GLA Economics calculations
Note: Public administration; education; health refer to SIC2007 sections O, P and Q.

The construction industries forms a larger part of total economic output within Outer London boroughs, with output shares several percentage points higher than for London as a whole.

Table 1.12: Share of total local authority output, Construction, 2014

Local authority	Share of total borough output
Havering	13.1%
Bexley	11.4%
Sutton	11.0%
Enfield	9.9%
Bromley	9.8%
Barking and Dagenham	9.2%
Redbridge	8.4%
Newham	8.3%
Lewisham	8.3%
Harrow	8.3%
London	**4.7%**

Source: Office for National Statistics, GLA Economics calculations

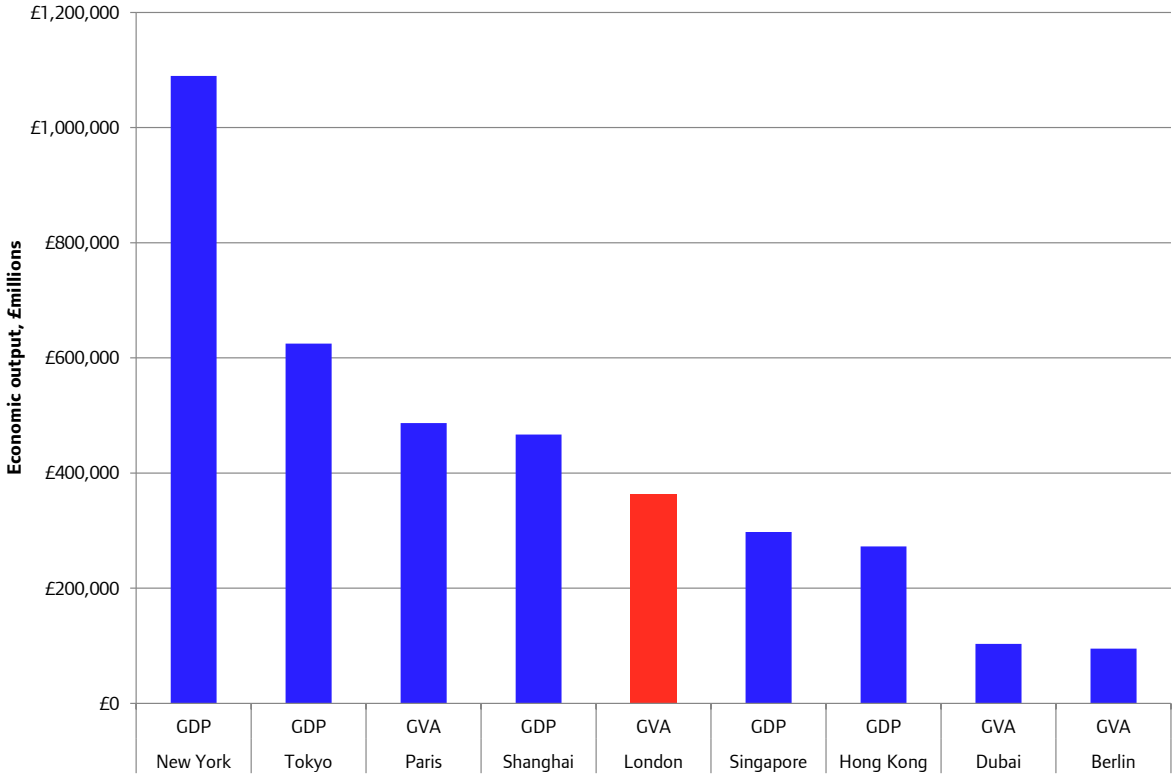
1.6 London's place in the global economy

Many industrial sectors are important to London's economy. London's economy is diverse as seen by the relative importance of particular sectors within different areas of the capital. However, at a more macroeconomic level, globalisation, trade and specialisation have led to London becoming a city primarily specialising in service sector activities. The growth of the capital as a leading destination for business and people has meant that it has become a leading global city (a topic discussed in more detail within Chapter 5). GLA Economics has undertaken an analysis into understanding how major global cities compare, with some of the findings summarised in this section.[10]

Making comparisons between global cities is intrinsically difficult, for example due to the definitions used in allocating activities to sectors or the methods used in calculating output, however it provides an indication of the importance of major cities to the economy as a whole.

In terms of its sheer size, London is considerably larger than other cities within the UK (London accounts for 22.5 per cent of the UK's total output), however it is much smaller than some other global cities, as shown in Figure 1.23. In addition, the growth rates of emerging cities such as Shanghai and Singapore are much higher, with compound annual growth rates of 5.8 per cent and 5.0 per cent respectively between 2006 and 2014, compared to 2.4 per cent for London over that period.

Figure 1.23: Total economic output for global cities, £million (2014)[11,12,13]



Source: ONS, US Bureau of Economic Analysis, INSEE, Statistik Berlin Brandenburg, SingStat, HK Census and Statistics Department, National Bureau of Statistics of China, Dubai Statistics Centre.

As shown in Table 1.13, within developed economies (such as London and New York), the importance of business services and finance is clear – with the broader section of finance and real estate accounting for 31.5 per cent of London's economy, and 34.1 per cent of New York's. In emerging economies, these sectors are comparatively less important, with a greater focus on primary activities. What is clear though is that major cities develop their own comparative advantages over time, and as such become centres for certain types of activities; whether it be in business services, or retail, or manufacturing.

Table 1.13: Industry share of total output for the global cities in 2014

City	London	New York	Paris	Berlin	Tokyo	Singapore	Hong Kong	Shanghai	Dubai
	GVA	GVA	GVA	GVA	GDP	GDP	GDP	GDP	GVA
Primary & Utilities	1.7%	#	2.4%	#	1.5%	..	0.1%	0.5%	5.4%
Manufacturing	2.6%	#	6.7%	12.5%	6.9%	18.8%	1.3%	31.2%	11.3%
Construction	4.7%	#	4.2%	3.9%	4.3%	5.2%	4.4%	3.5%	7.4%
Wholesale & Retail Trade	7.5%	10.6%	10.5%	#	20.8%	16.8%	24.1%	15.5%	29.1%
Transportation & Storage	4.6%	#	5.0%	#	4.0%	7.4%	6.2%	4.4%	#
Leisure & Hospitality	5.0%	#	#	#	#	#	#	#	#
Accommodation & Food	3.0%	2.3%	2.8%	#	#	2.2%	3.6%	1.5%	5.4%
Arts, Entertainment & Recreation	2.0%	#	#	#	#	#	#	#	#
Information & Communication	10.3%	7.7%	9.7%	#	11.5%	4.2%	3.5%	#	#
Financial Activities	31.5%	34.1%	20.3%	#	22.6%	#	#	20.9%	#
Finance & Insurance	18.9%	17.5%	7.5%	#	9.6%	12.2%	16.6%	14.4%	11.7%
Real Estate	12.6%	16.6%	12.8%	#	13.0%	#	#	6.5%	#
Professional & Business Services	16.7%	#	18.9%	#	#	#	#	#	#
Professional, Scientific & Tech Services	11.2%	#	#	#	#	#	#	#	#
Administrative & Support Services	5.5%	#	#	#	#	#	#	#	#
Public Admin, Education & Health	12.7%	17.2%	16.4%	#	6.3%	..	10.5%	..	7.7%
Public Administration	3.5%	9.2%	#	#	#	..	#	..	5.5%
Education	4.7%	1.4%	#	#	#	..	#	..	#
Human Health & Social Work	4.6%	6.6%	#	#	#	..	#	..	#
Other Services	2.2%	1.9%	3.2%	#	#	#	#	#	#
Activities of House-holds	0.4%	#	#	#	1.7%	#	#	#	0.3%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

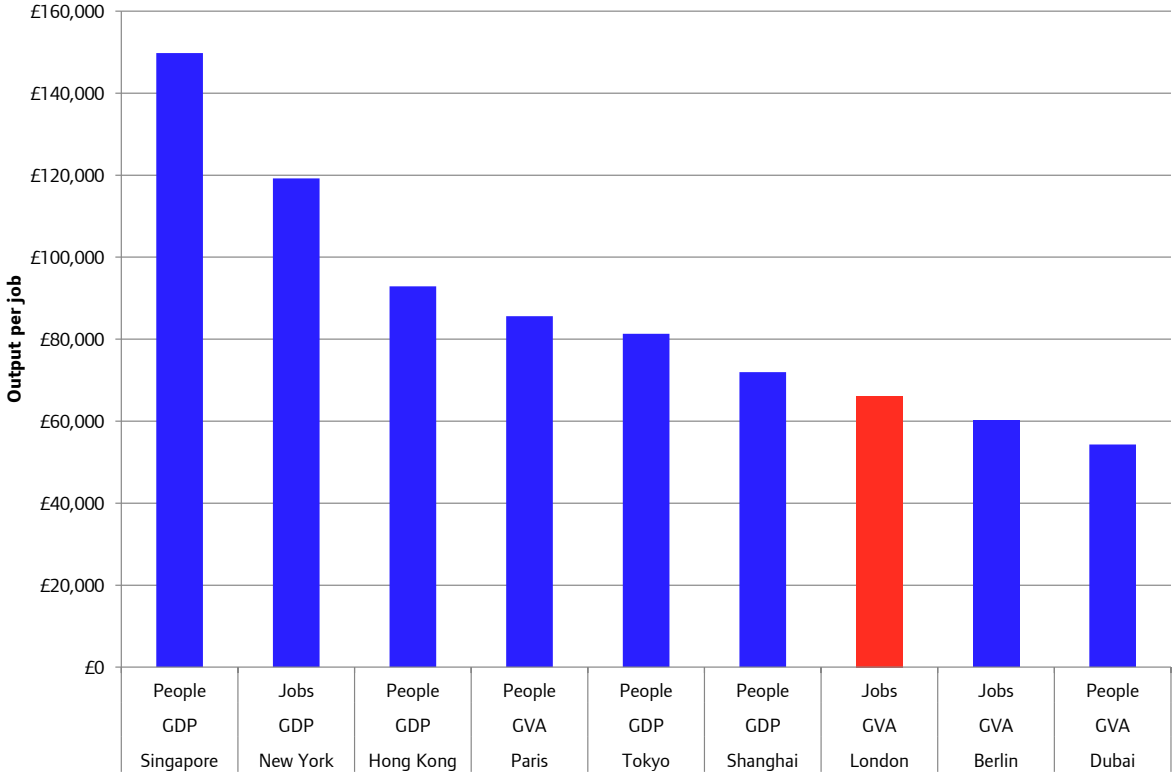
Source: ONS, US BEA, INSEE, Statistik Berlin Brandenburg, Tokyo Bureau of Statistics, SingStat, HK Census and Statistics Department, China NBS, Dubai Statistics Centre.

Notes:

1. *Only data that fits the industry definitions are shown in this table, but still contributes to the total and these are indicated by "#". Industries that are genuinely not included in the data (and the total) are indicated by "..". Consequently, the sum of the industries shown in this table may not equal to 100%.*
2. *Output estimates were originally in current prices, but to show the underlying output trend these have been adjusted into constant 2014 prices using the national GDP deflators.*
3. *Shanghai only includes urban units.*

Despite London having considerably higher labour productivity than the UK as a whole (as shown in Figure 1.20), an examination of the productivity of other global cities finds that London is less productive. It must be remembered that there are inherent difficulties in making such comparisons between cities – in this case in the definitions and output and jobs – therefore results should be treated with caution. Acknowledging this, Singapore had the highest output per job of the selected global cities, at approximately £149,800 in 2014, whereas London had the third lowest of all the global cities covered (Figure 1.24). Whilst acknowledging the difficulties in making comparisons, the differences in productivity were not explained by differences in industrial composition or qualification levels between the different cities.

Figure 1.24: Output per job for global cities, 2014, current prices



Source: ONS, US BLS/BEA, Eurostat, INSEE, Statistik Berlin Brandenburg, Tokyo Bureau of Statistics, SingStat, HK Census and Statistics Department, China NBS, Dubai Statistics Centre

Notes:

1. These figures may not include all industries.

2. Data for Paris and Tokyo refer to 2013 and in 2013 prices.

3. Shanghai only includes urban units.

4. Data for London are based on total GVA rather than GVA attributable to the workforce (as used in Section 1.4.1)

Chapter 1 endnotes

1 These figures on GVA are from the Regional Accounts published by the ONS and are in nominal terms, i.e. no changes have been made to account for the effects of inflation.

2 Department for Business Innovation and Skills, 'Openness to trade', 2015.

3 Office for National Statistics, ' Estimating the value of service exports abroad from different parts of the UK: 2011 to 2014', July 2016

4 London service export data from 2011-2014 uses the ONS experimental regionalised data series. Data prior to 2011 comes from the Pink Book.

5 This analysis utilises the Business Register and Employment Survey, therefore uses Great Britain as the largest geography to compare against.

6 More information about how GVA is used by government is available here.

7 These figures on GVA are from the Regional Accounts published by the ONS and are in nominal terms, i.e. no changes have been made to account for the effects of inflation.

8 ONS, 'Regional Gross Value Added (Income Approach)', December 2015.

9 See GLA Economics, 'London's changing economy since 2008', October 2015, for further details.

10 GLA Economics, 'London in comparison with other global cities', GLA Economics Current Issues Note 48.

11 These figures may not include all industries.

12 Data for Paris and Tokyo refer to 2013 and in 2013 prices

13 Shanghai only includes urban units (i.e. business units in towns or cities).