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Migration and commuting

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Executive summary

The processes of migration and commuting help to match people to jobs. As a result, they can help increase employment and reduce unemployment.

This paper examines trends in recent years in domestic migration and commuting into and out of London. It does not look at movement over short distances within regions (which forms the majority of domestic migration). It focuses solely on domestic migration between the regions of the UK.

Migration and commuting are closely linked. Someone who moved out of London to the South East or East for housing or other reasons – but who does not move away from their London-based job – will increase both the numbers out-migrating and the numbers in-commuting. Someone who commutes from London to an IT job in Reading but who then decides to move to Reading will reduce the numbers out-commuting and increase out-migration. Someone who commutes from Brighton but then moves to London will reduce the numbers in-commuting and increase the numbers in-migrating.

The migration data show that contrary to common popular perception, London has a constant net outflow of migrants to other regions, the majority of whom move to neighbouring regions. Some of those migrants may become commuters, potentially explaining some of the rise in inward commuting, from around 700,000 at the end of the 1990s to nearly 900,000 in 2013. Since 2001 commuting into London has risen by 24 per cent.

The data show that London has a consistent net outflow of people to the rest of the UK - the only age group where there is a significant net inflow is 16-24 (the 25-34 age group has a net inflow - but this is very small). The 16-24 bracket includes students. London is also generally a net supplier of people in managerial and professional occupations to the rest of the UK, including the South East. By contrast the South East usually has a net inflow from other regions of these people in the most senior occupations.

Indeed London acts as a 'value added incubator' for talented young people. Commonly, after graduation from higher education, young people come to London to begin their careers. Over time, when they grow older, they have tended to migrate to other regions in the UK (in particular to the South East) which then benefit from their skills and acquired knowledge.

In the second part of this report, on commuting, we note that over the last decade and a half commuting into London has been increasing, as well as commuting out of London – though the latter has edged down in the last couple of years after peaking in 2010. Relative to Londoners who work in London, commuters into London are more likely to work full-time, be in professional or managerial jobs, and to work in one of the principal sectors of the London economy, such as the financial services sector.

Commuters into London account for just under a fifth of employment in the capital and in 2012 they contributed, as a conservative estimate, between £51 and £59 billion to the London economy. The contribution of commuters to their home regions can also be proxied by consumer spending. GLA Economics estimates based on OEF assumptions suggest that commuting flows to and from London lead to consumer spending of £15.7 billion in the South East and East of England to the benefit of these regions and also regions further afield, which export goods and services into these two regions.

In summary: through out-migration London is a value-adding 'incubator' and through in-commuting London provides high quality opportunities benefitting neighbouring regions.

Introduction

In the migration section we look at the definition of domestic migration and the sources of data.

We consider the theory of migration and break down the migration data (UK-wide) by age, by highest qualification and by occupation, to examine the extent to which the experience matches the theory.

Focusing on London, we then analyse trends in migration into and out of London in the ten-year period 2002-2012, looking at the motivations cited by Londoners for moving to another region.

The analysis moves on to trends for migrating to and from London over a near-30 year period (using NHSCR-based data only) and examines the relation between house prices and migration.

Then we explore the characteristics of migrants to and from London – their age, highest qualification earned and occupation.

Finally we analyse the regional pattern of migration to and from London.

Moving to commuting, we analyse recent trends in in, out and net commuting. We then look at the composition of in and out commuters, which helps us understand the links between London and the surrounding regions. The age profile of commuters, the occupation profile of commuters as well as full/part-time working by commuters and the sectoral composition of commuters are all analysed.

Finally the analysis looks at the contribution of commuters to the London economy and the contribution of commuting into and out of London to the economies of the other UK regions.

Domestic migration

The objective of this section is to better understand trends in migration as between London and the rest of the UK.

Definitions and data sources

In this report we use the word 'migration' to mean movement by individuals or households **across** regional boundaries. Thus we differ slightly from the ONS definition of 'internal migration'. This is defined as 'residential moves between different local authorities'. So it could be **within** a region.

The principal source of information on the size of domestic migration is the UK Census of Population. This only occurs every ten years and there is no mandatory system for recording domestic migration in the intervening years. It is necessary to use administrative data to estimate migration flows and the preferred source (used by the ONS) is the National Health Service Central Register (NHSCR). Whenever a patient re-registers with a general practitioner in a different health authority, a record of that move is stored on a central database. These data are then collated quarterly. A re-register is taken to be a migration. The annual mid-year migration estimates which go into the population estimates use the Patient Register Data Service and data from the Higher Education Statistics Agency, in addition to the NHSCR.

It should be noted that because ONS' migration flow estimates are based primarily on moves recorded in the NHS Central Register, they will underestimate total flows. The extent of underestimation depends upon the propensity of migrants to engage with health services. This propensity varies with age and sex, with children and the elderly being better represented than young adults, and women being better represented than men.

Theory of migration – does the UK data conform?

To set the analysis of migration to and from London into context, previous research on the theory of migration has been examined.

The theory of migration suggests that an individual migrates if the benefits of living at the new location outweigh the costs of moving. Note that an individual who owns their own home or who rents could well have a lower cost of moving than someone in social housing, where tenants commonly have lower priority than existing residents if they move locations[1]. The theory assumes that individuals have knowledge of all vacancies available to them across all locations and that there are no barriers to them migrating if the best job offer is located in a region other than the one where they currently live, assuming the benefits of moving to the new location outweigh the costs of moving.

Consistent with this theory, research has found that migrants between regions have both higher individual earnings and higher household income by comparison with those who do not move[2]. Other research has emphasised the boost given by regional migration to individuals' careers[3].

Migration helps to match people to jobs. It thus increases employment and reduces unemployment. Research finds that, especially for the young, the availability of employment

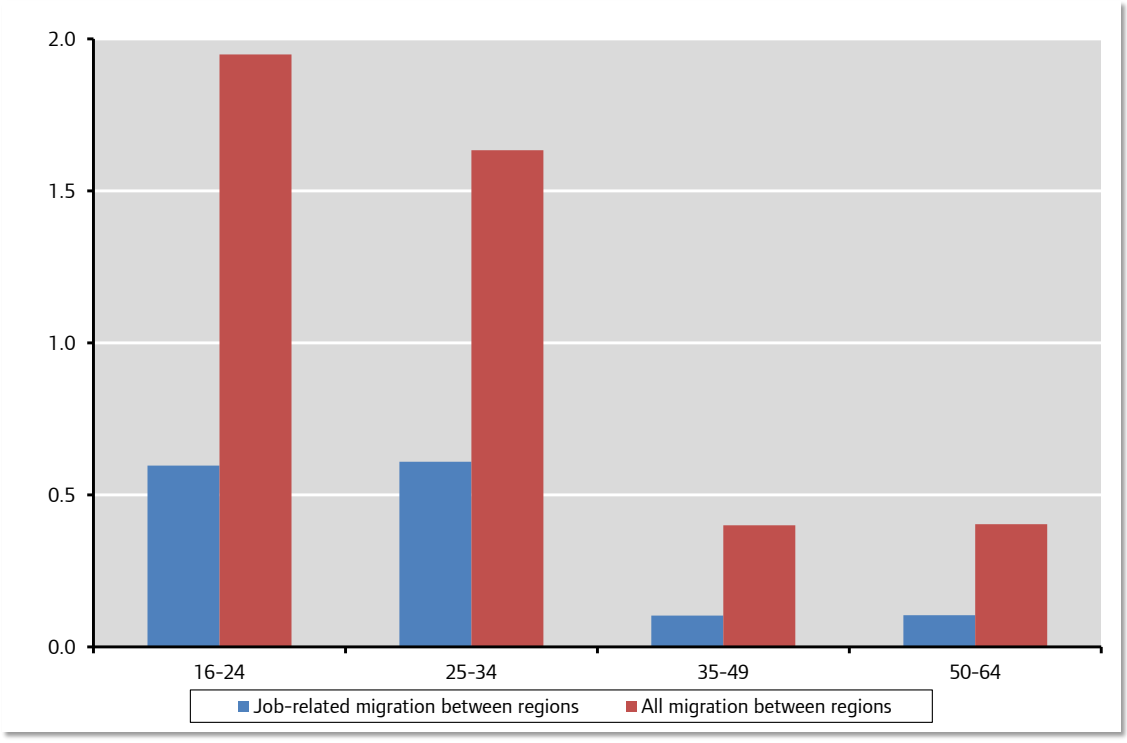
[1] The government is to consult on a 'right to move' for social housing tenants who need to move for employment reasons
[2] From the Dark End of the Street to the Bright Side of the Road, by Rene Boheim and Mark Taylor
[3] Migration and Social Mobility: South East England as an Escalator Region – Regional Studies, Volume 26 – by Tony Fielding

encourages migration[4]. When jobs are more plentiful, there is less impetus to leave a location in search of new employment. There is also evidence that as house prices in a region increase relative to those in other regions, the propensity to migrate to that region decreases[5]. This is especially true for young people who are not yet on the housing ladder. They have lower incomes and do not yet have housing equity to cushion them from some of the impact of a general rise in house prices.

The composition of migration is also likely to vary with age[6]. In the 30-44 age group, for example, at the younger end of the group the life stage influences of partnering, marriage, household formation and the starting of families exert pressure on migration moves. In the 45-59 age group, pre-retirement migration is likely to be a feature. For the 60-74 age group, migration distances increase as individuals are freed from the constraining influences of employment, moving to more rural destinations. At 75+, we might expect to see migration related to the priorities in the later stages of life – to be closer to family or the need for dependency-related care. In general, migration for job-related reasons might be expected to fall later in life, as age increases. This could reflect the smaller likelihood of young people to have partners or children. The cost of migrating rises if children's education is disrupted. And it also rises if a partner has a period of unemployment seeking a job in the new region. Trying to coordinate job moves to a new region for both members of a partnership makes migration more difficult and costly for dual income couples[7].

Figure 1 shows that both job-related and non-job related migration tends to fall with age.

Figure 1: Inter-regional migration in UK by age, 2009-2013 (% of age group)

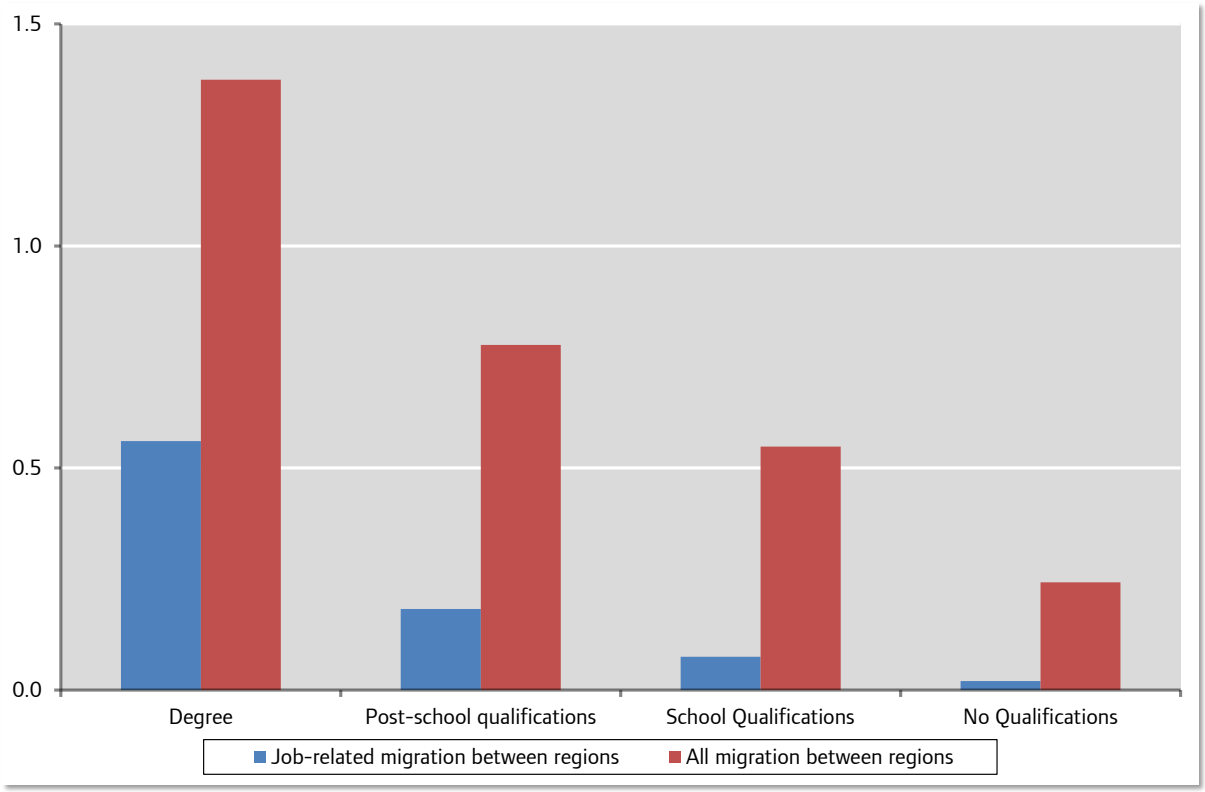


Source: Understanding Society

[4] Understanding Internal Migration in Britain at the start of the 21st Century, by Adam Dennett
[5] Dennett, op cit – though he found no relationship for London
[6] Migration within Britain for Job Reasons, by Sylvia Dixon, April 2003
[7] Job relocations and employer-assisted migration by Sylvia Dixon, May 2003

Research also suggests[8] that both job-related and total migration increases with the level of qualifications held. Individuals whose highest qualification is a university degree are more likely to migrate than those with lower level qualifications. Figure 2 shows that this has held true in more recent years as well.

Figure 2: Inter-regional migration in UK by highest qualification, 2009-2013 (%)

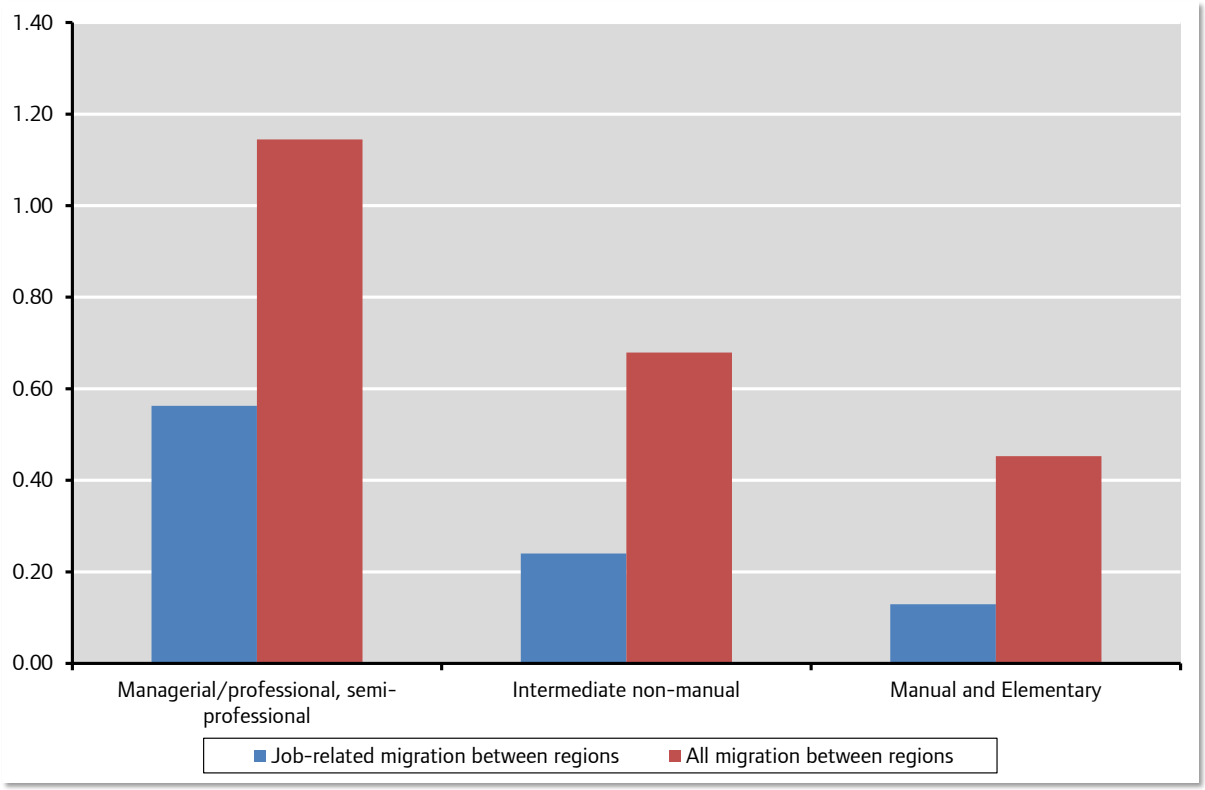


Source: Understanding Society

Similarly previous research has found that migration is more likely for those in the higher level managerial and professional occupations. Figure 3 confirms this for the most recent years: both job-related and non-job related migration between regions is greater for those with higher level occupations.

[8] See Dixon, April 2003, op cit; A Fielding 'Migration in Britain', 2012.

Figure 3: Inter-regional migration in UK by occupation, 2009-2013 (%)



Source: Understanding Society

The explanation for the higher propensity to migrate for those who have higher qualifications or work in higher level occupations relates to both the opportunity cost of not moving and to regional differentials in job availability. At any time, there is a 'pyramid' of available jobs, with higher paid jobs (requiring higher qualifications and people with high level occupations) fewer in number but at the top of the pyramid. These jobs are highly specialised and so are limited in number and scarce in location. In order to access those jobs, the highly qualified or high occupation jobseeker is more likely to need to move regions. If they do not want to move, the opportunity cost is high. Local jobs are available but at a significant discount in terms of pay as well as occupation level and qualifications required. For the jobseeker with a low level of qualification – or one who works in a lower level occupation – beyond the prospect of actually securing a job there is little if any opportunity cost to staying put. Jobs requiring a low level of qualification – or with a low level of associated occupation – are available locally at a similar salary level to that which could be obtained by moving. It is simply not worth moving.

A consequence of the 'pyramid' theory of migration is that we would expect to see vacancies in high level occupations or in jobs which demand a high qualification level advertised and marketed on a national (indeed possibly international) basis, rather than on a local basis, attracting applicants from a much wider geographical area. By contrast positions in lower occupation categories tend to be advertised and filled locally, reducing the need for job-related migration in order to fill vacancies[9]. Indeed that has been the case although as regards advertising, the trend towards advertising all jobs online and away from classified

[9] Migration and Employment, by David Owen (1992) in Migration Processes and Patterns, eds Stillwell, Rees and Boden; Dixon, May 2003 (op cit)

advertisements in print media has meant that low level job vacancies are increasingly available to all jobseekers regardless of location.

A further reason for a higher propensity to migrate of those in high level occupations can be found in corporate structure. Those employed in professional and managerial occupations are likely to have longer careers with the same organisation, but their advancement may be assisted by geographical mobility within the organisation. To assist their career development, organisations frequently operate internal labour markets to fill positions in different regions. Research suggests that intra-company transfers remain an important factor in migration although they have become less important. Managerial and professional workers tend now to further their careers more by changing employers than by progression within the same organisation[10]. (Of course this may also require migration.) Also information technology developments – especially superfast fibre optic broadband – and improved commuting infrastructure have enabled more workers to live where they want, either working from home for some days and commuting on other days, or working entirely from home. The homeworker rate in January-March 2014 in the UK was 13.9 per cent of those in work, the highest since comparable records began in 1998. The London rate (2013) was 13.6 per cent; the increase since 2008 was 2.1 percentage points, the highest for any region. Moreover homeworkers tend to work in higher skilled jobs than the rest of the population and so earn a higher average hourly wage.

Research has also found that propensity to migrate varies with employment status[11]. The 2001 Census showed that of the population aged 16-74, the economic group most likely to have moved in the past year were students. The next group most likely to have moved was those unemployed and seeking work, where 19 per cent had been living at a different address 12 months earlier.

Focus on London

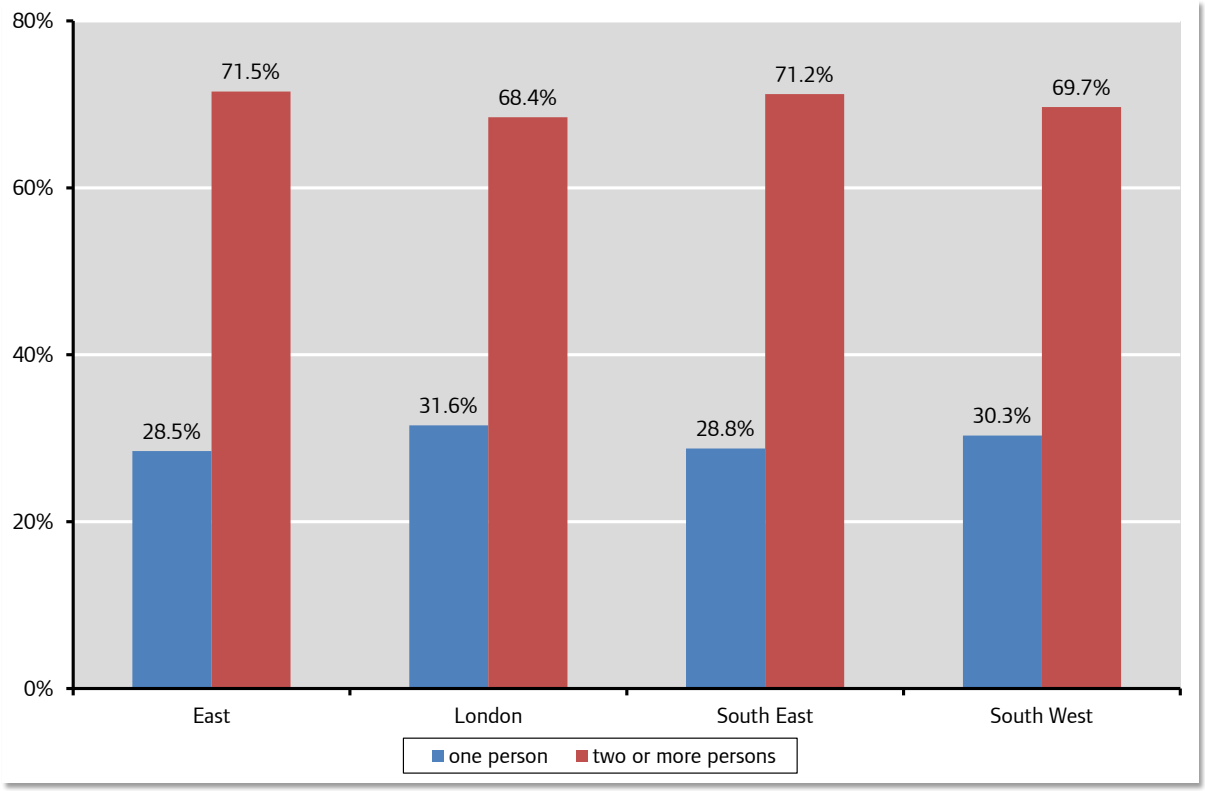
In the years 2002-2012, domestic migration from the rest of the UK into London averaged 185,000 per annum. Over the same period average annual outward domestic migration from London was 264,000. Thus on average over this period London lost a net 79,000 people to the rest of the UK each year. For the past few years this population loss has been offset 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 109,000 people each year from outside the UK. The 2011 Census showed that during the year prior to the Census, London lost a net 40,670 people to the rest of England and Wales.

As the subject of this report is London's relationship with the rest of the UK, the focus of the analysis is on domestic migration between London and other parts of the UK. 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. Even where an individual lives close to their workplace, there can be an association between migration and commuting. Many former London residents for example have migrated further away from their workplaces and choose to commute, often because of the relatively cheaper house prices and more spacious accommodation available outside the capital.

[10] Is Relocation Redundant?, by Anne Green, 2004, Regional Studies, Volume 38
[11] Population Movement Within the UK, by Tony Champion. Chapter 6 of Focus on People and Migration, 2005 (ONS)

London household sizes tend to be smaller than those in the South East, the East or the South West (these three regions are chosen because they are the ones to which London residents most often migrate). This is shown in Figure 4. This is likely to reflect the tendency for households – as they grow in size with the birth of children - to move out of London into more spacious housing that is cheaper per square foot than London. "Understanding Society" data shows that of Londoners citing 'housing related' reasons for moving house, the most common specific reason is the desire to move to somewhere bigger, cited by 29 per cent of respondents.

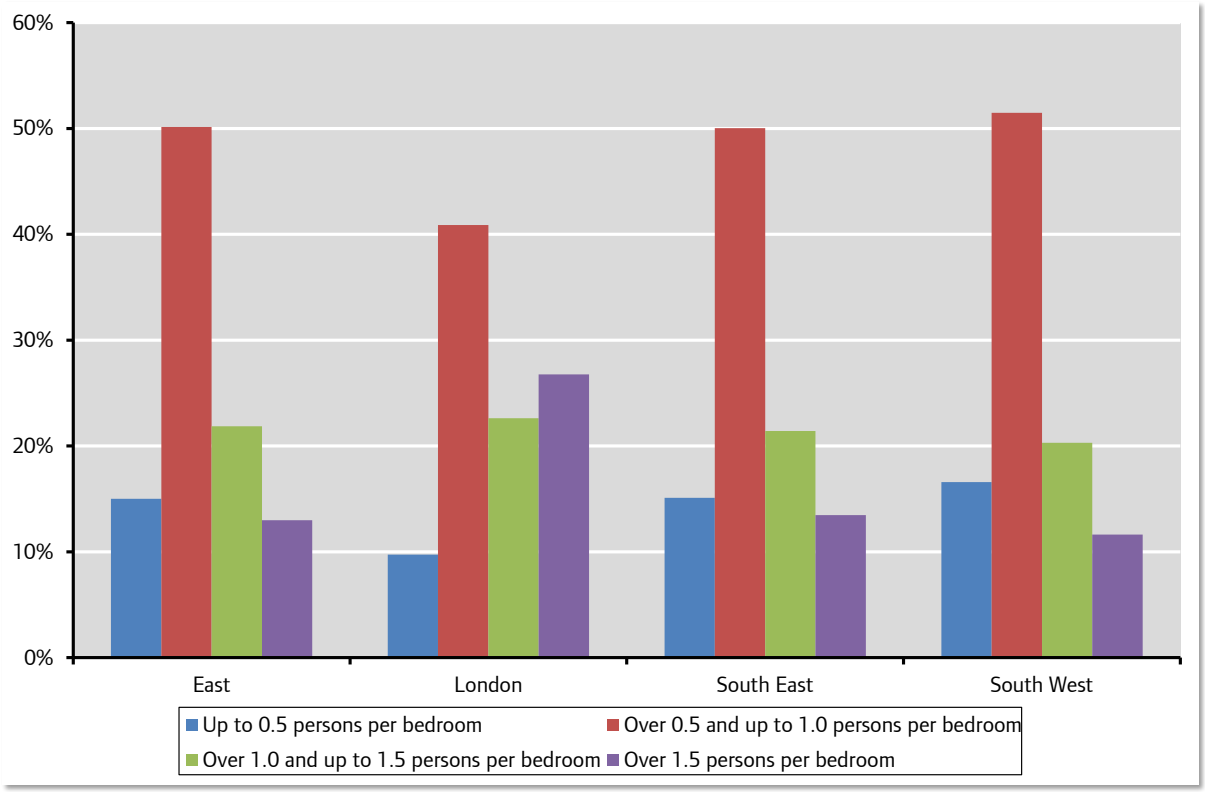
Figure 4: Household composition



Source: 2011 Census

Figure 5 shows the number of persons per bedroom (as a proportion of the total of people in each region). In London the proportion of people sharing a bedroom (the purple bar) is much higher than in neighbouring regions. This indicates the extent of the pressure on space in London.

Figure 5: Persons per bedroom

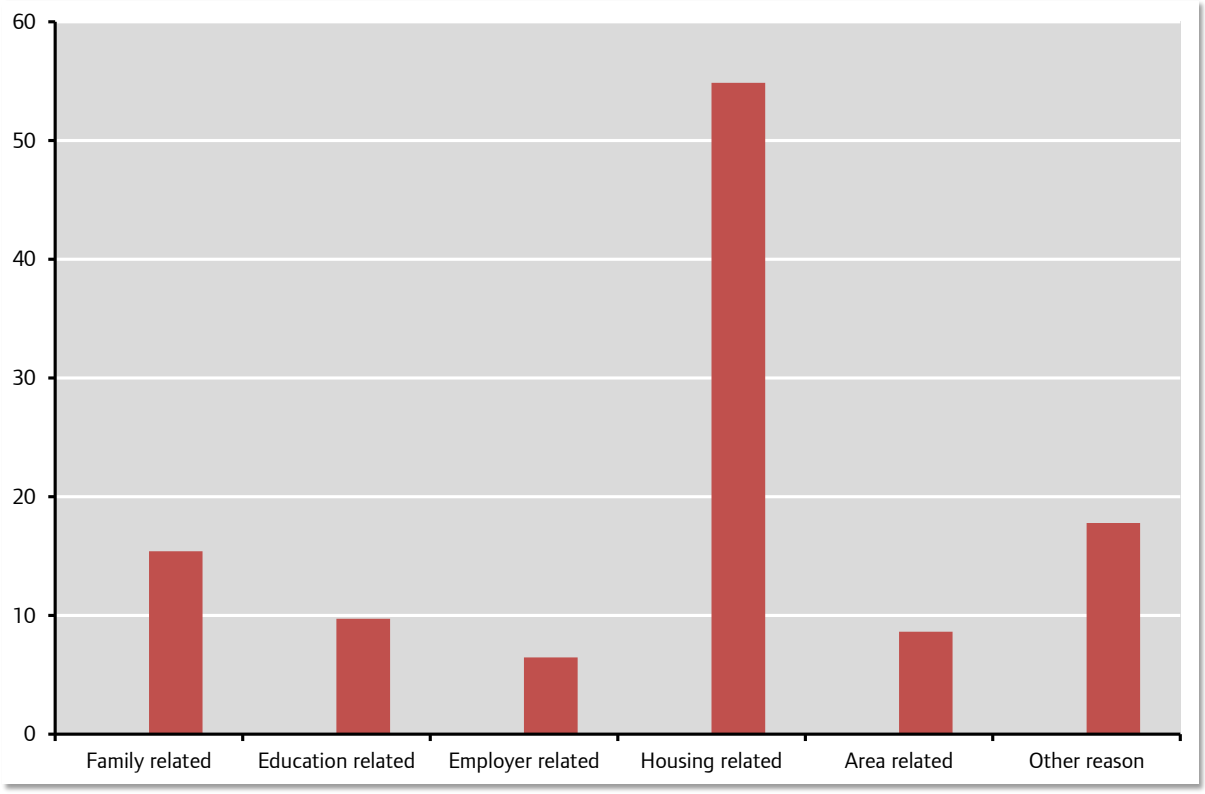


Source: 2011 Census

The 'Understanding Society' longitudinal survey allows us to quantify the numbers moving for housing-related reasons. Figure 6 shows that in 2012/13, of London residents who had moved to a house in a different region, by far the largest proportion gave 'housing related' reasons for their move. Of these respondents who cited 'housing related' reasons, the most common specific reason was the desire to move to somewhere bigger, cited by 29 per cent. Second was the desire for "own accommodation or to form a household" cited by 12 per cent[12].

[12] For London residents moving within London, the reasons were similar: 29 per cent cited the desire for more space; 10 per cent cited the desire for "own accommodation or to form a household"; 10 per cent said they wanted "somewhere smaller/cheaper".

Figure 6: Reasons for moving to another region given by London residents (% of total giving reason), 2012/13



Source: Understanding Society (Note: total adds to over 100 because more than one reason could be given)

Most changes of address by individuals and households are within short distances. 'Understanding Society' shows that in total seven per cent of respondents between 2009 and 2013 moved within the UK. The vast majority of these moves (nearly 90 per cent) were within regions; less than 10 per cent were between regions. Around one-third of these interregional moves involved London. The 2011 Census told a similar story. Of those who changed address in the UK in the year prior to the Census, only 17.5 per cent moved to a different region. The 2001 Census showed that, of those who were known to have changed address in the UK in the pre-census year, almost three out of five (59.6 per cent) stayed within the same local authority district[13]. Around a further one in five (21.6 per cent) changed district but did not cross into another Government Office Region or country. Again according to the 2001 Census, more than two in five (43.0 per cent) of the within-UK migrants moved no further than 2 kilometres. Another 10.6 per cent had moved 3-4 km while 12.1 per cent moved 5-9 km. Thus for almost two-thirds of these migrants, less than 10 km separated their current and previous addresses. Just one in 15 (6.7 per cent) had moved 200 km or more and only 18.5 per cent moved at least 50 km. (Comparable data from the 2011 Census has not yet been released).

Over short distances most moves are prompted by relationship formation or dissolution, or other family reasons (eg, education), or for housing reasons (eg, moving into a bigger or smaller home) or to move to another area. In other words they are prompted by factors not related to an individual's work[14]. By contrast, for movement over longer distances – eg, from one region to another non-adjacent region – job-related reasons become the principal impetus for moves.

[13] See Champion, op cit
[14] See Dixon, April 2003, op cit

Some research suggests that job relocations represent a higher proportion of interregional moves within Great Britain (15 per cent) than of all moves (about 5 per cent)[15].

Data for 2009-13 from 'Understanding Society' bear out this difference between the motivations for moves over longer distances and for moves over shorter distances. Table 1 shows that more than five times as many respondents who moved between regions cited 'job related' reasons as respondents who moved within regions (28.8 per cent versus 5.4 per cent). For those moving within regions, more than three times as many cited 'housing' reasons compared to those moving between regions (44.6 per cent versus 14.3 per cent).

Table 1: 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. Percentages do not add to 100 because more than one reason for moving could be given

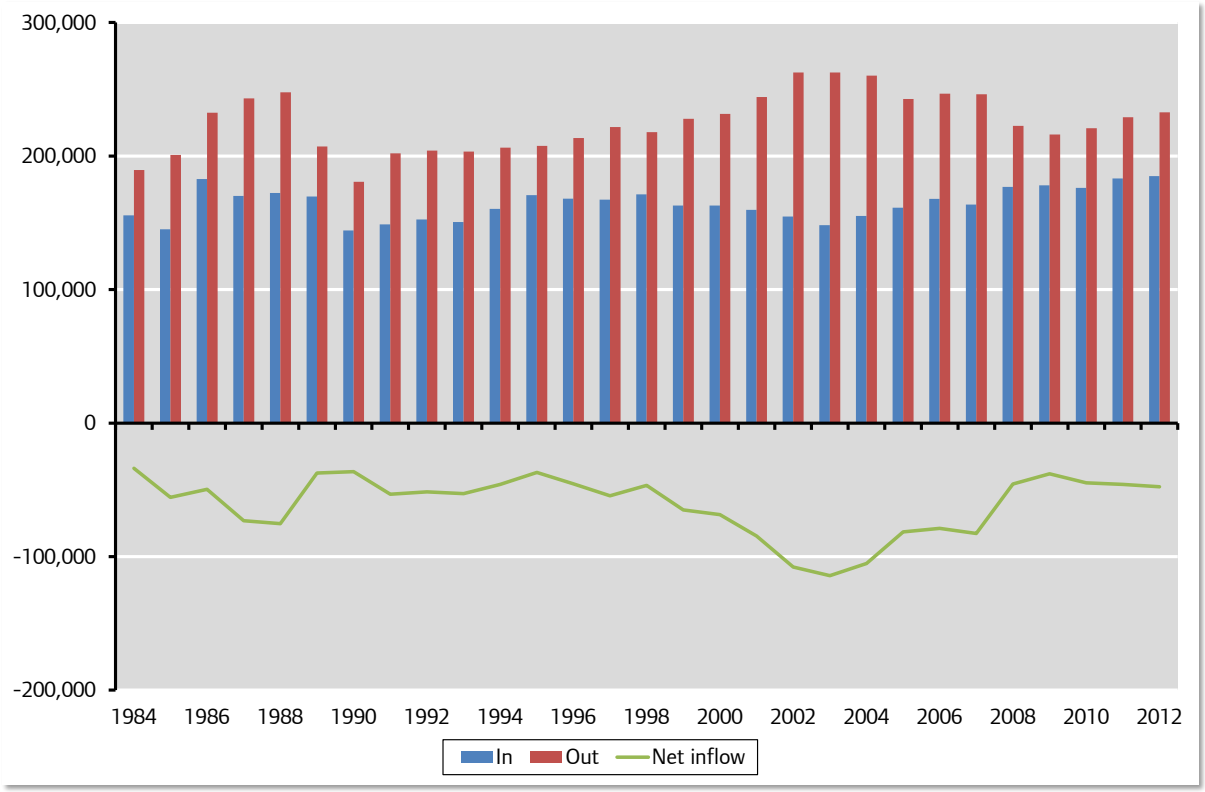
Another important reason for moving between regions is education, cited by 21.1 per cent of the respondents who moved between regions. This reflects the common practice for university students to enrol in a university away from their home region (as well as families moving for educational reasons). Over the last 50 years the UK has experienced a quadrupling of the proportion of 18-year olds going to university and this has greatly affected patterns of migration[16]. 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 students in total (that is, including those doing graduate degrees, part-time degrees and other undergraduate courses)[17].

Longer-term analysis of migration into/out of London

As noted earlier the outflow of domestic migrants from London to the rest of the UK exceeds the inflow. Figure 7 shows this trend since 1984. Of necessity it uses just the National Health Service Central Register data; the supplementary migration data (Patient Register Data Service and Higher Education Statistics Agency data) are not available that far back.

[15] See Dixon, May 2003, op cit
[16] See Tony Fielding, Migration in Britain, 2012.
[17] Source HESA Students in Higher Education Institutions, 2011/12 and 2012/13

Figure 7: Domestic migration into and out of London



Source: Office for National Statistics, NHSCR moves within the UK (excl the Isle of Man). Prior to 1999 the migration data that went into the ONS' population estimates was based solely on the NHSCR data. But subsequently two more administrative data sources were added[18]. The ONS migration data used in this section is the data that is used in the population estimates.

The net outflow of migrants from London to the rest of the UK rose during the mid-1980s but then fell back. By the early 1990s the net outflow of migrants from London stabilised at a level of around 50,000 people a year, a level that was maintained through to 1998. There was then a steady increase in net outward migration which took it to a peak of 114,000 in 2003 as outward migration increased to over 250,000 a year and inward migration tailed off to less than 150,000 a year – back to the levels seen in the early 1990s. As in the late 1980s there then followed a period of declining net outward migration which has taken it back to around 50,000 people a year, though this time the fall was more dramatic, from levels of over 100,000. Also unlike the late1980s – when the fall in net outward migration was due to a sharp fall in outward migration – in the 2003-2008 period both outward migration fell and inward migration rose.

The incidence of falling outflows of migrants in 1988-90 and 2008-10 suggests that house prices may well have been a factor. Specifically these were periods of house price falls following earlier booms[19] and it may be that people were therefore unable to realise the prices they needed in order to buy their desired property outside London, or delayed moving in anticipation of a recovery in prices. Many were even in 'negative equity'.

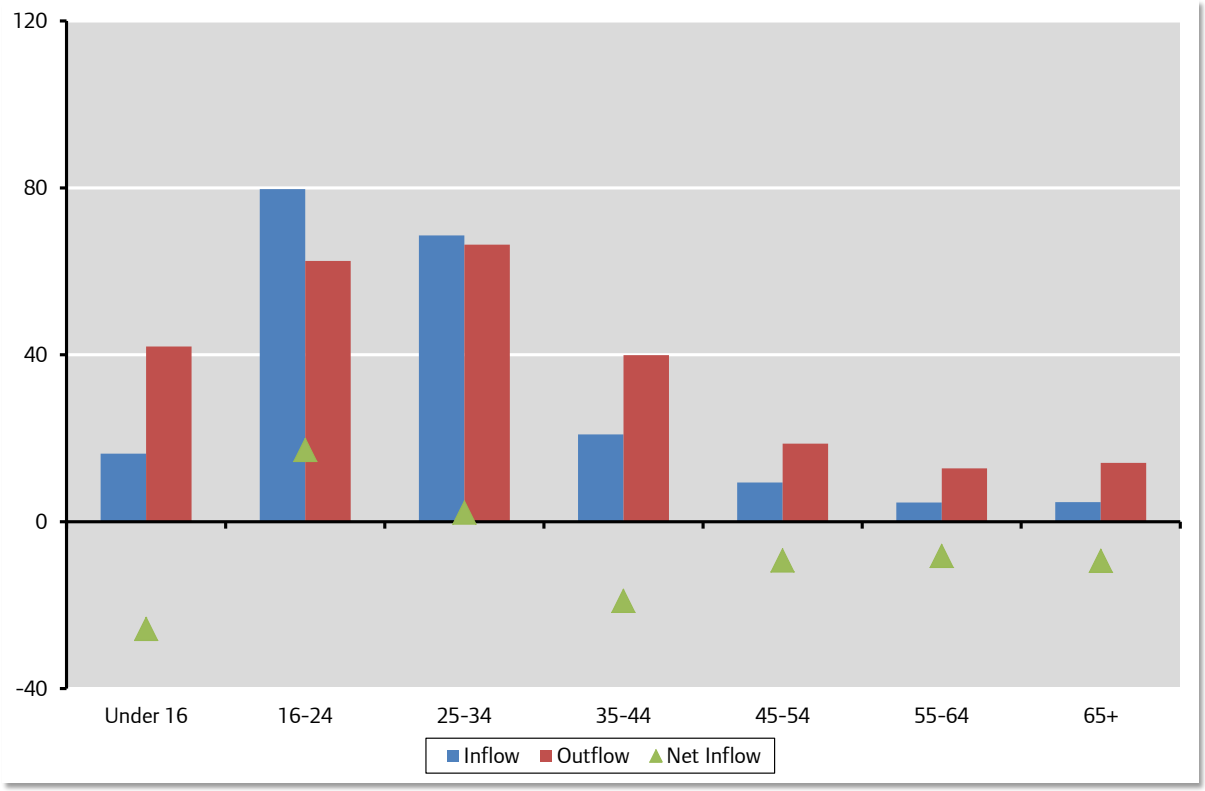
[18] http://www.ons.gov.uk/ons/guide-method/method-quality/specific/population-and-migration/estimating-internal-migration-customer-guidance-notes.pdf
[19] In London the mix-adjusted house price index fell by 16.7 per cent between 1989 and 1993

With house prices currently reaccelerating[20], this might suggest that the net outflow of people from London to the rest of the UK may increase once more from the current level.

Migration into/out of London – the characteristics of migrants

Given the constant excess of outflows over inflows shown in Figure 7, it is hardly surprising that there is a net outflow in most age bands of people from London to the rest of the UK. The exceptions, as Figure 8 shows, are for people aged 16-24 and 25-34. London saw a net inflow of some 17,000 in the latest year in the 16-24 age band and also a small net inflow – of about 2,000 – in the 25-34 age band. This is consistent with the data analysed above from the Understanding Society dataset.

Figure 8: Migration to and from London by age group, year to June 2012 (thousand)

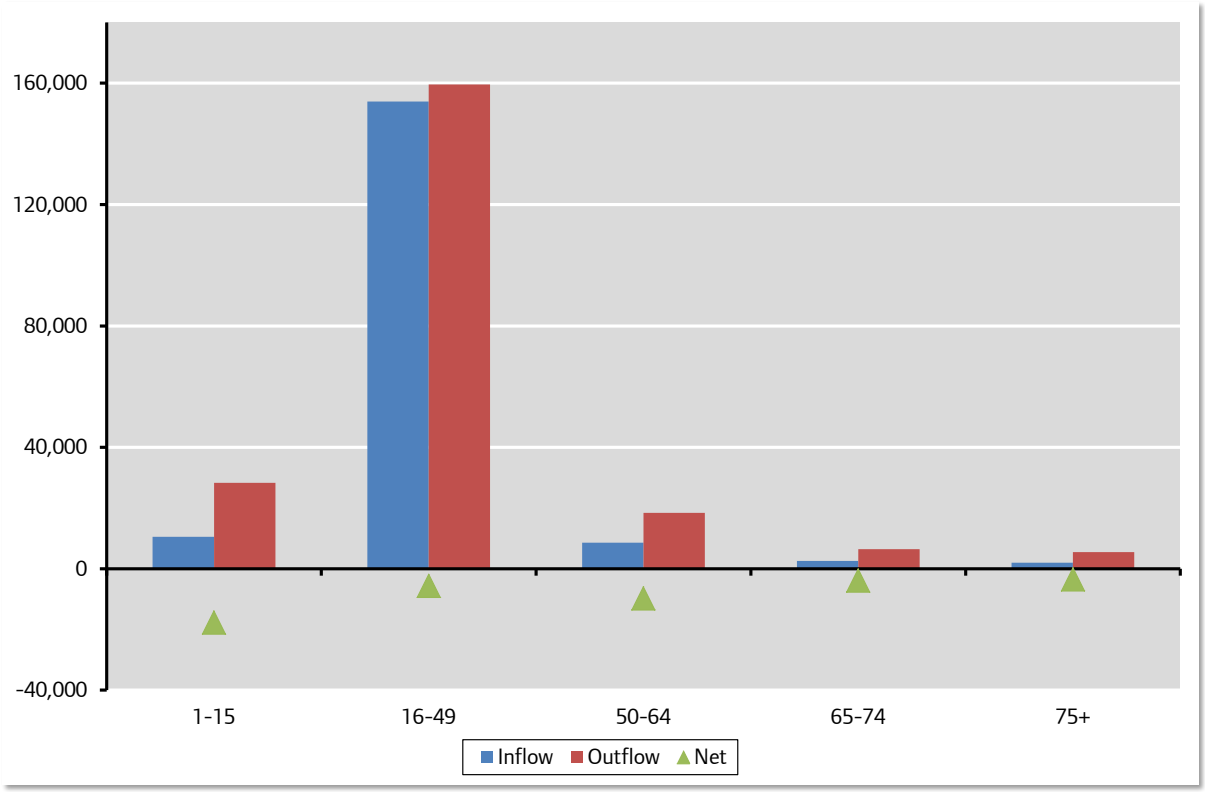


Source: Office of National Statistics, Internal Migration by Local Authorities in England and Wales

The net inflow in the 25-34 age group may well be due to young people coming to London after completing higher education, to commence their professional careers. In the younger age group it may also reflect people coming to London to study. The 2001 Census showed that the net inflow turns negative at age 27 for women and 29 for men.

[20] Appendix A has charts of regional house price data

Figure 9: Migration to and from London by age group, 2010-11 (thousand)



Source: Office of National Statistics, Census 2011. Note that 16-49 is the level of detail currently available from Census 2011.

The 2011 Census showed net outflows from London in 2010-11 in all age groups, see Figure 9, broadly confirming the picture given by other data.

Data from the Labour Force Survey (LFS) permits further analysis of migrants in and out of London by asking respondents where they lived a year ago. (Where we use LFS data in this paper to analyse the characteristics of migrants, we base totals on published ONS data as the ONS's authoritative source of migration statistics.)

Table 2: Migration into and out of London by working age, excluding full-time students, 2012/13

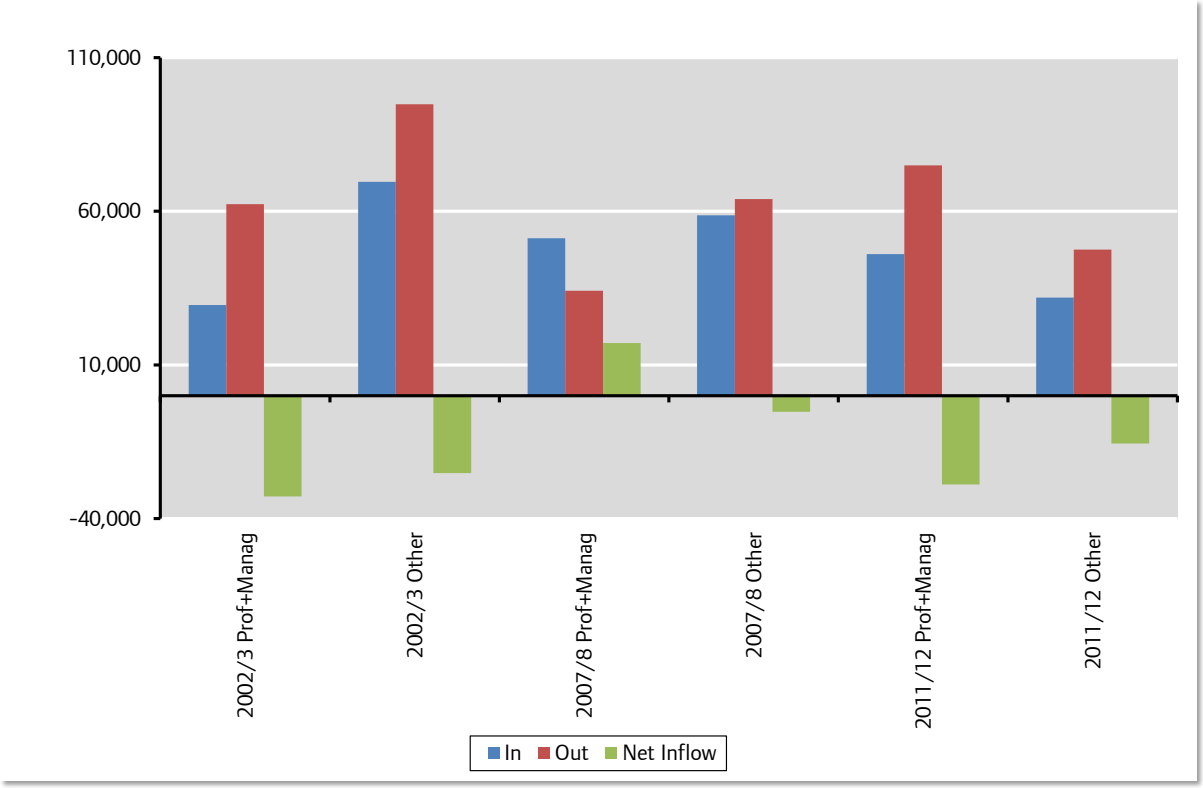
Age	In	Out	Net inflow
16-24	11,000	8,000	4,000
25-44	40,000	68,000	-28,000
45 to 64	9,000	25,000	-16,000

Source: GLA Economics calculations based on ONS LFS and ONS domestic migration statistics.

Table 2 supports the analysis above. The totals are calculated by applying the age proportions of migrants in the Spring 2013 LFS sample (excluding students) to the ONS migration data used in the population estimates. It shows that London receives a net inflow of young people aged 16-24 and a net outflow of people aged 25 and over. It excludes full-time students: at any one time there are around 110,000 full-time students from other regions in London so excluding students makes a big difference to the 16-24 inward migration total (which was 80,000 in the year to June 2012, see Figure 8).

In most years London is a net provider to other regions of people in the highest occupation categories, "Professional and Managerial" (which comprises Managing Directors and Senior Officials and Professional Occupations). London is also generally a net provider to other regions of people in "Other" Occupation categories. Figure 10, using LFS data, shows that this held true in 2003 and 2012.

Figure 10: Migration to and from London by occupation (excluding full time students)



Source: GLA Economics calculations based on ONS LFS and ONS domestic migration statistics. 'Other' occupations includes Associate Professional and Technical, Administrative and Secretarial, Skilled Trades, Caring Leisure and Other Service, Sales and Customer Service, Process Plant and Machine Operatives, Elementary Occupations

In years when the economy is strong, net migration out of London tends to increase, possibly because people feel more secure in their jobs, are more willing to commit to the mortgages needed to buy bigger houses outside London and as workers in other regions feel less need to migrate to London to advance their careers. In 2003, when UK GDP grew by nearly 4 per cent and London GVA by over 5 per cent, net outward migration (see Figure 7) reached over 114,000, the highest rate in the 1984-2012 period. As Figure 10 shows, in 2003 there were net outflows from London across all occupations. The same held true for 2012.

However in years when the London economy is weak, net migration out of London tends to fall. This is likely to be due to both a greater propensity of people coming to the capital to seek work and to a fall in outward migration.

The data suggest that over the period 1984-2012, both factors had broadly equal influence on net migration, albeit that the correlations[21] are somewhat weak. The correlation between inward

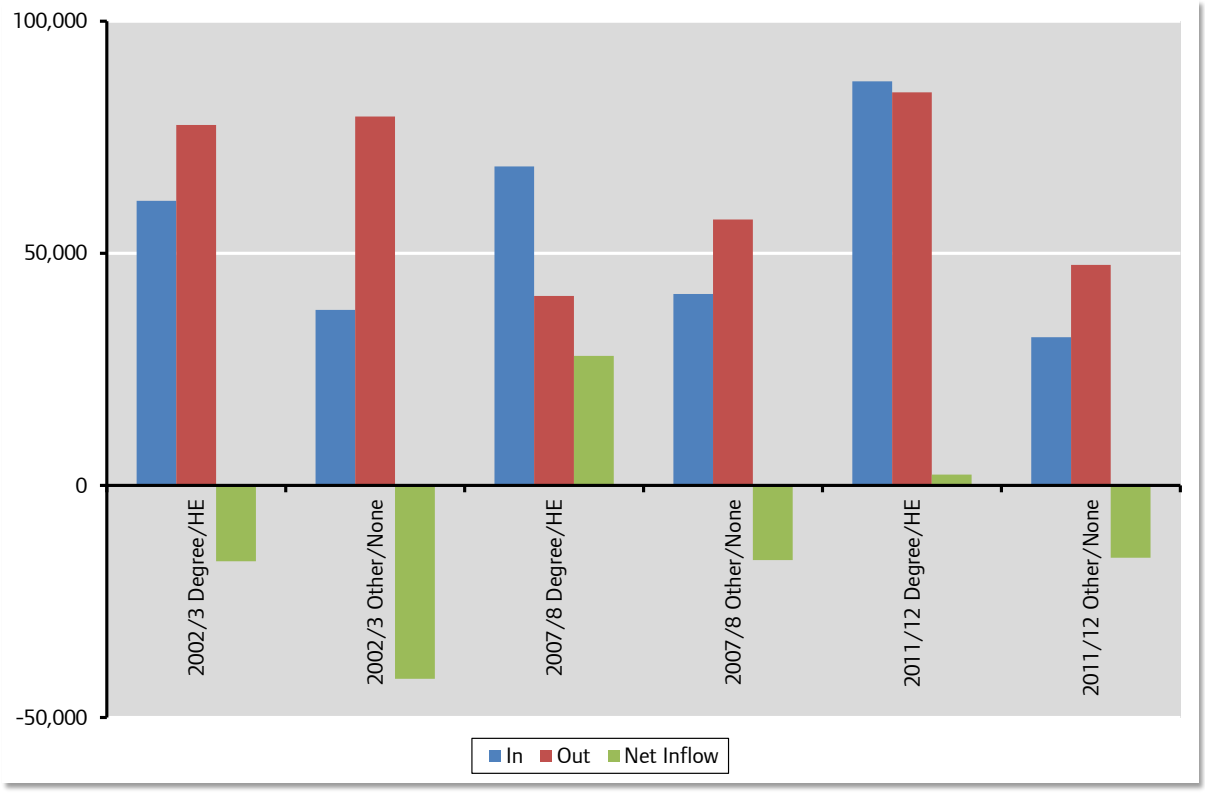
[21] The correlation coefficient is a statistical measure of the extent to which two variables move together. Two variables whose values increase or decrease exactly in tandem have a correlation coefficient of +1; if the value of one variable increases in exact proportion to the decrease in the second variable, the correlation is -1.

migration to London and real GDP growth for the UK[22] is -0.18; that between outward migration from London and real GDP growth for the UK is +0.21.

But Figure 10 also focuses on 2008. This was the year when the 2008/09 recession began (London's GVA rose by 3.4 per cent in 2008 but fell by 7.3 per cent in 2009). In this year (see Figure 10) there was a net inflow to London of people in the "Professional and Managerial" occupation category though there was still a small net outflow of people in "Other" occupations. While more people migrated to London in 2008 than in 2007, outward migration fell by 24,000 (see Figure 7). The fall in outward migration may well have been due to a feeling of less job security as the recession took hold and therefore to an unwillingness to commit to the mortgages needed to buy bigger houses outside London. Banks were not lending to consumers either in the way they had been before the recession.

Figure 11 shows migration to and from London by highest qualification level. In 2003 – a year that saw a strong London and UK economy – London supplied other regions with highly qualified people. In 2012 however there was a small net inflow to London of people with the highest qualification level: although the LFS and ONS data suggest net outward migration (excluding students), a higher proportion of inward migrants in 2012 had the highest qualification level than outward migrants. In 2008 – when the most recent recession began – there was a net inflow of migrants with the highest qualification level.

Figure 11: Migration to and from London by highest qualification level (excluding full time students)

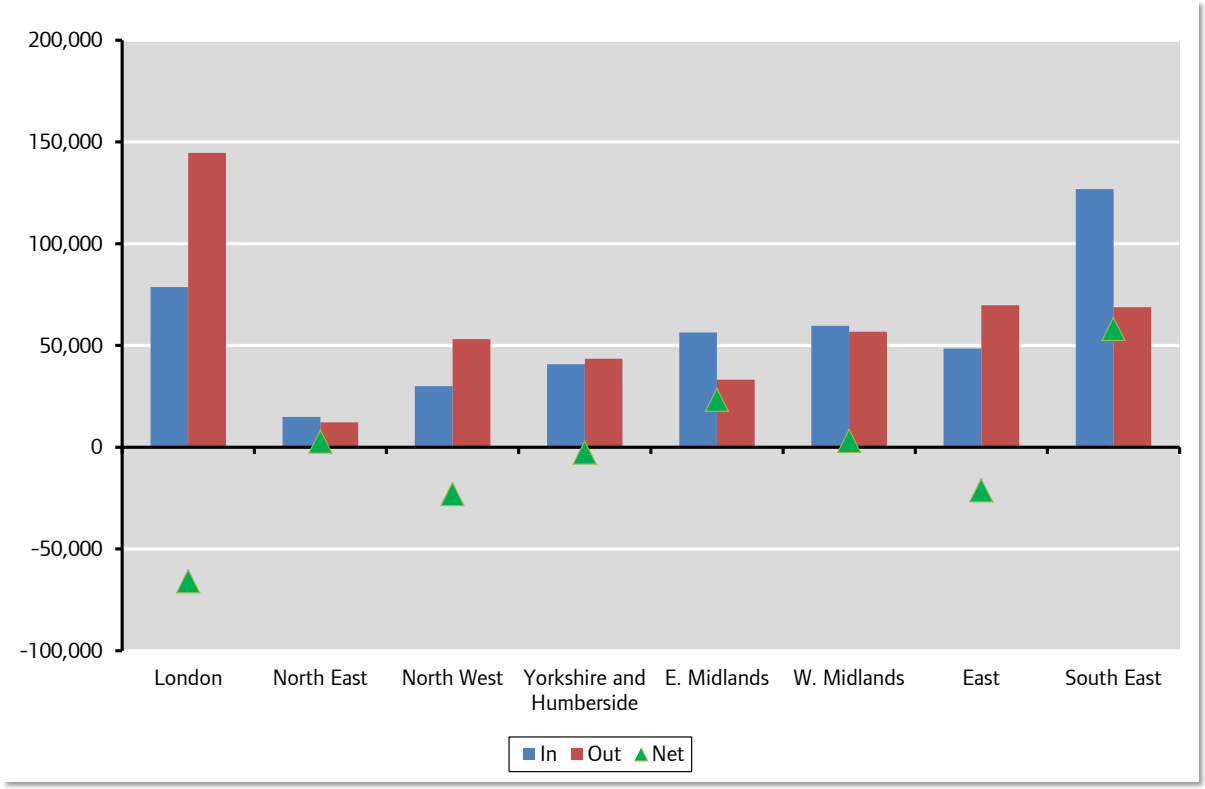


Source: GLA Economics calculations based on ONS LFS and ONS domestic migration statistics. Degree/HE = all qualifications including and above Higher Education qualification, so including higher degree.

[22] Used as a proxy for real GDP growth in London which is not published

Figure 12 shows that in the latest year, more people in managerial and professional occupations left London for the rest of the UK than migrated to London from the rest of the UK. By contrast, the North East, East Midlands, West Midlands and the South East all took in more people in managerial and professional occupations than they lost to other regions.

Figure 12: Migration (2011/12) by individuals in managerial and professional occupations



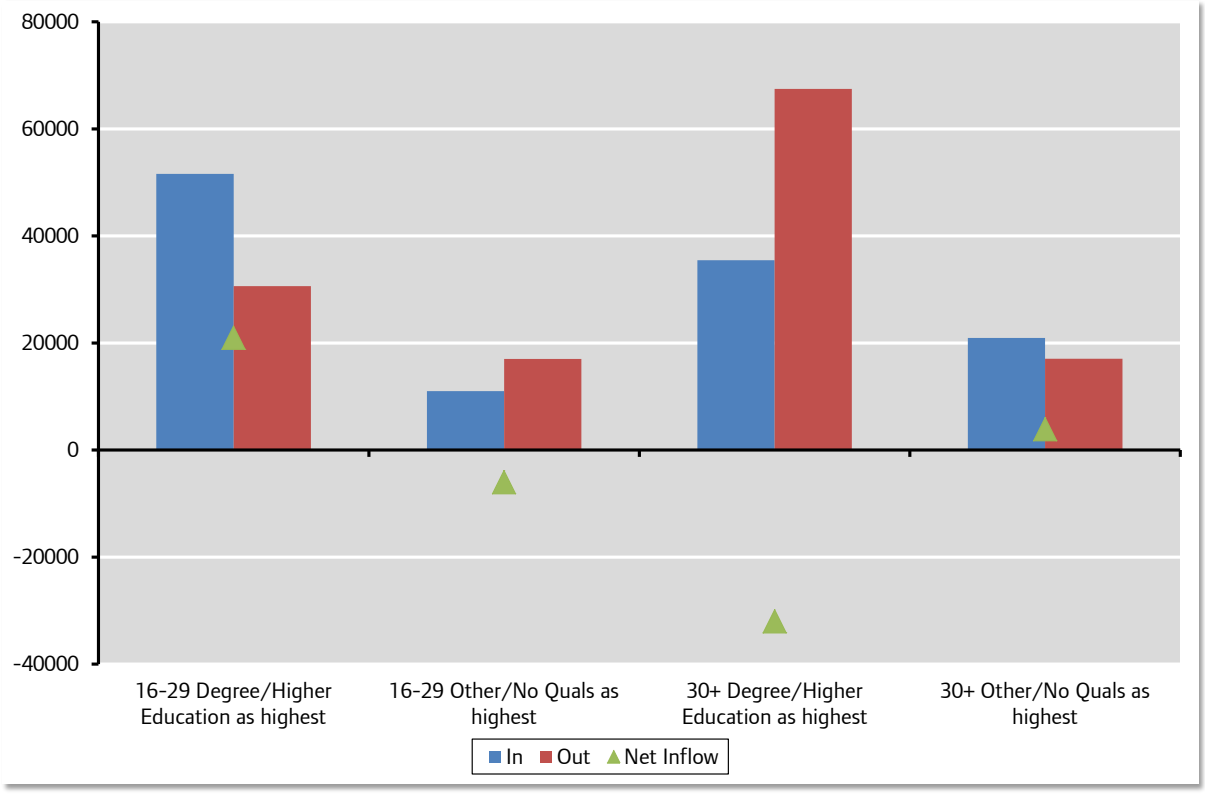
Source: GLA Economics calculations based on ONS LFS (spring 2013) and ONS domestic migration statistics (2012).

To summarise thus far as regards the characteristics of migrants to and from London: London has a consistent net outflow of people to the rest of the UK and the only age group where there is a net inflow is 16-24 (and for some years 25-34 but this tends to be very small). And London is generally a net exporter of people in managerial and professional occupations – unlike the North East, East and West Midlands and the South East. In other words the evidence does not support the contention, often made, that London consistently takes from other regions of the UK the most talented and skilled people.

Figure 13 shows that between 2011 and 2012, London received a net inflow of young people with a degree or other Further Education qualifications as their highest qualification. But as these people grow older and more experienced, there is a net outflow from London. Figure 13 shows a net outflow of some 30,000 for people aged over 30 with a degree or other Further Education qualifications as their highest qualification.

The data are consistent with the idea that London is a value-adding 'incubator' for talented young people. Highly qualified young people come to London for their first jobs and career advancement and then when they are older, they migrate to other parts of the UK, which then benefit from their skills, acquired knowledge and wealth accumulation.

Figure 13: Migration to and from London by age and highest qualifications, excluding full-time students, 2011/12



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

Fielding (1992)[23] 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.

Migration into/out of London – the regional distribution

Table 3 shows average annual inflows and outflows of population between London and other UK regions for the period 2002 to 2012.

[23] Migration and Social Mobility: South East England as an Escalator Region – Regional Studies, Volume 26

Table 3: Migration to and from London by origin and destination, all ages Average 2002 to 2012

	From	To	Net Balance	"From" as % population with degree and above
North East	5,500	4,500	1,000	1.8%
North West	14,100	13,700	400	1.7%
Yorkshire and Humberside	12,400	11,300	1,100	1.7%
East Midlands	12,600	14,400	-1,800	2.0%
West Midlands	14,100	13,800	300	2.0%
East	33,500	66,500	-33,000	3.6%
South East	60,300	100,300	-40,000	3.7%
South West	18,300	24,100	-5,800	2.3%
Wales	5,600	6,000	-400	1.3%
Scotland	7,200	7,900	-700	0.9%
Northern Ireland	1,400	1,700	-300	0.6%

Source: ONS migration statistics

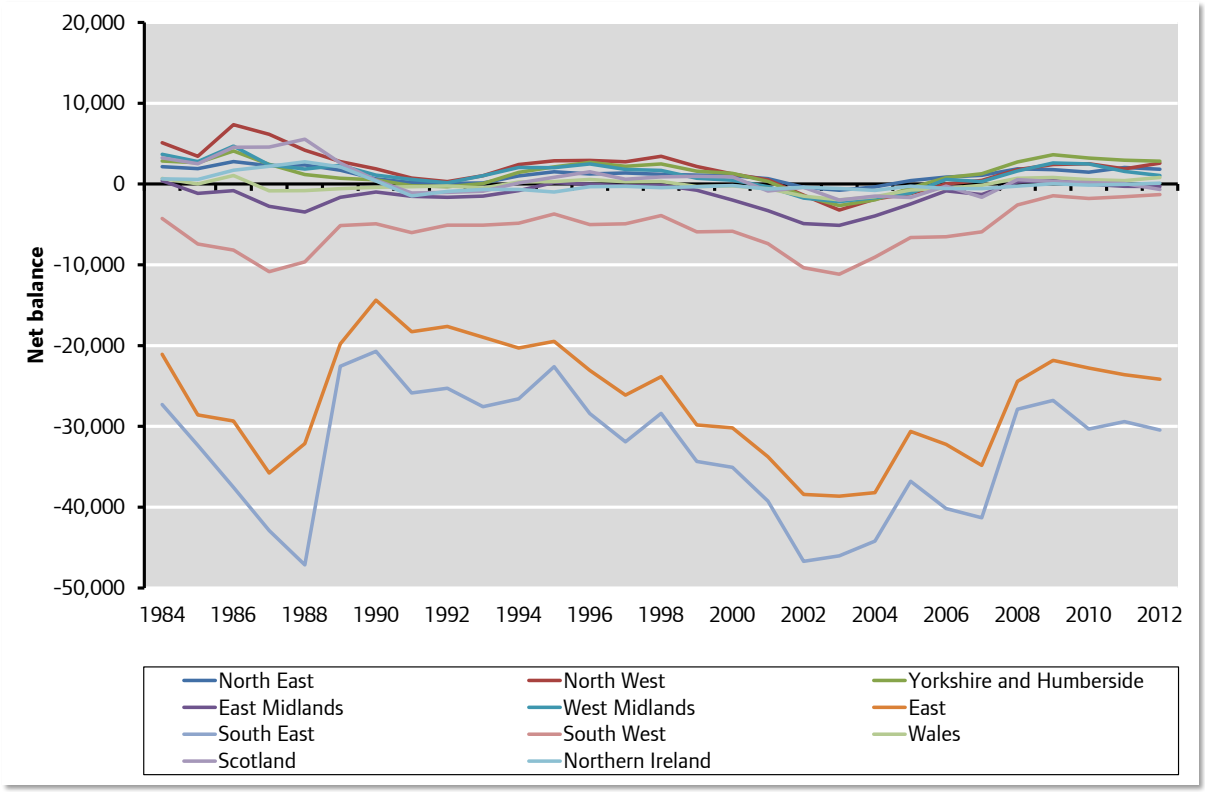
During this period London received on average small net inflows of migrants from outside Southern England and the devolved administrations (that is, all regions except the South East, South West and East of England, and Wales, Scotland and N Ireland) totalling 1,000 migrants each year. But these flows were very small – for example (shown in the table) by comparison to the population with a qualification level of a degree or above. And the average annual net flow of 1,000 into London from outside Southern England and the devolved administrations represents only one four thousandth of one percent of the population of these regions. Moreover these inflows to London were dwarfed by the average net outflow of 78,800 from London to the rest of Southern England (the South East, South West and East of England). In other words, the size of these net flows suggests that the gravitation of people or talent to London from these regions is minimal.

Table 3 also 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 just 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.

Figure 14 shows that (as one might expect) most of the year-on-year variation in net migration to/from London is accounted for by these neighbouring regions. The pattern of net migration from London to the East and South East – with falls in the late 1980s and again around 2008 – suggests that static/falling house prices in London and rising interest rates were an important determinant (the official Bank of England rate peaked at 14.875 per cent in October 1989)[24].

[24] On the role of the housing market in migration decisions see Tony Fielding, Migration in Britain, 2012.

Figure 14: Net migration into London



Source: ONS, Internal Migration, England and Wales

Conclusions on migration

The above analysis underlines the interdependence of the economies of London and the rest of the UK. London acts as a value-adding 'incubator'[25]. Highly qualified young people come to London for their first jobs and career advancement and then when they are older, they migrate to other parts of the UK, which then benefit from their skills, acquired knowledge and wealth accumulation.

London has a consistent net outflow of people to the rest of the UK and the only age group where there is a net inflow is 16-24 (and 25-34 but this is very small). London is generally a net exporter of people in managerial and professional occupations – unlike the North East, the Midlands and the South East. Over a ten year period London has seen net inflows from the UK outside Southern England and the devolved administrations, but these have been tiny and – taken together with the consistent outflows from London to Southern England and the devolved administrations – there is little evidence that London is drawing away talented workers from these parts of the UK, to their loss.

[25] It has also been called an 'escalator' – see for example Migration in Britain by Tony Fielding, 2012

Commuting

Given the concentration of employment in London's central business district in the City of London, Westminster and parts of other central London boroughs, large numbers of Londoners commute every day to their workplace. According to the 2011 Census, 73 per cent of Londoners travelled less than 20 km to work in 2011, however, out of all commuting distances, usually London's residents were most likely to have a commute of less than 5 kilometres.

Nonetheless, the focus of this report is on London's relationship with the rest of the UK, hence in this section we will discuss inter-regional rather than intra-regional commuting. Therefore, the terms commuting and commuters here refer just 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 to work outside London ("out-commuters").

The total number of workforce jobs in London has increased significantly since the end of the downturn. Given the job opportunities which London offers and its ability to attract talent and innovative businesses, it is not surprising that commuting is considered one of the most obvious interactions between London and the other parts of the UK. 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)[26], in 2013 the South East alone accounted for 50.7 per cent of commuters into London, the East of England provided another 40.4 per cent, and the rest of the UK regions accounted for just 8.9 per cent of total commuters into London[27]. Commuting helps to integrate London's 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[28]. The strength of these ripple effects will depend on the magnitude and nature of the commuting links between London and its surrounding regions.

Before presenting the analysis of commuting into and out of London, on a methodological note, it is important to briefly discuss the data sources for this analysis. Two sources of official statistics are available on commuting: the 2011 Census and the Labour Force Survey (LFS).

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[26] ONS, Labour Force Survey, October-December 2013.

[27] Please note that, at the time of writing, the Census 2011 data on commuting flows were not yet available; therefore, unless specified, we will be using Labour Force Survey Data, which are generally less accurate than Census figures. This is because the estimates obtained from the Census are based on data from about 98 per cent of the population at a given point in time, allowing for analysis of very small sub-groups within the population (ie, the numbers are big enough for a robust analysis to be carried out). Although the LFS is the main source of aggregate statistics (for the labour market in particular), it is based on a sample of the population, and the results of the survey are weighted to the total household population. Nonetheless, because the sample size is relatively small, estimates of small sub-groups are not always robust (ie, they have large sampling variances). This is the reason why LFS data are adjusted after every Census, so to re-weight all LFS data back to the previous Census by using the new population estimates. Unfortunately, at the time of writing, LFS data were not yet adjusted to the Census 2011 estimates. Therefore, it is likely that the figures reported in this chapter would actually be higher than estimated here.

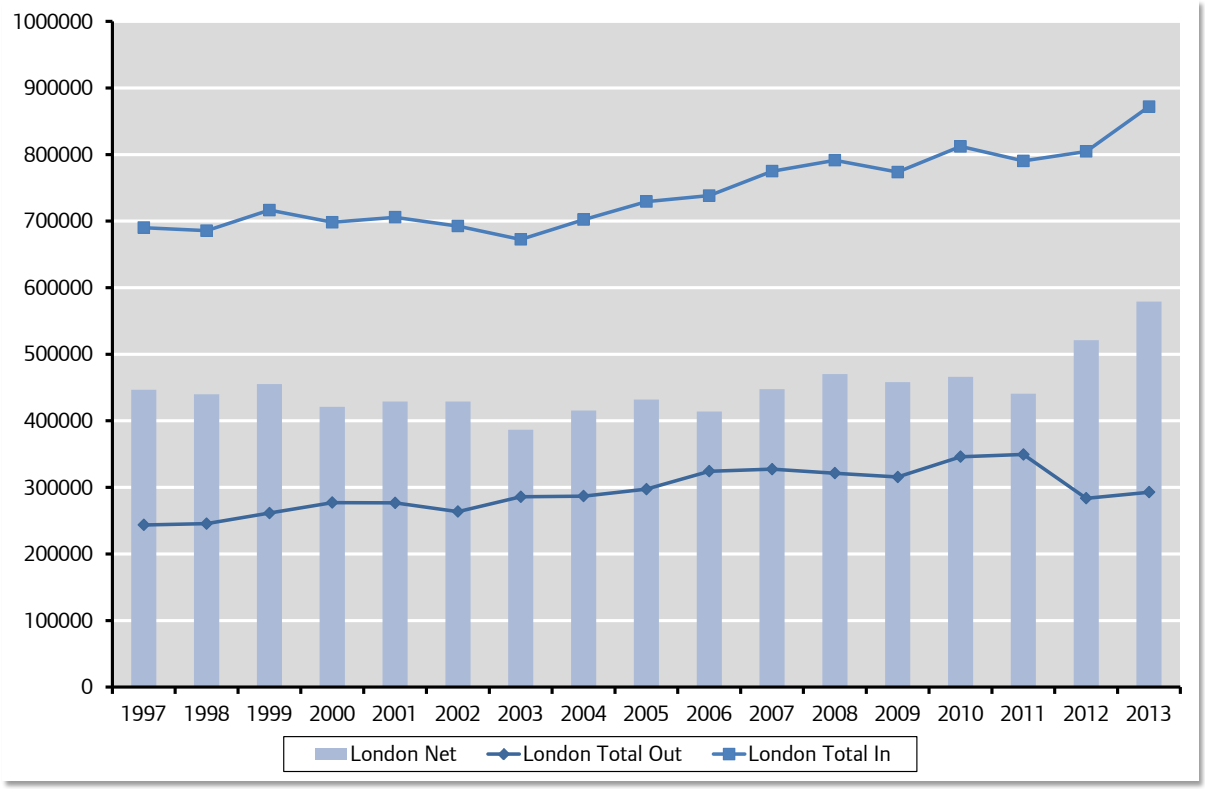
[28] Gordon, I. & Whitehead, C. (2003), Evidence to the Greater London Assembly, Scrutiny of London in its regional settings, available at http://legacy.london.gov.uk/assembly/past_ctees/plansd/2003/plansdjun03/plansdjun03item05appa.pdf [28th April 2014]

Although LFS data is generally less accurate than Census data[29], in this section we will be using LFS data, unless otherwise specified. There are two main reasons behind our choice; first, after comparing 2011 LFS data on commuting with 2011 Census data, we can conclude that there is little significant difference among the respective figures for in-, out- and net-commuting (for example, the difference between 2011 Census and 2011 LFS data with regard to the number of in-commuters is as small as 0.02 per cent). Second, 2011 data is already out-of-date; by contrast, the LFS provides us with more timely estimates, allowing us to analyse data covering Q4 2013.

Recent trends in commuting

According to the LFS, around 872,000 people commuted into London for work in 2013. Compared to the 2001 data, this represents an increase of 23.5 per cent, up by about 166,000 from 706,000. Out commuting by Londoners also increased between 2001 and 2013, according to the LFS, from 277,000 to 293,000 – an increase of 16,000 or about 5.8 per cent. Consequently, these data suggest an increase in the commuting interdependency between London and the rest of the UK as both increased numbers of non-Londoners are directly dependent on the London economy for work and increased numbers of Londoners are dependent on the economy outside London for work. Net commuting into London has also increased over the same period to 579,000, up 35.0 per cent from 429,000 in 2001. Figure 15 shows the trends in in-, out- and net-commuting to London from 1997 to 2013.

Figure 15: In, out and net commuting to London



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

[29] The reason why LFS data is less accurate than Census data is that the estimates obtained from the Census are based on data from about 98 per cent of the population at a given point in time, allowing for analysis of very small sub-groups within the population (ie, the numbers are big enough for a robust analysis to be carried out). See also footnote 27.

Notably, Figure 15 shows how net commuting has picked up since 2011, due, in particular, to a decrease in the number of Londoners commuting to other parts of the UK. Over the period 2011-12, London experienced a considerable drop in the number of out-commuters; the number of Londoners commuting to other regions for work decreased to about 284,000. According to LFS data, it is in fact the biggest decrease in the last 16 years or so. At the same time, between 2011-13 London experienced an increase in the number of in-commuters, hence the increase in net commuting over the period 2011-2013 (+31.3 per cent). Another interesting trend is found in the constant increase in in-commuting since 2003. After a period (1997-2002) of relative stability, the number of commuters into London has increased by 29.8 per cent.

According to the latest LFS data (Oct-Dec 2013), 50.7 per cent of the commuters into London come from the South East, followed by the East of England (40.4 per cent). Moreover, commuters into London account for 10.3 per cent of all employed residents in the South East. The equivalent figure for the East of England is 12.1 per cent.

Table 4 reports the share of commuters into London of each of the UK regions, as well as in-commuters as share of employed residents in the region of origin, and, as a share of all workers in London.

Table 4: 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 have their workplace in the South East (53.0 per cent) and in the East of England (30.2 per cent). Londoners working in the South East and East of England represent about 4.0 per cent of all working in the two regions and 3.6 per cent of the total number of London's employed residents.

Table 5: 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*

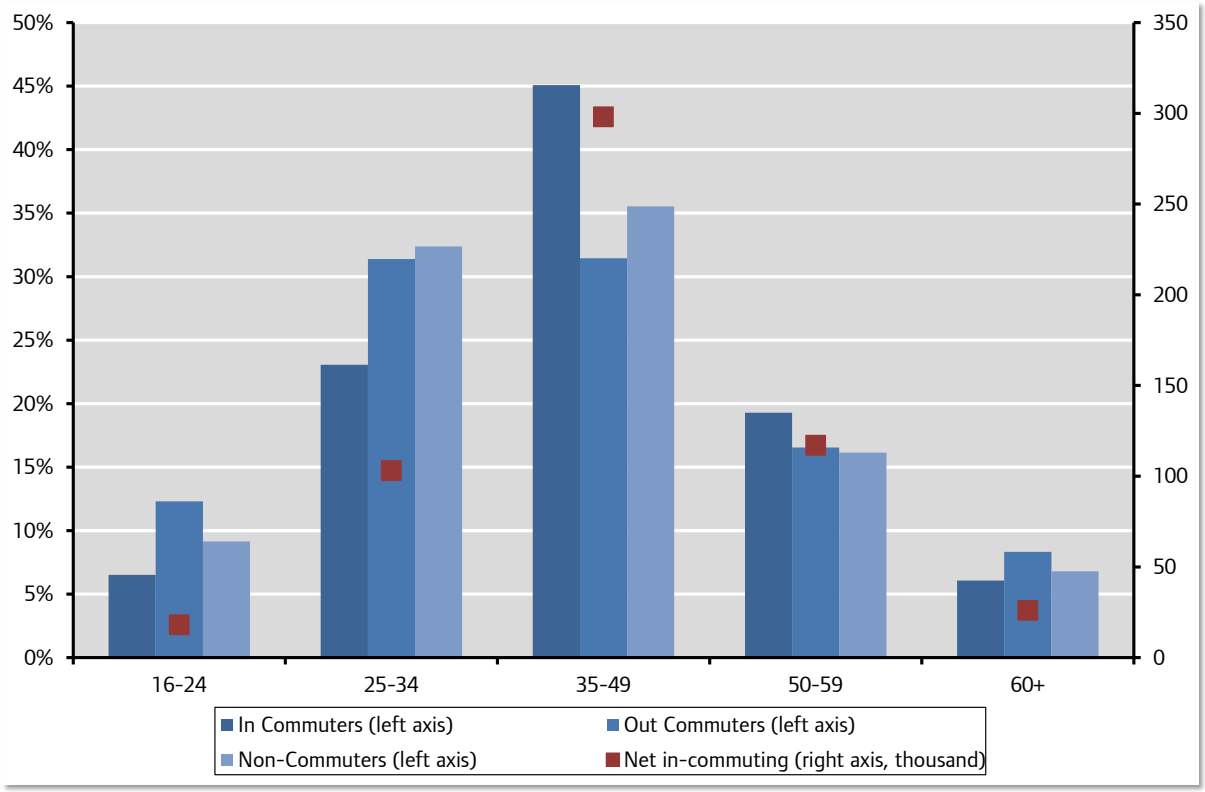
Source: Labour Force Survey (Oct-Dec 2013)

As was observed earlier, migration and commuting are closely linked. Someone who moves out of London into the South East or East for housing or other reasons – but who does not move away from their London-based job – will increase both the numbers out-migrating and the numbers in-commuting. Someone who commutes from London to an IT job in Reading but who then decides to move to Reading will reduce the numbers out-commuting and increase out-migration. Someone who commutes from Brighton but then moves to London will reduce the numbers in-commuting and increase the numbers in-migrating. Figure 7 from the migration section shows that London has a constant net outflow of migrants to other regions, the lion's share of which move to neighbouring regions. It is likely that some of those migrants become commuters, adding to the upward rise in in-commuting to London.

Composition of in and out commuting

Looking at the composition of in and out commuters and non-commuters (ie, Londoners who work in London) helps us understand the links between London and the surrounding regions. Figure 16 shows the age profile of these three groups.

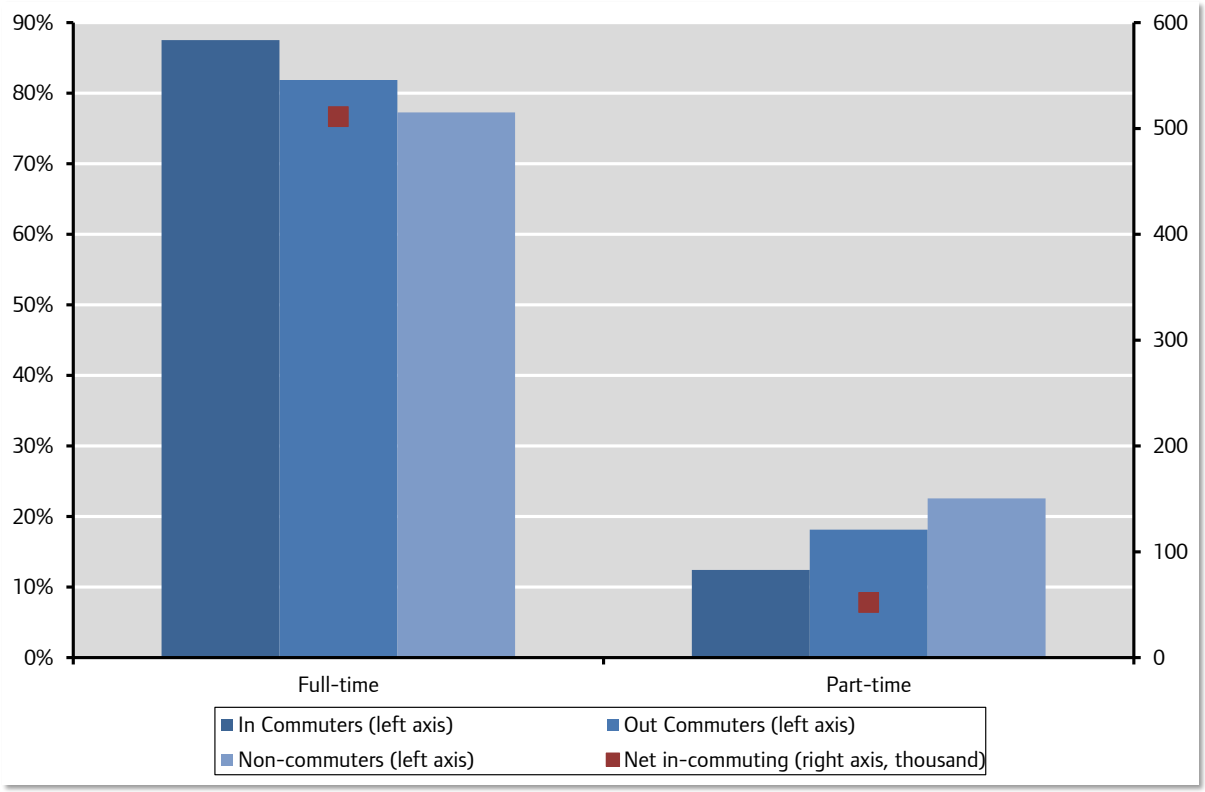
Figure 16: Age profile of commuters and non-commuters



Source: Labour Force Survey (Oct-Dec 2013)

In-commuters tend to be older than the other two groups; perhaps not surprisingly, the most represented group of in-commuters is the 35-49 age group (45.1 per cent), followed by 25 to 34 year olds (23.1 per cent). If we look at the youngest of the working age groups shown in Figure 16, 12.3 per cent of out-commuters are 16 to 24 year olds, a higher share compared to the other two commuting statuses.

Figure 17: Part-time and full-time working by commuters and non-commuters

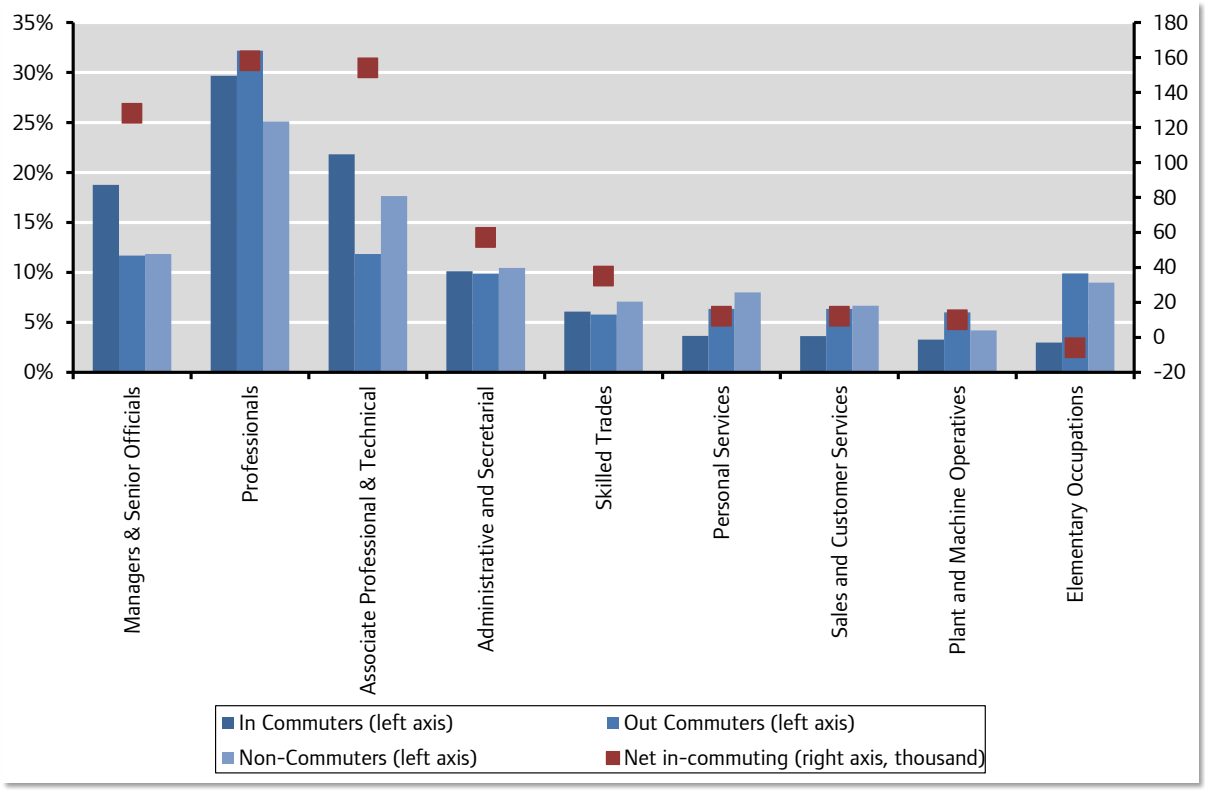


Source: Labour Force Survey (Oct-Dec 2013)
Note: part-time and full-time employment patterns are self-reported by the LFS respondents

As Figure 17 shows, commuters, particularly in-commuters, are less likely to work part-time than non-commuters. Only about one-in-eight in-commuters work part-time as compared to almost one-in-four non commuters. This trend is not surprising given that commuting involves financial and time costs (time spent commuting could otherwise be spent working, enjoying leisure or in unpaid work). Commuters have higher opportunity costs deriving from taking up part-time jobs, as compared to non-commuters. In other words, working part-time is less likely to be worthwhile for individuals commuting into or out of London than it is for people who both live and work in London.

Figure 18 shows the occupational profile of commuters and non-commuters.

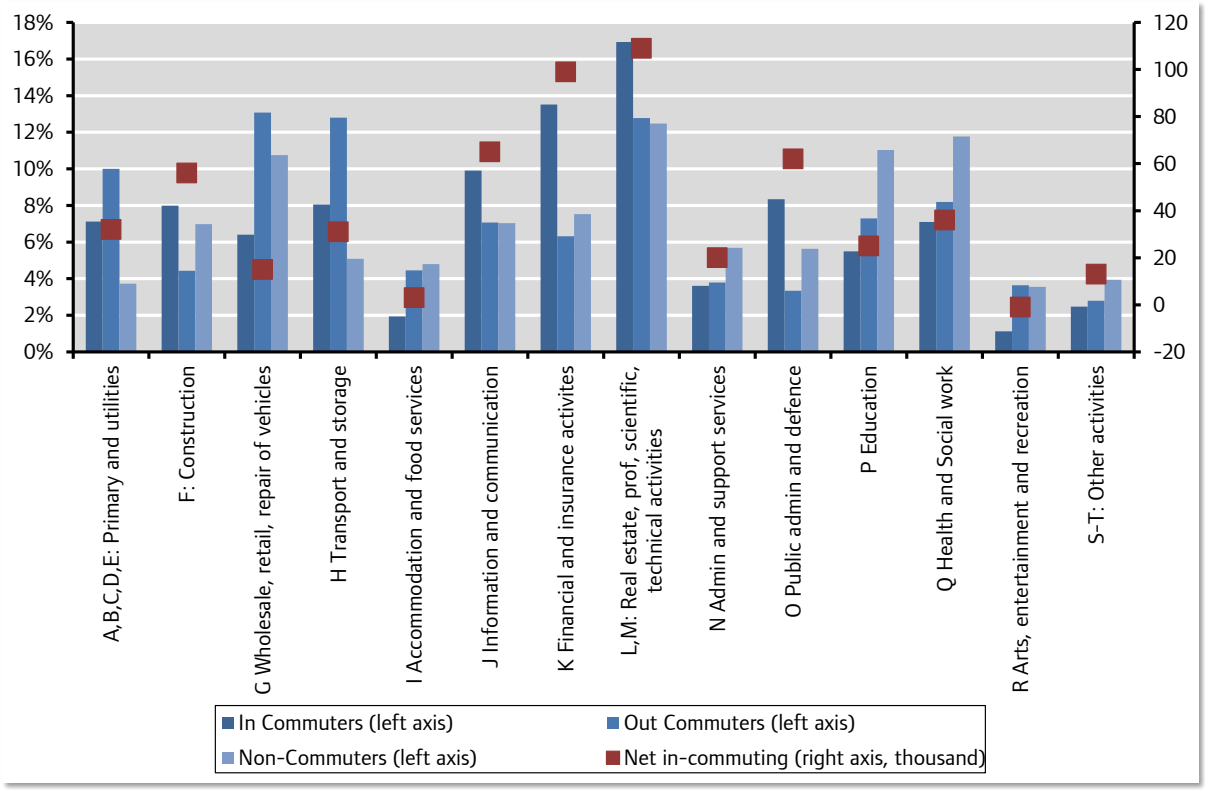
Figure 18: Occupation profile of commuters and non-commuters



Source: Labour Force Survey (Oct-Dec 2013)

In-commuters and, to a lesser extent, out-commuters are more likely to be in higher paid (see Appendix B), higher status occupations (eg, managerial and professional occupations) than non-commuters, possibly for the same reasons based on which commuters are more likely to take up full-time jobs rather than part-time jobs (ie, opportunity costs of commuting). About seven-in-ten in-commuters work in managerial, professional or technical occupations as compared to just over half of non-commuters and out-commuters. In-commuters are also less likely to be employed in relatively lower paid occupations, such as elementary occupations and sales and customer services roles. Finally, out-commuters (22.3 per cent) are slightly more likely to be in lower paid occupations as compared to non-commuters (19.8 per cent), in particular with respect to elementary occupations.

Figure 19: Sectoral composition of commuters and non-commuters



Source: Labour Force Survey (Oct-Dec 2013)
Note:

- *Primary and Utilities (A-E) include the following sectors: Agriculture, forestry and fishing (A); Mining and quarrying (B); Manufacturing (C); Electricity, gas, air conditioning supply (D); and Water Supply, sewerage, waste (E);*
- *Real estate, prof, scientific, technical activities (L,M) include the following sectors: Real estate activities (L); and Professional, scientific, technical activities (M);*
- *Other activities (S-T) include the following sectors: Other services activities (S); Household as employers (T); and Extraterritorial organisations (U).*

Figure 19 shows the sectoral composition of commuters and non-commuters. In line with the figures on the occupational composition of commuters and non-commuters, in-commuters are more likely than the other groups to work in one of the larger sectors for the London economy, such as financial services, information and communication, and real estate, professional, scientific and technical activities – sectors that also pay relatively higher in London as compared to the other sectors (see Appendix B). In fact, 40.4 per cent of in-commuters are employed in these industries. If we look at the primary and utilities (which in this instance includes manufacturing) and the construction sectors combined, perhaps surprisingly, the proportion of in-commuters (15.1 per cent) working in these sectors is not significantly different from that of out-commuters (14.4 per cent). However, non-commuters are less likely to be employed in these industries (10.7 per cent).

Contribution of commuters to the London economy

Data from the LFS suggest that in 2013 in-commuters to London accounted for 19.4 per cent of all workers employed in London, slightly up by 1.6 percentage point from 2001. Also according to LFS data from 2003 and 2008, the share of in-commuters in the total number of workers in London shows an increasing trend: up by 0.3 of a percentage point from 2003 to 2008 and by 0.9 of a percentage point from 2008 to 2013.

In order to understand the value of the contribution that commuters make to the London economy, we can look at the regional output figures, which are calculated by the ONS 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, by 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 out 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. This may even be an underestimate. This is because as compared to the average London worker, in-commuters are more likely to work in professional and managerial occupations and in the financial services sector, where London is a world leader. As a consequence, these types of roles in these sectors tend to be higher paid as compared to the others (see Appendix B). Hence, in-commuters may be more productive than the average London worker. If so, their contribution to the London economy will be higher than their share of employment and this would boost their estimated contribution to London's output above £59 billion. For example if we look at the "value" to the economy generated by commuters through earnings, as expected, higher value is generated by well-paid occupations which are also those with the highest share of commuters, in particular in the managerial and technical occupations (for details, see Appendix B).

Impact of commuting on the other UK regions

The London economy provides significant employment opportunities for workers resident in the other UK regions, in particular in the South East and East of England regions. In the previous paragraph, we have looked at the impact of commuting on the London economy. However, it is also important to estimate the impact that commuters might have on the economies of the other UK regions, in particular those with the highest share of commuters into London. In order to do so, we apply the method developed by Oxford Economic Forecasting (OEF)[30], which allows us to estimate the impact of commuters on demand for goods and services, or, in other words, on consumer spending (see Appendix D for more details). We use the estimates of the number of commuters from the 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]. Moreover, previous OEF calculations provide us with estimates of the proportion for each different commodity that is likely to be spent by workers near the workplace as compared to near their home. Therefore, we assume that 15 per cent of the commuters' spending is likely to be in the region of work, and 85 per cent in the region of residence. GLA Economics has estimated that spending by in-commuters in the region

[30] Corporation of London & Oxford Economic Forecasting (2004), London's Linkages with the Rest of the UK, May 2004, available at http://www.bipsolutions.com/docstore/pdf/7493.pdf [1st May 2014]
[31] BoE & NMG Consulting, 'Influences on household spending: evidence from the 2012 NMG Consulting survey', 2012

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 about £1 billion in the region where they work. Again, the majority of the spend, £0.8 billion, is spent in the Greater South East.

Overall in-commuters account for just under a fifth of employment in London and contributed between £51 and £59 billion to the London economy in 2012. The contribution of out-commuters from London to the Greater South East is estimated to be around £15.7 billion in 2012.

Conclusions on commuting

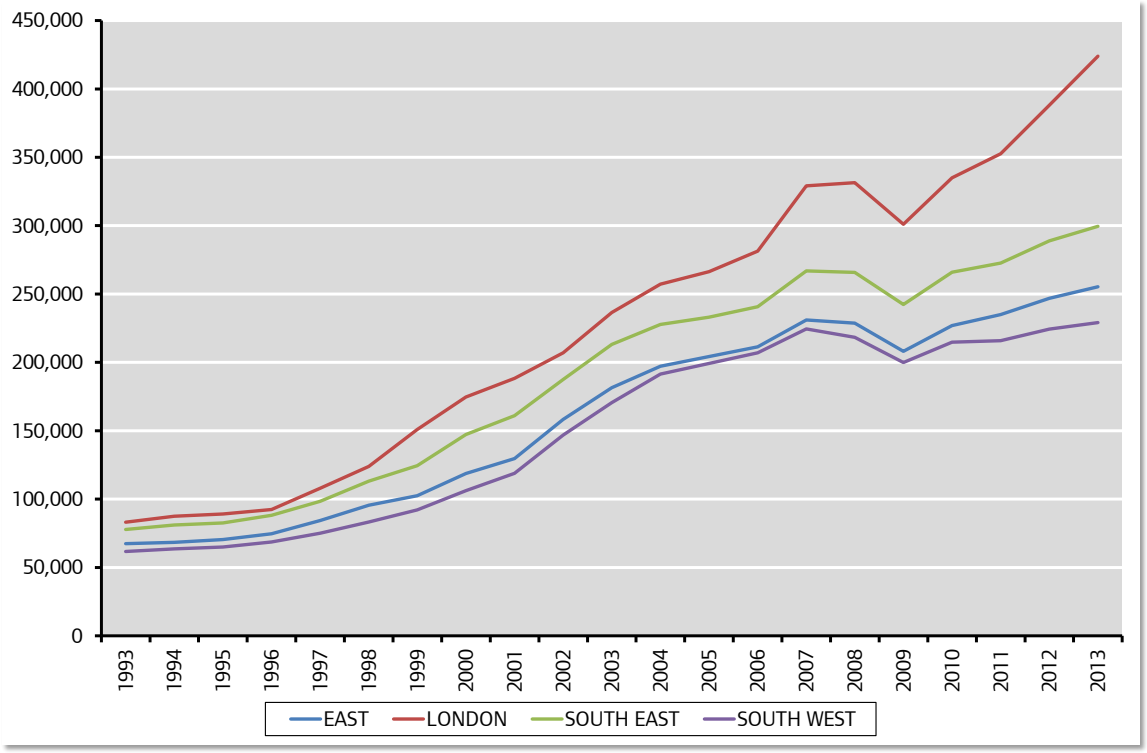
Commuting integrates London's housing and labour markets with those in the other UK regions, in particular with those in the Greater South East. In the last 16 years or so, commuting into London has been increasing, as has out-commuting - which has, however, seen a decrease in the last couple of years, after the 2010 peak. Nonetheless, the data show a degree of integration between the regions, which has strengthened the economic links between London and the surrounding regions. In-commuters, relative to non-commuters, are more likely to work full-time, be in professional or managerial jobs, and to work in one of the larger sectors of the London economy, such as the financial services sector. Hence, London provides high quality opportunities to these in-commuters benefitting principally the South East and East of England regions. Consistent with this, past research has identified a positive relationship between the proportion of in-commuters employed in a sector and the average productivity of workers in that sector, so higher commuting is associated with higher productivity[32]. Overall in-commuters account for just under a fifth of employment located in London and in 2012 they contributed, as a conservative estimate, between £51 and £59 billion to the London economy. In addition, around one-in-ten of workers resident in both the South East and East of England regions rely on the London economy for employment. The contribution of commuters to the local economies can also be proxied by consumer spending. GLA Economics estimates based on OEF assumptions suggest that commuting flows to and from London lead to consumer spending of £15.7 billion in the South East and East of England to the benefit of these regions and those beyond which export goods and services into these two regions.

[32] London Development Agency (2003), Understanding London's sectors, November 2003.

Appendix A

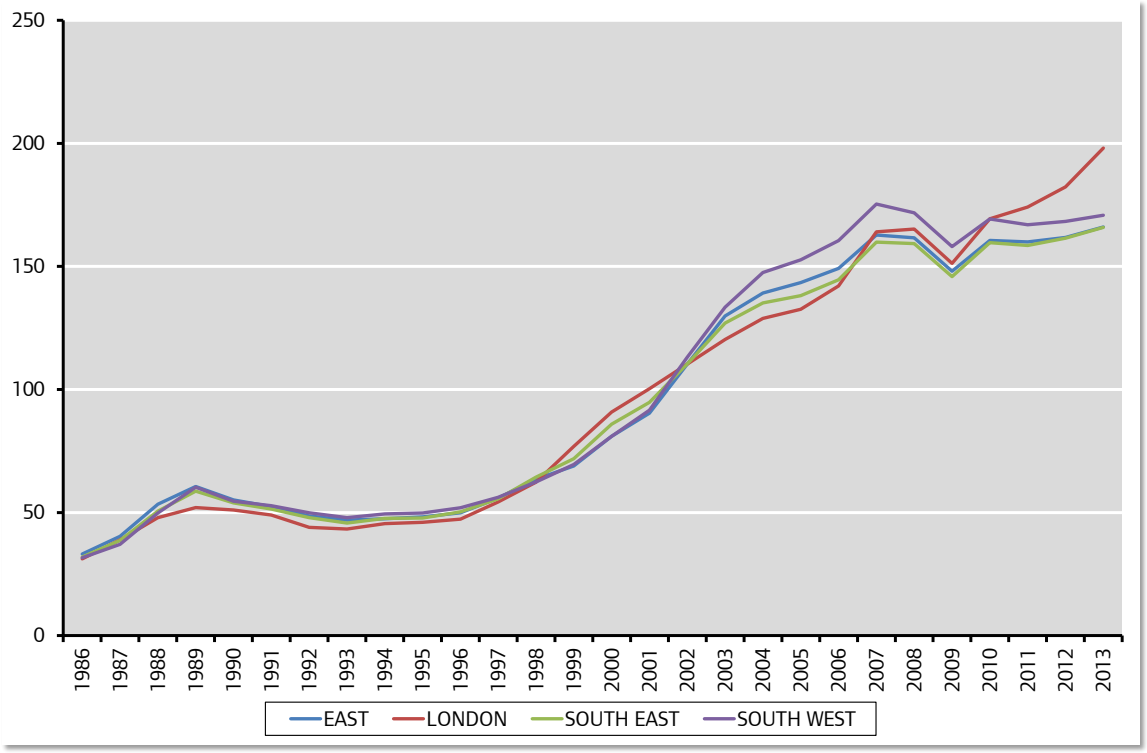
House price charts

Figure A1: Mix-adjusted average house prices



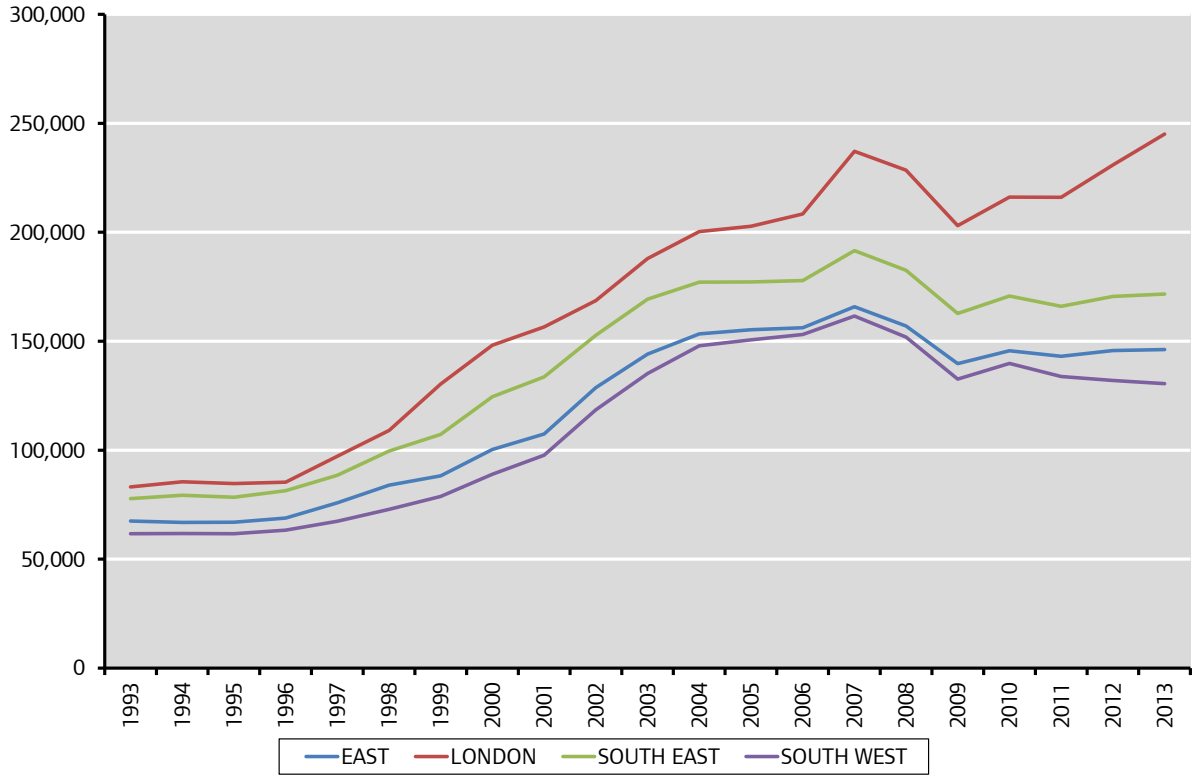
Source: Housing Market, Table 25 (ONS)

Figure A2: Mix-adjusted house price index, Q1 2002=100



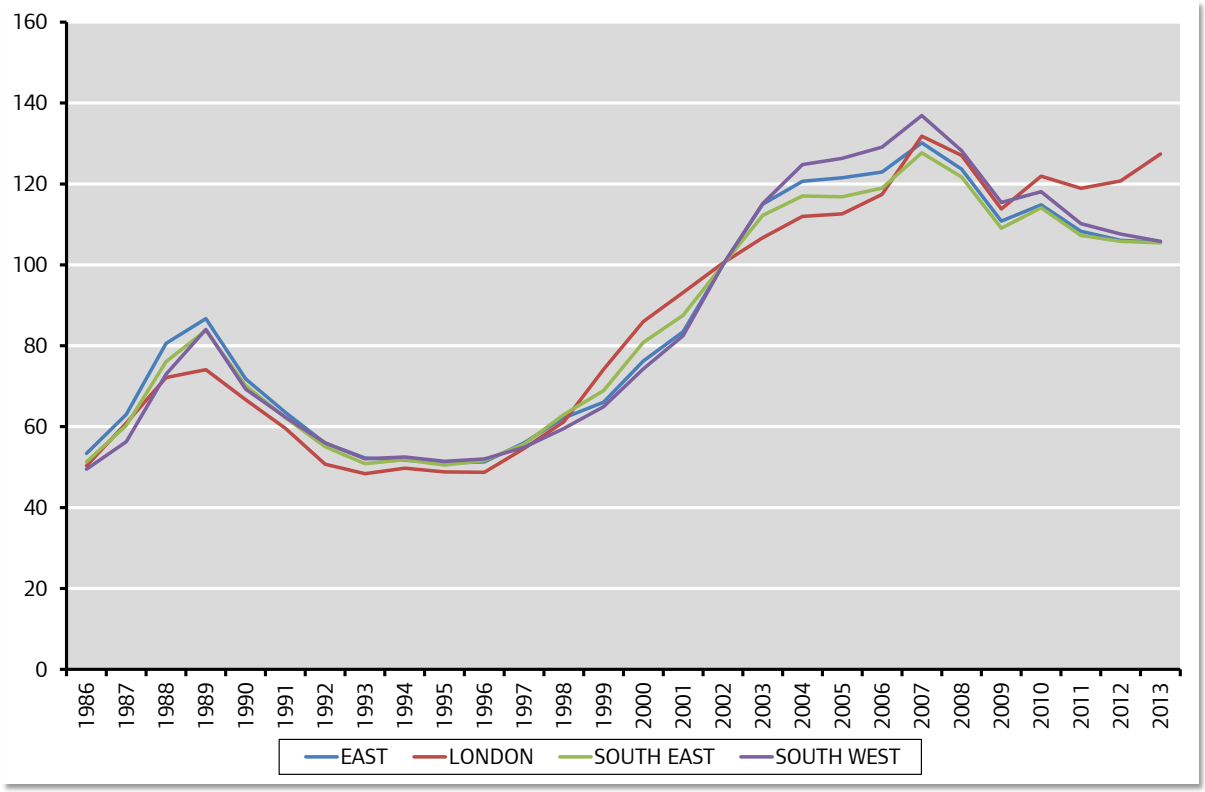
Source: Housing Market, Table 33 (ONS)

Figure A3: Mix-adjusted average house prices deflated by RPIX



Source: Housing Market, Table 25 (ONS); Retail Price Index Excluding Mortgage Interest Payments (ONS); GLA Economics calculations

Figure A4: Mix-adjusted house price index deflated by RPIX (2002=100)

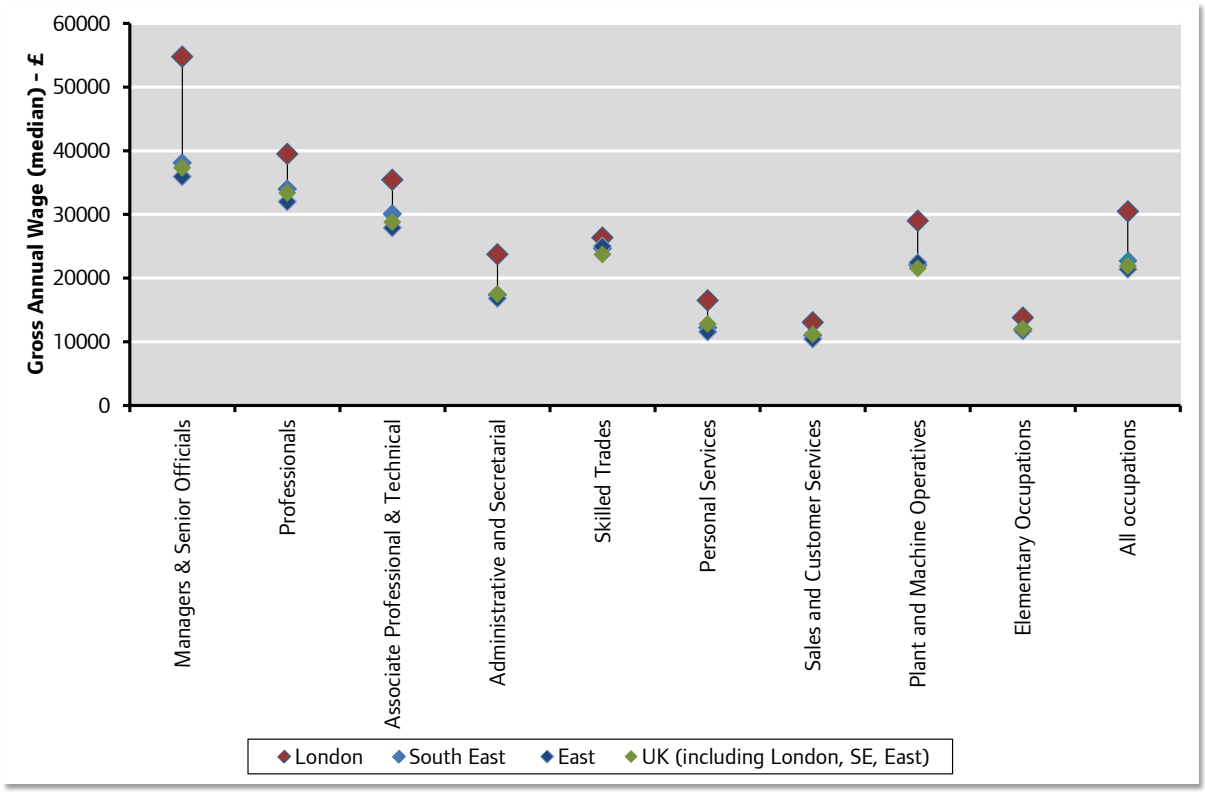


Source: Housing Market, Table 33 (ONS); Retail Price Index Excluding Mortgage Interest Payments (ONS); GLA Economics calculations

Appendix B

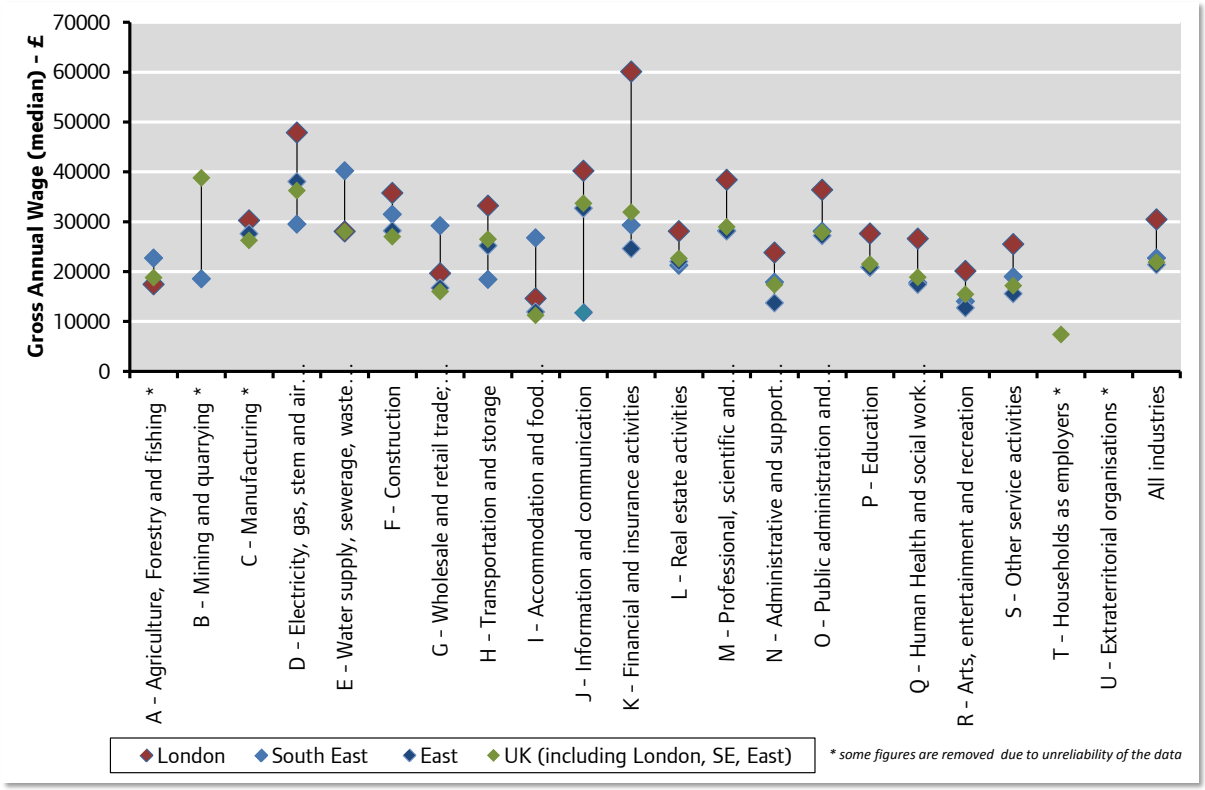
Figures B1 and B2 report the Gross Annual Wage (median) per relevant regions by occupation and by sector. These charts should be used as a reference when interpreting the data on commuting presented in this chapter. In particular, it is interesting to note that commuting into London is linked to occupations and industries which are relatively higher paid in London as compared to both the other sectors/occupations in London and all sectors/occupations in the other regions and in the whole of the UK.

Figure B1: Gross Annual Wage by occupation (median), 2013



Source: ONS, Annual Survey of Hours and Earnings (ASHE), 2013 provisional results

Figure B2: Gross Annual Wage by sector (median), 2013



Source: ONS, Annual Survey of Hours and Earnings (ASHE), 2013 provisional results

Appendix C

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 C1: 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 C2 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 C2: 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:

$$(in\ commuters - out\ commuters) = net\ commuting$$

$$(846{,}200 - 278{,}900) = 567{,}300$$

$$\left(\frac{in\ commuters - net\ commuters}{net\ commuters}\right) = \%\ difference\ in\ commuters - net\ commuting$$

$$\left(\frac{846{,}200 - 567{,}300}{567{,}300}\right) = 49\%$$

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

$$(\%\ difference\ in\ commuters - net\ commuting \times Total\ GVA\ London, net\ commuting) = (49\% \times 34{,}295) = 16{,}863$$

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 C3 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 C3: 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:

$$(in\ commuters\ as\ share\ of\ London\ workers \times Tot\ GVA\ London, workplace\ based) = in\ commuters\ contribution$$

$$(19\% \times 309{,}339) = 58{,}774$$

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

$$(net\ commuting\ as\ share\ of\ London\ workers \times Tot\ GVA\ London, workplace\ based) = net\ commuting\ contribution$$

$$(12.7\% \times 309{,}339) = 39{,}401$$

Appendix D

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)[33]. 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 survey on 2012 Household spending[34].

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" (*ibidem*, p. 35).

OEF combines 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, it calculates proportions of spending in the regions of work and residence, as follows:

- 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 to go on spending. With regard to income, we use 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 spending, as suggested by the results of the 2012 Household Survey conducted by the BoE and NMS Consulting.

Table D1 reports the parameters and the estimates of commuters spending in London and in the rest of the UK in 2012.

[33] See footnote 30.
[34] BoE & NMG Consulting, 'Influences on household spending: evidence from the 2012 NMG Consulting survey', 2012

Table D1: Parameters and estimates of commuters spending in London and in the other UK regions (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 (15%)	6.4 (100%)
Total	1,124,500	na		na	8.3 (32%)	17.4 (67%)	25.7 (100%)

Source: ONS, Labour Force Survey (LFS), Oct-Dec 2012; ONS, Family spending survey, 2010-2012, and ONS Regional Accounts, 2013; OEF, 2004, 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:

$$average\ spending\ per\ person\ per\ year \times number\ of\ in\ commuters = total\ spending\ by\ in\ commuters$$

$$23{,}000 \times 846{,}200 = 19{,}343{,}000{,}000$$

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

$$in\ commuters\ spending\ in\ London = total\ spending\ by\ in\ commuters \times 15\% \quad and$$

$$in\ commuters\ spending\ in\ the\ rest\ of\ the\ UK = total\ spending\ by\ in\ commuters \times 85\%$$

$$19{,}343{,}000{,}000 \times 15\% = 2{,}901{,}000{,}000 \quad and$$

$$19{,}343{,}000{,}000 \times 85\% = 16{,}442{,}000{,}000$$

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 D2 reports these estimates.

Table D2: 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	na		17.4	15.7

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 calculations.

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:

$$(in\ commuters\ spending\ in\ the\ rest\ of\ the\ UK \times share\ of\ in\ commuters\ coming from\ GSE) + (out\ commuters\ spending\ in\ the\ rest\ of\ the\ UK \times share\ of\ out\ commuters\ to\ GSE) = contribution\ to\ the\ economies\ of\ the\ GSE$$

$$(16.4 \times 91\%) + (1 \times 81\%) = 15.7$$

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