Profile of migrant labour in the South East of England: skills, industry and occupation

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Table of contents

Table of contents ................................................................................................................. 2
Executive Summary .................................................................................................................. 3
1. Introduction ......................................................................................................................... 6
2. National context of work related migration ...................................................................... 7
   2.1 Labour market impacts ................................................................................................ 8
   2.2 Fiscal impacts ................................................................................................................ 10
3. Skills, industry and occupational profile of migrants in the South East ............................... 13
   3.1 Skills profile of the resident population (stock measure) ........................................... 13
   3.2 Industry of employment – resident population (stock measure) ............................... 15
   3.3 Occupational distribution of resident population (stock measure) ........................... 19
   3.4 Skills shortage .............................................................................................................. 22
   4.1 Industry profile of CoS visa applicants ...................................................................... 25
   4.2 Occupational profile CoS visa applicants .................................................................. 31
5. Conclusion ......................................................................................................................... 33
Bibliography ............................................................................................................................ 34
Appendix 1 Sectoral and occupational employment in the South East compared to England .... 36
Appendix 2 Hard to fill vacancies ........................................................................................... 37
Appendix 3 Shortage Occupation List .................................................................................... 39
Appendix 4 Certificate of Sponsorship (Industry) by LEPs ................................................. 40
Appendix 5 Certificate of Sponsorship (Occupation) by LEPs ............................................. 45
Appendix 6 Census 2011: UK, EU and non-EU born resident population .............................. 50
Executive Summary

Remit and context of the research
This report was commissioned by the South East Strategic Partnership for Migration (SESPM) to provide local authorities and regional bodies in the South East with:

- An update on recent UK research on international migration and impact on labour markets;
- A follow-up on earlier research for the SESPDM on type of jobs and industries migrants are employed in;
- A comparison of EU and non-EU labour migration in the South East; and,
- An assessment of the significance of migrant labour in different industries and occupations with particular reference to the UK’s official occupation shortage list.

The report maps the employment profile of international migrants by industry of employment and occupation.

HEADLINE FINDINGS

1. Net work-related migration to the UK declined and fluctuated after 2008...
Since 2008 there have been shorter periods of positive and negative net work-related migration. The UK’s prolonged period of economic recession and anaemic growth is a likely explanation for this. There are some signs that work-related migration has accelerated again after 2012, but still remains below the high mid 2000 levels.

2. …and the data show substantial compositional change in origin of work-related migrants.
Net work-related non-EU migration declined after 2004 and has remained consistently negative since 2008. IPS data suggests that more non-EU residents left the UK for work reasons than arrived in the UK for work reasons. Since 2010 migration from the EU15 countries has increased substantially, while A8 migration was relatively stable at a lower level than pre-crisis.

3. Since 2001 EEA migrants are found to contribute more to the public purse than they withdraw or pay their way. However, overall fiscal impact of migration is low relative to GDP.
A younger profile and the temporary nature of much migration means that migrants, on average, consume less public services and are less likely to make claims on the tax and welfare provisions (Dustmann and Frattini 2013). Forecast by the Office of Budget Responsibility (OBR 2014) shows that UK public sector debt paths are contingent on the flow of international migrants – the lowest level of public sector debt is associated with the highest level of net migration; the highest level of debt is associated with no migration. Over the longer-term migration slows the overall aging profile of the UK population. For non-EEA migrants the outcomes are more mixed and alternative studies (Rowthorn 2014) demonstrate the sensitivity of these findings (both EEA and non-EEA) to a range of socio-economic and demographic characteristics.

4. EU15 and non-EU migrants provide substantial skills and educational inflow in the South East.
Census data shows that a greater proportion of EU15 and non-EU residents hold Level 4 or above qualifications compared to UK born residents. Compared to London and England outside London the skills inflow associated with non-EU migration is particularly high in the South East.

5. **Migrants in the South East are an important source of labour across a number of health, educational, hotels/restaurants and business related sectors with hard-to-fill vacancies, but also constitute a key source of labour in a number of smaller mining, service and manufacturing industries.**

A number of smaller (by absolute employment) industrial sectors in the South East are strongly reliant on migrant labour. In excess of 20% of the workforce in a number of oil, gas and mining divisions; private household employment; and, manufacturing of fuels, medical equipment, clothing, chemicals, electronics and office machinery are not born in the UK. Many of these (such a manufacturing and business services) reported high levels of skills-related hard-to-fill vacancies. Others (such as wholesale/retail, hotels and restaurants, health and social work) report high non-skills related hard-to-fill vacancies.

6. **Some segmentation of types of job filled by migrants, particularly EU accession country residents in the South East; and health, research and science related professionals.**

Most migrants work as functional managers, elementary personal services or cleaning, and health care related services. There is only a weak correlation between the types of jobs UK born residents do and the types of jobs EU accession born resident do. Jobs performed by other migrant groups, however, correlate more closely with the types of jobs UK born residents do. A breakdown of jobs by migrant concentration shows that close to a 25% of health professionals and associate professionals are migrants. Similarly, more than 20% of research and science professionals and individuals in ICT occupations are migrants. In addition to filling a range of skilled and lower skilled jobs migrants are important to maintaining and developing the professional, business and information networks that support the South East’s ability to innovate and adjust to changing global trends.

7. **Migrants are a key source of labour in a number of skilled shortage occupations in health care, engineering, social/natural sciences and IT and software.**

Many of the occupations on the UK’s official shortage list have a high concentration of non-EU, EU15 and EU accession country nationals. In excess of 25% of medical radiologists, civil engineers, medical practitioners, dentistry and nursing are migrants. The vital contribution that migrants make to the National Health Service is not only evident from concentration in shortage occupations, but generally across migrant’s employment profile.

8. **The South East accounts for a greater than proportional share of non-EEA/Certificate of Sponsorship (CoS) visa applications...**

The South East accounts for a quarter of CoS visa applications since 2008. This is particularly the case for the Thames Valley Berkshire LEP, Enterprise M3 LEP, South East Midlands LEP and the Solent LEP. However, within these areas there is a particular concentration in areas adjoining to the west of London and to a lesser extent along the M4/M3 corridors.
9. ...reflecting the strength of the knowledge intensive and urban economies of the areas along with engineering and medical professionals.

The majority of visa applications relate to employment in computer programming and consultancy; other professional, scientific and technical activities; and, information and communication. In terms of occupations CoS applications across the South East are dominated by occupations relating to information technology (IT and software professionals; Programmers and software development professionals; IT business analysts, architects and systems designers; Technicians, IT operations) and to a lesser extent managers in ICT and marketing and sales.

10. Non-EEA migration instrumental in alleviating skills shortage in the South East.

Based on 2013/14 CoS data some 45% of CoS visa applications to the South East relate to the official shortage list. CoS visa applications relating to the shortage list are particularly high for Buckinghamshire Thames Valley LEP (58%) and the South East LEP (59%). Key shortage occupations applied for by migrants are ‘IT business analysts, architects and systems designers’, ‘Programmers and software development professionals’ and ‘Artists’. Non-EEA/CoS migration, along with EU migration (Point 7), is thus instrumental in alleviating skills shortage in the South East.

11. Industry of employment profile of non-EEA/CoS applicants across LEPs in the South East differs...

Across the Local Economic Partnerships in the region the Oxfordshire City Region LEP (‘Employment activities’ and ‘Education’), South East LEP (‘Create arts and entertainment’, ‘Education’ and ‘Human health activities’) and Coast to Capital LEP (‘Sports activities, amusement and recreation’ and ‘Other manufacturing’) differ from the remaining LEPs and the South East region in terms of industry of employment. For the South East Region overall the key non-EEA recruiting industrial sections are ‘Information and communication’ and ‘Professional, scientific and technical activities’ (in particular the ‘Other professional, scientific etc. division).

12. ...as does the occupational profile of non-EEA/CoS applicants.

The dominance of ‘Information and Communication’ professionals (multiple SOC classifications) amongst CoS visa applicants across a number of LEPs ensures a high correlation between the general pattern South East and a number of Local Economic Partnerships. However, as with industry of employment three LEPs differ from this general assessment: Oxfordshire City Region (‘Researchers’, ‘Finance and investment’ and ‘Natural and social scientist’) South East LEP (‘Nurses’, ‘Artists’ and ‘Medical practitioners’) and Coast to Capital LEP (‘Sports and fitness occupations’, ‘Managers in marketing and sales’, ‘Physicist, geologists and meteorologists’, ‘Engineers’ and Engineering professionals’.)
1. Introduction

The UK has experienced a period of high net migration since the late 1990s. This follows a period of low positive net migration 1990-98 and negative net migration in the period 1960-1980 (Devlin et al 2014). While significant geopolitical events contributed to the changes in migration trends (such as the break-up of the Soviet Union or EU enlargement) there have also been a number of legislative changes determining migration trends. For instance, in the late 1990s immigration rules for non-EEA migrants became less restrictive. In 2008 a (5-tiered) point-based system (PBS) was phased-in prioritising high-skilled and skilled worker migration. An official Shortage Occupation List accompanies Tier 2 migration. Since its inception in 2008 the skill-level requirement under Tier 2 has increased (MAC 2013).

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- A follow-up on earlier research for the SESP on type of jobs and industries migrants are employed in;
- A comparison of EU and non-EU labour migration in the South East; and,
- An assessment of the significance of migrant labour in different industries and occupations with particular reference to the UK’s official occupation shortage list.

The report utilises Census 2011 data, Annual Population Survey (APS) data and Certificate of Sponsorship data to map industry, occupations and skills for UK, EU15, Accession EU and non-EU residents.

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This report draws extensively on the Annual Population Survey data obtained via special licence and Certificate of Sponsorship survey. The authors would like to acknowledge the assistance in data provision by the Office of National Statistics’ Social Survey Division and UK Data Archive for special license access. The authors also wish to acknowledge the assistance of the Home Office’s Performance Unit in provision of Certificate of Sponsorship data.
2. National context of work related migration
The impacts of migration are complex and controversial in public and policy discourse. Migration routinely figures as an important topic for UK citizens and in EU elections. A number of geopolitical (EU expansion) and administrative changes (easing of visa requirements in 1998; then skills-biased migration rules (BPS) in 2008) over the past 15 years have coincided with a higher average level of net migration to the UK. This section reviews work related migration to the UK since 2003.

Figure 1 shows all work related migration (definite job or looking for a job) since 2003. Until early 2008 net work-related migration remained consistently positive, but has fluctuated since the onset of the financial crisis.

The overall trend does, however, disguise some compositional changes within migration flows. Figure 2 summarises net work-related migration for EU15, EU8, EU2 and non-EU nationals since 2003.
Figure 2 shows that EU8 migration recovered rapidly following 2008, but has remained below pre-crisis levels. Bulgarian and Romanian migration shows an increase in the period 2012-13 (transitional controls remained in place until end 2013). The largest changes are observed in the EU15 and non-EU groups.

Figure 2 also shows that migration from the EU15 countries has increased since 2011 – reflecting the better performance of the UK economy vis-à-vis a number of Mediterranean economies. Net work-related migration for non-EU nationals, on the other hand, has been negative since 2008. While the change in trend coincides with the introduction of the PBS it should be noted that work-related non-EEA migration began to decrease in 2004. Notably, while work-related non-EU migration declined, migration for study purposes increased after 2008 so that overall net non-EU migration has shown less change.2

Figure 3 summarises the top 10 nationalities issued with work-related visas in 2012. It is notable that 5 out 10 are countries with a standard of living comparable to the UK’s.

2.1 Labour market impacts
International migrants constitute an important source of labour across a range of industries and occupations, with some variation in types of migrants filling different jobs. Using Quarterly Labour Force Survey data (LFS) Nygaard (2011) shows the relative concentration of international migrants by ethnicity. Asian migrants are concentrated in distribution, hotels and restaurants (and to a

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2 Trends are based on IPS and LTIM statistics until 2012. For non-EEA migrants there was little change in the numbers in the different categories between 2012 and 2013 (ONS 2014).
smaller extent professional employment) whereas ethnic black migrants are concentrated in public administration, education and health as well as personal services and elementary employment. White and white mixed migrants are relatively concentrated in banking, finance and insurance. Using Annual Population Survey (APS) data Nygaard et al (2013) shows the concentration of A2 migrants in the construction industry, but also real estate and business services and hotels and restaurants.

Using Certificate of Sponsorship (CoS) data Worcester Research (2012) identifies a number of sectors where non-EEA migrants constitute an important source of labour supply in the SE (South East) with some variation in these sectors across the LEPs. The report also identified some sectors where indigenous labour supply might potentially be more readily available. The three largest employment sectors were: software professionals, nurses and care assistants & home carers.

The literature on labour market impacts of international migration tends to focus on impacts on wages, wage distribution, and indigenous employment and indigenous unemployment levels. Box 1 summarises literature by the Migration Advisory Committee (MAC 2012).

**Box 1 – Regular migration and labour market impacts**

This box is largely reproduced from Nygaard and Francis-Brophy (2013). It summarises key findings from the literature overview on labour market impacts from migration in *The Analysis of the Impacts of Migration* (MAC 2012). The MAC report reviews the impact of regular migration on average wages, wage distributions, employment, unemployment and native mobility.

- **Average wages**: Most UK studies find only a negligible impact on average wages levels from regular migration. Average impacts are estimated in the region of +/- £2 per annum.
- **Wage distribution**: The evidence suggests that migration increases wages at the higher end and lowers wages marginally at the lower end of the distribution. Wages were found to decrease by some £8 to £15 per annum in semi-skilled and unskilled occupations (Nickell and Saleheen 2008). Some evidence that the impact at the lower end of the distribution particularly affects the wages of other migrants, rather than native British workers (Manacorda et al 2006).
- **Employment rates**: Much of the literature surveyed finds little or no impact on the employment rates of native British workers. The MAC report finds some displacement of native workers during economic downturns.
- **Unemployment rates**: Little evidence that A8 migration has affected native British unemployment rates, though there is some tentative evidence that overall foreign-born migration is associated with a minor increase in unemployment amongst natives with intermediate qualifications (Dustmann et al 2005).

In a report for the Home Office/Department of Business, Innovation and Skills, Devlin et al (2014) further stress the cyclicality and temporary nature of labour market impacts from non-EU migration. This report argues that labour markets in the UK appear to adjust well to increases in migration during periods of growth or good economic conditions, but that adjustment might be longer during
downturns or recessions. In the latter case short-term negative impacts are more likely.³ Devlin et al (2014) re-estimates the MAC 2012 results over the longer period 1975-2012 in order to assess the impact of cyclicality (especially the period 2009-10). The study confirms the original MAC finding (i.e. a negative association between non-EU migration and native employment levels) even over the longer period, but finds that the effect disappears when excluding the period 2009-2010.⁴ This suggests that the impact is short-term and linked to the recession. When estimating the MAC-model on unemployment levels no effect is found. If and where displacement takes place examining unemployment alone may therefore be insufficient as individuals may be displaced from the labour force altogether – i.e. become inactive. Devlin et al (2014) otherwise find that the MAC 2012 results are robust with respect to the definition of migrants and the exclusion of London.

Key conclusions from the recent literature therefore are:

- Labour market impacts of international migration depends on the skills composition of migrants (skilled and low-skilled) vis-à-vis the native population; social, economic and geographic conditions; and, the speed with which markets adjusts to labour inflows.
- The speed of adjustment is found to differ over the business cycle (within country) and the degree of regulation (between countries).
- There is some evidence of a cyclical labour market impacts from non-EU migration. Non-EU migrants are tentatively more likely to compete with UK-born labour during an economic downturn than in an economic upturn. Importantly, any labour markets are found to adjust over the medium to longer term so that potential impacts appear to disappear over a 5-year period.
- EU migration is not associated with average impacts on UK-born employment or unemployment levels. Two recent studies (MAC 2012, Devlin et al 2014) find some evidence of displacement of native labour from non-EEA migration during the recent recession period.

2.2 Fiscal impacts

The propensity of migrants to work, pay tax and demands on the UK welfare system are key determinant of the fiscal impact of migrants in the UK. Three recent studies have focused on the fiscal impact of migration: Dustmann and Frattini (2013), Migration Watch (2014) and Rowthorn (2014).

Dustmann and Frattini (2013) identify individuals’ contribution (taxes, duties etc.) to public (government) revenues and individual’s share of different aspects of government expenditure (benefits, cost of public services etc.). Where contributions exceed withdrawals there is a net benefit to UK fiscal position. Estimates are presented on an average cost basis and a marginal cost basis. Broadly, the average cost basis attributes total cost of public services relative to the population proportions of UK, EEA and non-EEA migrants. The marginal cost basis attempts to attribute only such costs that are additional due to migration (for instance defence expenditure is independent of the level of migration). For migration over the period 2001-2011 Dustmann and Frattini find that EEA

³ This was a joint report for the Home Office and Department for Business, Innovation and Skills.
⁴ While findings for EU migrants are statistically insignificant, the coefficients for EU and non-EU migrants are similar. The MAC (2013) report cannot entirely reject that the impact of EU migration is similar to non-EU migration.
and non-EEA migrants generated a fiscal surplus. On an average cost basis the contribution to UK purse was 0.2% and 0.03% of GDP (£21.5bn and £2.9bn) for EEA and non EEA migrants, respectively. Results for average and marginal contributions are summarised in Table 1. Table 1 also contains adjustments to the Dustmann and Frattini results by Migration Watch (2014) and Rowthorn (2014). The table is extracted from Rowthorn (2014).

**Table 1 Net fiscal contribution of recent international migration (2001-2011), % of GDP**

<table>
<thead>
<tr>
<th></th>
<th>Average cost basis</th>
<th>Marginal cost basis</th>
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<tbody>
<tr>
<td></td>
<td>EEA</td>
<td>Non EEA</td>
</tr>
<tr>
<td>Dustmann &amp; Frattini</td>
<td>0.20</td>
<td>0.03</td>
</tr>
<tr>
<td>Migration Watch</td>
<td>-0.16</td>
<td>-0.24</td>
</tr>
<tr>
<td>Rowthorn</td>
<td>-0.00</td>
<td>-0.27</td>
</tr>
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Source: Rowthorn (2014).

Given the different assumptions regarding public expenditure the fiscal contribution of international migrants on marginal cost basis is more favourable to migration. These are cumulative effects over the period 2001-2011. For individual years EEA fiscal contribution is consistently positive (average and marginal basis). Non EEA fiscal contribution is negative in the period 2008-2011 (average cost basis), but otherwise positive. These positive results are driven by the high employment rate of EEA (75%) migrants; the lower number of EEA dependents relative to non-EEA dependents; a younger age profile of both migrants groups; and, the higher proportion of both migrant groups with university degrees and lower proportion of low education (no schooling beyond age 17).

The Migration Watch (2014) study argues that the Dustmann and Frattini assumptions overestimate government revenue from migrants (income tax, national insurance, VAT, indirect taxes as well as various business and other taxes) and underestimate demand on tax credits and benefits. Adjusting these elements of the Dustmann and Frattini estimates the result is a consistently negative fiscal contribution from international migration (average and marginal cost basis).

Rowthorn (2014) includes elements of the Migration Watch critique (though not income tax and debt interest) and also adjusts for native labour displacement and share of national debt. Displacement of labour is argued to affect the fiscal cost of the native population through lower incomes to the exchequer justifying a reassignment of part of the net revenue from recent migrants to the native population. Displacement effects are expected to weaken as the economy resumes growth. The results are shown in Table 1. Depending on cost basis the positive contribution found by Dustmann and Frattini is either reduced or removed. On an average cost basis EEA fiscal contribution is negligibly negative, whereas on a marginal cost basis the contribution is 0.09% of GDP. The financial crisis has a negative impact on fiscal contribution of both EEA and non EEA migrants. Unlike the Dustmann and Frattini results Rowthorn find non EEA fiscal contribution to be negative.

Demographics are an important determinant, and critique, of the outcomes in Table 1 and it is difficult to assess how aging will affect the fiscal impact over time. Where comparisons of benefits uptake and tax-credits are conducted the outcomes remain favourable for migrants (Dustmann and

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5 This displacement effect is related to the MAC study (MAC 2013) and Devlin et al (2014) discussed above.
Frattini 2013:28), but the study has been critiqued for its assumptions regarding tax credits and welfare provision demands.

The above studies examine fiscal impact of international migration to date. The Office of Budget Responsibility (OBR 2014) sets out different scenarios for the long-term fiscal effects of international migration (Figure 4).

![Figure 4 Public sector net debt projections for different migration scenarios](image)

*Source: OBR (2014).*

The OBR estimates address the effect of international migration on the ratio of residents of pensionable age to the working age population. Over the longer-term higher rates of migration are found to have a positive impact on the UK’s age structure, working age population and projected public sector debt. The key distinction between migrants and natives in the OBR analysis is the age structure – fertility rates, labour market participation rates and productivity rates are assumed the same. A younger profile means that international migration, on average, reduces the age profile of the population, resulting in lower public expenditure, and increases the working age population, resulting in higher revenues. Rowthorn (2014) stresses that a number of these assumptions may not be accurate – for instance, fertility rates of non-UK born residents are known to differ from that of the UK born population and that fiscal benefits may be overestimated.

The divergence in debt paths beyond 2030 is contingent on the flow of international migrants – the lowest level of public sector debt is associated with the highest level of net migration; the highest level of debt is associated with zero net migration (in each of the other scenarios international migration slows the overall aging profile of the UK population). However, the OBR point out that alternative policies (tax increases or spending reductions) or increased fertility rates would also improve the UK’s fiscal position and age structure. Moreover, Rowthorn (2014) questions whether the fiscal gain (less than 2% of GDP over the projection period) adequately compensates the environmental and social impacts of the associated population increases. These effects are not accounted for in the OBR’s projections (OBR 2014).
As with the Dustmann and Frattini research the OBR’s projections broadly find that migrants contribute more to the public purse than they withdraw. Critiques of these studies do, however, show the sensitivity of these findings to a range of socio-economic and demographic characteristics. For local authorities in the South East a key issue is also the extent to which any positive fiscal effects accrue at local and neighbourhood levels or at the national level. A key challenge for public policy is to ensure that the net positive contribution made by migrants is distributed appropriately across central and local government. Currently, many benefits accrue at central government/treasury level, whereas many costs is accrued at local government level.

3. Skills, industry and occupational profile of migrants in the South East

3.1 Skills profile of the resident population (stock measure)

Figure 5 and 6 summarise the skills profile for UK, EU15, EU Accession and non-EU residents in the South East, London and England outside London on census night 2011. Across each of these regions some 12.1%, 36.7% and 9.7% of the population was born outside the UK.6

From Figure 5 it is notable that for most of the categories the proportion of migrants with Level 4 qualifications (degree or higher) is greater than the equivalent share in the UK population. The exception here is migrants from the accession countries where the proportion in the South East and for the UK overall is on par with that of the UK born population. In accordance with entry restrictions (skilled migration criteria) the proportion of non-EU migrants with Level 4 qualifications is substantially above the equivalent share in the UK-born population in the UK overall and in the South East. Overall, the high share of non-EEA migrants is likely to, in part, reflect migration rule changes that increasingly favour high skilled migration.

At the other end of the spectrum, it is likely that the boundaries between what constitutes no qualifications and other qualifications can be blurred and can therefore be difficult to compare directly to the UK born population – difficulties in converting types of education/qualification to British norms is likely to exacerbate this. Comparing across the three migrant groups, only the share of no qualifications in the non-EU group in the South East is below the corresponding share in London and England. This pattern is repeated for EU accession migrants. Overall, census data suggests that the share of skilled migration is higher, especially for non-EU migration, in the South East than in England generally – but not necessarily when compared to London.

Figure 6 summarises the distribution of migrants and UK-born residents across the different skills classifications and gives an indication of overall contribution of migrants to skills composition in the South East, London and England outside London. The blue bar shows the percentage of UK born

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6 The non-UK born share of residents outside the South East and London is 9.1% (all shares based on 2011 Census data). The working age population born outside the UK is 14.8%, 43.5%, 12.2% and 11.5% for the SE, London, England outside London and England outside London and the South East (estimated from APS Oct 2012- Sept 2013).
residents in each of the skills categories. The importance of migrant labour to the London economy is clearly evident across each of the skills categories.

With respect to the South East, unskilled migration constitutes just fewer than 10% of the unskilled population in the South East – substantially less than in London, but the same as in England outside London.\(^7\) In comparison with the share of the population (working age population) born outside the UK migrants are thus under-represented in the low skilled category. For Level 1 and 2 qualifications the share of migrants in the South East is marginally lower (c. 2 percentage points), but increases to approximately 18% in the population with Level 4 qualifications – some 2/3s (two-thirds) of which is non-EU migrants. International migrants are thus over-represented in the high skilled category. While there are relatively small differences between the South East and England outside London for qualification levels 1-3, the share of migrants in the SE with Level 4 qualifications is greater.

### Figure 5 Level of qualification by country of birth and area of England

![Bar chart showing level of qualification by country of birth and area of England.](source)

Source: Census 2011, ONS

\(^7\) A caveat here is the extent to which overseas qualifications map onto British qualification norms.
3.2 Industry of employment – resident population (stock measure)

This section employs APS/LFS data to map the industry of employment of migrants across the South East. APS data is a representative survey of households in England and Wales that allows estimates of the share of migrants employed in different industrial sectors and occupations. Successive quarters of APS data were pooled to improve labour market details on migrants.

As shown in the ‘Skills profile’ section international migrants are an important source of skills and experiences that augment the skills profile of native labour and the ability of industries to adjust to domestic and international fluctuations in consumer demand. Moreover, business’ capacity to absorb innovation and benefit from the expansion of the technological and knowledge frontiers is linked to its ability to access knowledge networks, international collaborations and partnerships. UK regions differ with respect to the quantity and quality of the networks to which they belong and the ability to utilise such networks (Mahroum et al 2008) – transnational migrant networks and/or the hosting of foreign company branches can enhance a region’s ‘access capacity’ and ‘absorptive capacity’ (Mahroum et al 2008).

The Polynet study by Hall and Pain (2006 in Crampton et al 2010) found that the South East distinguished itself from other multi-nodal north-west European urban regions in terms of its integration in global-scale advanced business service networks with a functional polycentric global city region larger than the administrative South East. In part this was a result of the geographical

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8 CoS data is presented in Section 4.
proximity to the London agglomeration of domestic and international business (Hall and Pain 2006 in Crampton et al 2010). International migration thus enhances labour market flexibility and the ability of the economy to restructure (the UK literature generally finds little evidence of any crowding-out of UK born labour).

Structural labour market factors, such as the general availability of low-skilled workers due to high general levels of education and/or alternative sources of income available to domestic residents (welfare payments) (Düvell 2011), generate a market for the labour services of low skilled, and irregular, migrants. Rath (2002, in Vershinina and Rodionova 2011) argues that concentration in employment niches might generate migrant-specific capital that sustains niche economies. Figure 7 summarises the share of UK-born and non-UK born residents in the 15 largest industrial employment divisions (2 digit SIC).

**Figure 7 Industry of employment by 2-digit SIC code (1992) in the South East (%)**

Bars are arranged in descending order by total employment share in the South East. The first cluster of bars shows that some 12% of UK-born residents living in the South East were employed in ‘health and social work’ – the equivalent share for migrants was 15.7%. The green bars show migrant employment as a share of total employment within each industrial division. Thus some 16.8% (figures in bold) of all employees in ‘health and social work’ were migrants. For comparison some 14.8% of the working age population in the South East is born outside the UK (footnote 5).

The top 15 industrial divisions account for some 80% of employment. Within the 15 largest industrial divisions migrants constitute a particularly large source of labour in ‘health and social work’, ‘hotels and restaurants’, ‘computer and related activities’, ‘wholesale and commissioned trade’, ‘transport’ and ‘auxiliary transport (travel agencies)’. In addition to ‘health and social work’ migrants are thus particularly employed in a range of service industries. Notably, these are figures for all migrants – Nygaard et al. (2013) show employment shares for A2 migrants where concentration is substantially higher in the construction industry (above 20%).


Note: Distributions based on population-weighted data. All weights rebased to Oct 2012-Sept 2013 edition of APS. Industry of employment ordered by total employment share in the South East. Analysis is based on SIC1992 to enable pooling of APS survey results over a longer period. The authors refer readers to the note about sampling and variability in the introduction.
Figure A1.1 (in the appendix) compares the results in Figure 7 to the England average. The figure shows that a greater share of migrants in the South East are employed in ‘health and social work’ and ‘education’, but also that employment in most of the top 15 employment divisions in the South East is less reliant on migrant labour than in England. Notably the results for England include London. Given the high concentration of migrants in the capital it is likely that the differences in concentration are amplified by the London labour market. However, **while migrants are an important source of labour in the largest employment divisions, the reliance on migrants labour is generally greater in a number of smaller employment divisions**. The 15 industry divisions with the greatest concentration of migrant labour are shown in Figure 8.

**Figure 8 Sectoral concentrations of migrants South East**

![Sectoral Concentrations of Migrants South East](image)


*Note*: See Figure 7. Shaded bars are also part of Figure 7. The authors refer readers to the note about sampling and variability in the introduction.

Figure 8 shows that in a range of smaller employment divisions migrants are a key source of labour supply – ‘oil and gas extraction’, energy/mining more generally, a range of manufacturing industries (food/beverage), clothing, medical and optical equipment, chemical and chemical products, and a range office machinery/communication technology). Notably migrant concentration by CoB varies considerably with non-EU migrants residents dominating in ‘oil and gas extraction’ and ‘mining’; EU12 migrants are particularly prominent in ‘food and beverage manufacturing’ and ‘private household employment’; and EU15 migrants dominating in ‘leather and leather goods manufacturing’.

According to the 2013 Employer Skills Survey (UKCES 2014) skills related hard-to-fill vacancies have increased since 2011. Overall employers with vacancies report that just under a third (29%) of vacancies are classified as hard-to-fill (UKCES 2014). Hard-to-fill vacancies are particularly prevalent in: ‘agriculture’ (40%), ‘manufacturing’ (35%), ‘construction’ (34%), ‘transport and communication’ (33%), ‘business services’ (32%) and ‘community, social and other activities’ (35%). While on par with the average hard-to-fill rate ‘wholesale and retail’, ‘hotels and restaurants’, ‘public administration’ and ‘health and social work’ have higher than average incidences of non-skills related reasons for

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9 See Appendix 2 for hard-to-fill vacancies by industry and occupation.
hard-to-fill vacancies (UKCES 2014). Figure 7 and 8 show the importance of migrant labour supply in a number of these sectors.

Table 2 disaggregates sectoral employment patterns by country of birth. The penultimate row shows the combined employment in the top 15 industrial divisions. The final row shows the extent to which employment patterns amongst different migrant groups reflect the employment pattern in the UK-born population. Given the high share of total employment accounted for by the top 15 industrial divisions (79-83%) it is perhaps not surprising that the distributional correlations across sectors is high. Nevertheless, it is notable that the employment correlation for residents born in the EU accession countries is lower than that of the EU15 or the non-EU born residents. Industrial divisions are colour coded to Column 2 (UK-born employment share). Thus uncoloured cells are employment divisions not in the top 15 for non-UK born residents. This is summarised in column 1 where the number of stars reflect the amount of times each division is listed across the columns (4 stars means present in each of the columns; 1 star means only present in the UK born column).

<table>
<thead>
<tr>
<th>Rank</th>
<th>UK</th>
<th>EU15</th>
<th>Accession EU</th>
<th>Non-EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ****</td>
<td>85: Health, social work</td>
<td>11.7 %</td>
<td>85: Health, social work</td>
<td>13.9 %</td>
</tr>
<tr>
<td>2 ****</td>
<td>80: Education</td>
<td>10.7 %</td>
<td>74: Other business activities</td>
<td>13.2 %</td>
</tr>
<tr>
<td>3 ****</td>
<td>52: Retail trade (not motor vehicle) repairs</td>
<td>9.7%</td>
<td>80: Education</td>
<td>13.2%</td>
</tr>
<tr>
<td>4 ****</td>
<td>74: Other business activities</td>
<td>9.6%</td>
<td>55: Hotels &amp; restaurants</td>
<td>7.6%</td>
</tr>
<tr>
<td>5 ****</td>
<td>45: Construction</td>
<td>8.1%</td>
<td>52: Retail trade (not motor vehicle) repairs</td>
<td>6.7%</td>
</tr>
<tr>
<td>6 ****</td>
<td>75: Public adm., defence &amp; social security</td>
<td>7.1%</td>
<td>45: Construction</td>
<td>4.4%</td>
</tr>
<tr>
<td>7 ****</td>
<td>55: Hotels &amp; restaurants</td>
<td>3.8%</td>
<td>72: Computer &amp; related activities</td>
<td>4.1%</td>
</tr>
<tr>
<td>8 ****</td>
<td>92: Recreational, cultural &amp; sporting activity</td>
<td>3.3%</td>
<td>51: Wsale, commiss. trade (fee, contract)</td>
<td>3.0%</td>
</tr>
<tr>
<td>9 ****</td>
<td>72: Computer &amp; related activities</td>
<td>3.1%</td>
<td>75: Public adm., defence, social security</td>
<td>2.6%</td>
</tr>
<tr>
<td>10 ****</td>
<td>51: Wsale, commiss. trade (fee, contract)</td>
<td>2.3%</td>
<td>92: Recreational, cultural, sporting activity</td>
<td>2.6%</td>
</tr>
<tr>
<td>11 ***</td>
<td>64: Post, telecommunications</td>
<td>2.2%</td>
<td>64: Post, telecommunications</td>
<td>2.3%</td>
</tr>
<tr>
<td>12 ***</td>
<td>60: Transport by land, pipeline</td>
<td>1.8%</td>
<td>63: Aux transport activ., travel agents</td>
<td>2.3%</td>
</tr>
<tr>
<td>13 *</td>
<td>50: Sales of motor vehicles, parts, fuel etc.</td>
<td>1.8%</td>
<td>24: Chemicals, chemical products manufacturing</td>
<td>2.0%</td>
</tr>
<tr>
<td>14 ****</td>
<td>63:Aux transport activ., travel agents</td>
<td>1.8%</td>
<td>65: Financial intermed (not insur., pensn.)</td>
<td>1.6%</td>
</tr>
<tr>
<td>15 *</td>
<td>93: Other service activities</td>
<td>1.6%</td>
<td>67: Other financial (not insur., pensn.)</td>
<td>1.6%</td>
</tr>
<tr>
<td><strong>Top 15 %</strong></td>
<td><strong>78.6%</strong></td>
<td><strong>81.0%</strong></td>
<td><strong>80.7%</strong></td>
<td><strong>82.8%</strong></td>
</tr>
<tr>
<td><strong>Correl v UK</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>92.0%</strong></td>
<td><strong>80.0%</strong></td>
<td><strong>91.0%</strong></td>
</tr>
</tbody>
</table>

Source: APS, various.
Note: The authors refer readers to the note about sampling and variability in the introduction.
The table shows considerable similarities across the first 5 employment divisions, which account for close to 50% of employment within each of the CoB categories. However, financial services and chemical/chemical products manufacturing is a relatively more important sector of employment for EU15 born residents. Agriculture and food/beverage manufacturing are relatively more important for EU accession country nationals.

In part this is likely to reflect the Seasonal Agricultural Worker Scheme reserved for Bulgarian and Romanian migrants, and to a lesser extent the Sector-Based Scheme in food (meat, fish and mushroom processing) and beverage manufacturing. Medical precision and optical equipment manufacturing is also a relatively more important employment division for EU accession nationals. Like the EU15 group financial services is a relatively more important division of employment for non-EU born residents. Computer and related activities also figure more highly for EU15 and non-EU nationals than for UK born residents.

3.3 Occupational distribution of resident population (stock measure)
Figure 9 shows the occupational distribution (type of job) for UK and non-UK born residents by 3-digit occupational classification in the 15 largest occupational classes. Compared to the industrial division employment share the overall concentration for each occupational class is lower – some 6% of non-UK born residents are employed as functional managers; somewhat less than for UK-born residents (7%). The top 15 occupational classes account for some 50% of total employment. Migrants constitute some 11% of residents working as functional managers.

While migrants make-up over 10% of employees in a number of occupations they are particularly represented in ‘healthcare and related personal services’, ‘elementary personal service occupations’, ‘transport drivers and operatives’ and ‘information and communication technology’. Figure A1.2 shows that compared to the England average more residents in the South East (UK and non-UK born alike) are employed as ‘functional managers’ and ‘information and communication technology’. However, migrants are, as with employment in industrial division, less concentrated across the top 15 occupational classifications.

Figure 9 and Figure A1.2 show the concentration of migrants in the top 15 occupational classes (of total employment). However, (as with employment in industry division) the contribution of migrants is greater in a number of other occupations. The 15 occupational classifications with the greatest reliance on migrant labour are shown in Figure 10.
Figure 9: Occupational classifications by 3-digit SOC code (2002) in the South East (%)

Note: Distributions based on population-weighted data. All weights rebased to Oct 2012-Sept 2013 edition of APS. Industry of employment is ordered by total employment share in the South East. SOC2002 is used to enable pooling of APS survey results over a longer period of time. The authors refer readers to the note about sampling and variability in the introduction.

Figure 10: Occupational concentrations South East

Note: See Figure 8. Shaded bars are also part of Figure 11. The authors refer readers to the note about sampling and variability in the introduction.

In each of the occupations listed in Figure 10 migrants constitute close to a fifth or more of South East residents in these occupations. Only a small number of occupations (shaded) are present in Figure 9. Again there is considerably variation across the CoB groups with non-EU migrants dominating as ‘health professionals’, ‘research professionals’, ‘health associate professionals’ and ‘information and communication technology’. Generally these are skilled occupations.

EU12 migrants are dominant in ‘elementary process plant occupations’, ‘process operatives’ and ‘elementary cleaning occupations’ – in the latter case with a similar share to non-EU migrants. Overall these are less skilled occupations. EU15 migrants are employed across each of the
occupations, but do not tend to dominate the migrant contribution to the same extent as non-EU and EU12 migrants. Table 3 further disaggregates occupations by country of birth.

The penultimate row summarises the share of employment in the top 15 largest occupational sectors. Compared to employment in industrial divisions employment by occupation is less concentrated although both EU12 and non-EU migrants are more concentrated than UK and EU15 residents. The final row shows the extent to which UK-born residents are employed in similar occupations as migrants. For both EU15 and non-EU migrants there is a high degree of correlation, but the correlation with EU12 migrants is only weak.

Table 3 Occupation by country of birth, 3-digit SIC (2002)

<table>
<thead>
<tr>
<th>Rank</th>
<th>UK born</th>
<th>EU 15</th>
<th>Accession EU</th>
<th>Non-EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 **** Functional Managers</td>
<td>6.9%</td>
<td>Functional Managers</td>
<td>8.2%</td>
<td>Elementary Cleaning Occupations</td>
</tr>
<tr>
<td>2 **** Sales Assistants and Retail Cashiers</td>
<td>5.7%</td>
<td>Teaching Professionals</td>
<td>6.5%</td>
<td>Elementary Personal Service Occupants</td>
</tr>
<tr>
<td>3 *** Teaching Professionals</td>
<td>5.0%</td>
<td>Healthcare &amp; Reltd Personal Services</td>
<td>4.5%</td>
<td>Transport Drivers and Operatives</td>
</tr>
<tr>
<td>4 ** Childcare &amp; Reltd Personal Services</td>
<td>3.2%</td>
<td>Elementary Personal Service Occupants</td>
<td>4.3%</td>
<td>Elementary Process Plant Occupations</td>
</tr>
<tr>
<td>5 ** Construction Trades</td>
<td>3.1%</td>
<td>Childcare &amp; Reltd Personal Services</td>
<td>3.7%</td>
<td>Sales Assistants and Retail Cashiers</td>
</tr>
<tr>
<td>6 **** Healthcare &amp; Reltd Personal Services</td>
<td>2.9%</td>
<td>Info &amp; Communication Technology</td>
<td>3.4%</td>
<td>Elementary Goods Storage Occupations</td>
</tr>
<tr>
<td>7 ** Secretarial and Related Occupations</td>
<td>2.9%</td>
<td>Elementary Cleaning Occupations</td>
<td>3.2%</td>
<td>Healthcare &amp; Reltd Personal Services</td>
</tr>
<tr>
<td>8 ** Administrative Occupations: Finance</td>
<td>2.7%</td>
<td>Sales Assistants and Retail Cashiers</td>
<td>3.1%</td>
<td>Food Preparation Trades</td>
</tr>
<tr>
<td>9 **** Elementary Personal Service Occupants</td>
<td>2.6%</td>
<td>Financial Inst and Office Managers</td>
<td>2.7%</td>
<td>Construction Trades</td>
</tr>
<tr>
<td>10 *** Transport Drivers and Operatives</td>
<td>2.5%</td>
<td>Health Associate Professionals</td>
<td>2.4%</td>
<td>Process Operatives</td>
</tr>
<tr>
<td>11 ** Administrative Occupations: General</td>
<td>2.4%</td>
<td>Managers in Hospitality and Leisure</td>
<td>2.2%</td>
<td>Assemblers and Routine Operatives</td>
</tr>
<tr>
<td>12 ** Production Managers</td>
<td>2.2%</td>
<td>Administrative Occupations: Finance</td>
<td>2.2%</td>
<td>Administrative Occupations: General</td>
</tr>
<tr>
<td>13 ** Business &amp; Finance Assoc Professnls</td>
<td>2.2%</td>
<td>Secretarial and Related Occupations</td>
<td>2.1%</td>
<td>Functional Managers</td>
</tr>
<tr>
<td>14 *** Info &amp; Communication Technology</td>
<td>2.1%</td>
<td>Business &amp; Statistical Professionals</td>
<td>2.1%</td>
<td>Administrative Occupations: Finance</td>
</tr>
<tr>
<td>15 * Mngrs in Distrib, Storage and Retail</td>
<td>2.0%</td>
<td>Production Managers</td>
<td>2.0%</td>
<td>Managers in Hospitality and Leisure</td>
</tr>
</tbody>
</table>

| Top 15% | 48.3 | 52.7 | 61.5 | 57.4 |
| Correl v UK born | 1.00 | 0.88 | 0.38 | 0.80 |

Source: APS, various.
Note: The authors refer readers to the note about sampling and variability in the introduction.
As shown in Figure 5 the proportion of highly skilled EU12 residents is below that of the UK population and other migrant groups. Table 3 thus suggests that while EU15 and to a somewhat lesser extent non-EU migrants tend to work in similar jobs to the UK born population, there is clearer segmentation with respect to EU12 migrants who are more likely to be found in a number of lower skilled service jobs. Segmentation (jobs where fewer UK born residents are concentrated) is, however, also evident within the other migrant groups. Reasons for such segmentation are not explored in this report.

For instance, in comparative terms EU15 migrants are more concentrated in number of managerial and professional occupations; EU12 migrants are more concentrated in a number of elementary cleaning, process and operative occupations; whereas non-EU migrants are more concentrated in health professional, engineering and business professional occupations. Both EU12 and non-EU migrants are concentrated in food preparation occupations. Overall Table 3 shows the important supply of labour provided by migrants to urban and knowledge-based economies, but also in the maintenance and logistics of urban and knowledge based activity.

### 3.4 Skills shortage
According to the 2013 Employer Skills Survey (UKCES 2014) a reasons for difficulty in recruitment/filling specific jobs is a lack of relevant skills in the available labour pool. A key contribution of international migration and an internationally mobile labour force is precisely that it enables UK employers to tap into a larger pool of potential applicants/providers of labour services.

The domestic skills deficit in a number of occupations is reflected in the UK government’s Tier 2 Shortage Occupation List. Since its inception in 2008 the skill level under Tier 2 has gradually increased (MAC 2013). Migrants from outside the EU (and EEA) are required to obtain a work permit to work in the UK. Under the Points Based System the shortage occupation list confers advantages for an employer: firstly, jobs are not required to be advertised in the resident labour market; secondly, in case the Tier 2 migration limit is exhausted migrants via the shortage list will be given priority (MAC 2013).\(^\text{10}\)

Figure 11 and 12 show the share of employment by occupation on the shortage list and CoB for migrants arriving in the period 2008-Sept 2013 (Fig. 11) and all migrants (Fig. 12) in the South East. For instance some 9% of all people employed in ‘Design and development (2126)’ were migrants arriving after 2007. Overall migrants arriving after 2007 constitute less than 2% (in the South East) of the employed labour force aged 16-64. Note, due to small numbers in some categories only a selection of occupations are shown – remaining proportions should be nevertheless be treated with caution. Occupations are organised in descending order to overall migrant share.

\(^{10}\) The current Shortage Occupation List, valid from April 2014, is listed in Appendix 2.
Figure 11 Employment concentrations of migrants arriving after 2007 in Tier 2 Shortage Occupations (4 digit SOC2010)


Note: For consistency with the classifications in the shortage list SOC2010 is used (see Appendix 3 for Tier 2 Shortage Occupation List). The authors refer readers to the note about sampling and variability in the introduction.

The figure also shows that while non-EU migrants dominate many of the shortage occupations, both EU15 and EU12 migrants constitute important sources of skills-specific labour in a number of entries on the shortage list. Due to the uncertainty of small number the analysis is replicated in Figure 12 for all migrants. While statistically more robust the data is no longer, necessarily, reflecting recent flows of migrants. On the other hand, given the longer period under consideration the important skills-specific contribution that international migration makes to meet to UK employers’ needs become even more evident.

Figure 12 Employment concentrations of migrants in Tier 2 Shortage Occupations (4 digit SOC2010)

Source: APS, various.

Note: See Figure 11. The authors refer readers to the note about sampling and variability in the introduction.
For instance, some 50% of those surveyed in the APS/LFS since 2008 and working as ‘Medical radiologists (2217)’ were born outside the UK – particularly in non-EU countries. Similarly, some 25-30% of ‘Civil engineers (2121)’, ‘Chefs (5434)’, ‘Medical practitioners (3218)’, ‘Medical and dentistry (3218)’ and ‘Nurses ‘2231’ were born outside the UK. The vital contribution that international migration makes to the National Health Service is evident not only from migrant concentration in shortage occupations, but also in the earlier analysis of employment by industry and occupational classes. While many of the shortage occupations are dominated by non-EU migrants both EU15 and EU12 migrants constitute important sources of skill-specific transfers to the UK in a number of occupations.

4. Non-EEA/Certificate of Sponsorship related migration flows 2008-2013

Earlier work by Worcester Research (2012) for the SESPM shows the important contribution made by non-EEA migrants across a range of sector. While net non-EEA migration has been negative since 2008 (see Section 2.1) non-EEA migrants remain a significantly larger share of the working age population than EEA migrants – 11.7% and 5.5%, respectively (APS Oct 2012 –Sept 2013). The earlier Worcester Research analysed Certificate of Sponsorship (CoS) data for the period 2008- Feb 2012.

This section extends the analysis until March 2014 and analyses CoS (Tier 2 and Tier 5) applications for work (Out of country entry clearance) for the South East and Local Economic Partnerships in the South East regions. UK employers wishing to recruit skilled workers form outside the EEA can sponsor candidates’ visa applications. Recruitment is generally subject to the ‘resident labour market test’, but occupations on the official shortage list and intra-company transfers are exempted.

**Tier 2**: For skilled workers who are not EEA citizens; must be in possession of a job offer and a Certificate of Sponsorship from a UK employer. Since 2011 there has been a cap of 20,700 people per annum for the ‘general’ category under this Tier (additional categories are ‘Intra company transfers’, ‘Sportsperson’ and ‘Ministers of religion’). Tier 2 (general) migrants can remain in the country for up to 5 years. Sports people and ministers of religion can remain in the country for up to 3 years.

**Tier 5**: Temporary visa for people wanting to do unpaid voluntary work for a charity, have been offered a work as a sports person or creative worker, coming to the UK for short-term work experience, training or approved research/exchange scheme, work covered by international law (e.g. diplomacy), want to do religious work or a young person (aged 18-30). Depending on Tier 5 category the migrant can remain for 12-24 months.
Box 2 Classification of CoS records

Classification of industry and occupational categories in the CoS data is based on sponsors’ self-reported entries. Sponsors chose categories from a menu relating to sector of employment and type of occupation.

Categorisation of these records are based on the UK’s official SIC (industry) and SOC (occupation) classifications. However, from time to time these classifications are updated to reflect changes to UK labour markets. The CoS application switched SOC classifications and 2013 (SOC) and altered the self-reporting SIC structure in 2012. The impact from the change of SIC codes are minor. The impact from the change in SOC code are, however, quite substantial.

In the following analysis SIC data has been used to analyse change in recruiting industries over time. However, due to the significant structural changes to the SOC data this analysis cannot be replicated for type of occupation. Changes to the SOC classification were implemented in April 2013. The obtained data is on an annual basis so that recording ‘conventions’ (as per the calendar year data) thus differs for 2012, 2013 and 2014. It has not been possible to reclassify individual categories to harmonise the different versions of the SOC. SOC data is therefore only presented as a total for the entire period. This enables analysis across regions, but not, to the same extent, across time.

4.1 Industry profile of CoS visa applicants

Table 4 summarises CoS (Tier 2 and Tier 5) visa application statistics for the South East and South East Local Economic Partnerships for the period 2008-March 2014. CoS statistics relate to sponsored applications, not numbers of visas granted. While indicative of flows of migrants in particular occupations they are not a measure of the number of migrants working in particular jobs/occupations. Similarly, while indicative of location of work, headquarter effects mean that address of sponsors and place of work may differ. In addition to number of sponsored visa applications Table 4 also shows the percentage of CoS applications that relate to occupations on the UK’s shortage occupation list, share of CoS applications by LEPs and the ratio of applications shares to population shares. A ratio greater than 1 in the final column indicates that the area accounted for a greater than proportional share of CoS applications.

Table 4 shows that in the period 2008-March 2014 the South East region accounted for a quarter of CoS visa applications. In relative terms (last column) the South East region’s proportion of CoS application is roughly twice its population share. In other words, a disproportionately large share of CoS applicants are sponsored by South East businesses or licensed sponsors.
Table 4 Certificate of Sponsorship (Tier 2 and Tier 5), Out-of-Country (Entry Clearance) 2008-March 2014

<table>
<thead>
<tr>
<th>Region</th>
<th>Tier 2 applications</th>
<th>Tier 5 applications</th>
<th>Shortage list, (2013-14)%</th>
<th>CoS, %</th>
<th>Ratio CoS/UK population</th>
</tr>
</thead>
<tbody>
<tr>
<td>South East Region</td>
<td>69,693</td>
<td>11,644</td>
<td>45.0</td>
<td>26.3</td>
<td>1.9</td>
</tr>
<tr>
<td>Outside South East</td>
<td>154,191</td>
<td>74,186</td>
<td>37.9</td>
<td>73.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Buckinghamshire Thames Valley LEP</td>
<td>1,255</td>
<td>258</td>
<td>58.0</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Coast to Capital LEP</td>
<td>4,181</td>
<td>1,135</td>
<td>34.5</td>
<td>1.7</td>
<td>0.6</td>
</tr>
<tr>
<td>South East LEP</td>
<td>3,015</td>
<td>1,549</td>
<td>59.0</td>
<td>1.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Oxfordshire City Region LEP</td>
<td>1,696</td>
<td>2,274</td>
<td>39.3</td>
<td>1.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Solent LEP</td>
<td>5,769</td>
<td>350</td>
<td>46.0</td>
<td>2.0</td>
<td>0.8</td>
</tr>
<tr>
<td>Thames Valley Berkshire LEP</td>
<td>22,248</td>
<td>3,431</td>
<td>48.7</td>
<td>8.3</td>
<td>6.1</td>
</tr>
<tr>
<td>Enterprise M3 LEP</td>
<td>14,256</td>
<td>858</td>
<td>46.3</td>
<td>4.9</td>
<td>1.9</td>
</tr>
<tr>
<td>South East Midlands LEP</td>
<td>13,041</td>
<td>495</td>
<td>39.6</td>
<td>4.4</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Source: Home Office/Performance Unit, ONS.

Note: Certificate of Sponsorship, out-of-country (entry clearance), Tier 2 and Tier 5. Column 2 shows total applications, Column 4 shows percentage of applications relating to the official shortage list. This column is based on 2013/14 data only due to reclassification of data in 2013. * Relates to part of LEP within the South East region. Data is aggregated at local authority level. In terms of LEP composition there is some overlap, ^ & indicate affected LEPs. Authors’ calculations.

Map 1 CoS (Tier 2 and Tier 5) visa applications 2008-March 2014

Source: Home Office/Performance Unit.

Note: Authors’ calculations. Apart from the South East LEP only local authorities falling within the South East region are shown.

Within the South East there is a particular concentration of sponsored applications in the Thames Valley Berkshire (8.3%), Enterprise M3 (4.9%) and South East Midlands LEPs (4.4%). Map 1 shows number of application per 1000 residents (2012 estimated resident population) and shows that within the Thames Valley Berkshire LEP and Enterprise M3 LEP there is considerable concentration in areas adjoining Greater London (reflecting the findings in the Polynet study and the SE’s economic
integration with London). The South East Midlands LEP (South East region component thereof) has a strong concentration in Milton Keynes.

Comparison maps for UK, EU and non-EU born residents based on Census 2011 data is shown in Appendix 6. Appendix 6 also shows that there is some variation in the relative concentration of Tier 2 and Tier 5 applicants across the South East. Tier 5 applications are strongly represented in urban economies to the west of London (as are Tier 2), but there also appears that short-term work migration is more prevalent along the south coast as well as Canterbury, Chichester and Oxfordshire. Importantly, the absolute numbers of Tier 5 is substantially less than Tier 2 (see Table 4).

Table 5 shows the correlation coefficients for type of sponsoring industries in the Local Economic Enterprises across the South East for the period 2008 to March 2014. A value of 1 indicates that the sponsoring industries in two LEPs are the same; a value close to 0 indicates little similarity in CoS sponsoring patterns. The final row shows Top-12 concentrations for each of the areas. From Table 5 it is clear that there is some variation in the most frequently sponsoring industries across the South East and also in comparison between the South East and the remainder of the UK.

Table 5 Comparison of CoS industry, South East and South East LEPs 2008-March 2014

<table>
<thead>
<tr>
<th></th>
<th>South East Region</th>
<th>Buckinghamshire Thames Valley LEP</th>
<th>South East LEP</th>
<th>Oxfordshire City Region LEP</th>
<th>Solent LEP</th>
<th>Thames Valley Berkshire LEP</th>
<th>Coast to Capital</th>
<th>Enterprise M3 LEP</th>
<th>South East Midlands LEP</th>
<th>Outside South East</th>
</tr>
</thead>
<tbody>
<tr>
<td>South East Region</td>
<td>1.00</td>
<td>0.78</td>
<td>0.22</td>
<td>0.22</td>
<td>0.82</td>
<td>0.73</td>
<td>0.44</td>
<td>0.87</td>
<td>0.75</td>
<td>0.74</td>
</tr>
<tr>
<td>Buckinghamshire Thames</td>
<td></td>
<td>1.00</td>
<td>0.17</td>
<td>0.10</td>
<td>0.94</td>
<td>0.26</td>
<td>0.13</td>
<td>0.68</td>
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<td>0.38</td>
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<td>0.01</td>
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<td>0.23</td>
<td>0.62</td>
<td>0.06</td>
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<td>Top-12 concentrations (%)</td>
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<td>82.9</td>
<td>83.3</td>
<td>93.7</td>
<td>95.1</td>
<td>94.4</td>
<td>85.5</td>
<td>88.4</td>
<td>96.5</td>
<td>77.9</td>
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</tbody>
</table>

Source: Home Office/Performance Unit.
Note: Authors’ calculations.

For instance the industries sponsoring Tier 2 and Tier 5 migrants in the South East LEP and Oxfordshire City Region LEP differ substantially from the general pattern in the South East over the period 2008-2013 and from other LEPs. Coast to Capital LEP to a lesser extent also diverges from the general SE pattern. Figure 13 shows the main non-EEA sponsoring industries across the South East Region for the period 2012-March 2014 and vis-à-vis the period 2008-2011.
Figure 13 Certificate of Sponsorship (Tier 2 and Tier 5) 2012-March 2014, South East by industry (%)

Source: Home Office/Performance Unit.
Note: Authors’ calculations. Figures in **bold** are CoS%; figures in *italics* are percentage point change. * Industry sections (all other categories (divisions) nest within a higher level section).

Section 3.2 showed a high concentration in the top 15 industrial divisions. This remains the case when examining CoS visa applications by industry where the Top-12 industries account for some 85-95% of applications. Compared to the rest of the UK the ‘Computer programming, consultancy and related activity’ and ‘Other professional, scientific and technical activities’ in the South East account for larger proportions of sponsored visa applications; ‘Financial service activities’ account for a much smaller proportion (not in the top 15 in the SE). Compared to the rest of the UK, CoS visa applications in the South East region are more concentrated in a smaller number of industries, especially the Information and communication industry. Comparable industry CoS statistics for the rest of the UK are shown in Appendix 4.

**Box 3 – Interpreting CoS classifications**

Certificate of Sponsorship data records industry of employment using a mix of industry sections and divisions. Divisions are nested within sections. In Figure 13, for instance, ‘Computer programming etc’ (Rank 1) ‘Information service activities’ (Rank 8) and ‘Telecommunications’ (Rank 9) are divisions within the higher-level industrial section ‘Information and communication’ (Rank 2). Overall therefore the Information and communication sector of the South East region economy accounts for just over 40% of CoS visa applications. Industry sections are denoted with a * in each of the Top-12 figures.

Notably, sponsors self-select these categories so that records will fluctuate in line with sponsors’ understanding of classifications and practice as well as the design on the application process. Industry classifications were updated in 2012.
As shown in Figure 13 the ‘Computer programming, consultancy and related activities’ industry accounts for just under a quarter of all CoS visa applications, followed by ‘Information and communication’ and ‘Other professional and scientific and technical activities’. ‘Computer programming etc.’ covers a range of specific functions including programming, software development and consultancy activities for both the domestic and business markets.

Compared to the period 2008-2011 there was, nevertheless, a decline of 6.2 percentage points in ‘Computer programming etc.’ CoS visa applications. ‘Information and communication’ related CoS applications increased marginally, as did ‘Activities of head offices’ (1.4 percentage points), ‘Sports activities and amusement’ (1.9 percentage points) and ‘Creative arts and entertainment’ (1.2 percentage points). Earlier analysis showed the important contribution that all migration makes to health services in the UK. Figure 13 shows that compared to the earlier period there was small decline (1.2 percentage points) in ‘Human health activities’ CoS visa applications in the period 2012-March 2014.

Individual Top-12 bar charts for each of the LEPs are shown in Appendix 4. Generally each area has one or two industries that stand out in term of Tier 2 CoS visa applications:

- **Buckinghamshire TV LEP:** ‘Computer programming, consultancy and related activity’ (41.8%) is by far the dominant CoS category and has increased (4.4 percentage points) compared to the period 2008-2011. Smaller categories, ‘Arts, entertainment and recreation’ and ‘Information service activities’, have also experienced increases in CoS visa applications, 7.4 and 2.6 percentage points, respectively (ranked 2nd and 3rd). **Compared to the period 2008-2011 the top category is the same, but ‘Human health activities’ has declined by 4.2 percentage points and ranks 4th in the current period. ‘Movies, video and TV programming’ ranked 3rd in the earlier period has declined by 7.5 percentage points and is no longer in the Top-12.**

- **South East LEP:** ‘Creative, arts and entertainment activities’ (24.4%), ‘Education’ (13.1%) and ‘Human health activities’ (13.1%). **Compared to the period 2008-2011 the top 3 categories are the same, but ‘Human health activities’ has declined 15.3 percentage points (to rank 3) and ‘Creative, arts etc.’ has increased 15.8 percentage points (to rank 1). ‘Manufacturing of motor vehicles, trailers and semi-trailers’ has grown by over a third (2.2 percentage points).** Unlike for the South East region as a whole ‘Financial service activities, except insurance and pension funding’, ranked 5th, is in the Top-12 non-EEA sponsoring industries. The South East LEP has the highest proportion of shortage list related CoS applications.

- **Oxfordshire City Region LEP:** ‘Employment activities’ (41.1%) and ‘Education’ (35.2%). **Compared to the period 2008-2011 the share of ‘Employment activities’ CoS applications has increased substantially (16.7 percentage points). Education, ranked 1st in the earlier period, declined by 4 percentage points.** Other categories show lower concentrations and changes between the two periods.

- **Solent LEP:** ‘Computer programming, consultancy and related activities’ by far dominates CoS applications in this LEP – 73.1%. Despite a small decline (2.2 percentage points)
compared to the period 2008-2011 this division continues to dominate non-EEA CoS applications in the Solent LEP. ‘Education’ and ‘Other professional, scientific and technical activities’, ranked 2 and 3, account for 7.5 and 5.4 per cent of CoS applications, respectively. Compared to the earlier period there is relatively little change in these categories.

- Thames Valley Berkshire LEP: ‘Other professional, scientific and technical activities’ (31.4%), ‘Information and communication’ (23%) and ‘Computer programming, consultancy and related activities’ (9.9%). Compared to the period 2008-2011 there is relatively little change; there was a small increase in ‘Information and communication’ CoS applications and ‘Creative, arts and entertainment activities’ – 2.0 and 2.2 percentage points, respectively. There were smaller declines in ‘Education’ and ‘Other professional etc.’ CoS applications – 1.7 and 1.5 percentage points, respectively.

- Coast to Capital LEP: ‘Other professional, scientific and technical activities’ (20.4%), ‘Sports activities, amusement and recreation’ (13.8%) and ‘Other manufacturing’ (10.5%). Compared to other LEPs in the South East CoS applications in the Coast to Capital LEP are spread over a wider and more varied number of industries. In addition to the top 3 categories, ‘Extraction of crude petroleum and gas’ (9.4%) and ‘Education’ (8.8%) are sizable sponsoring industries. Compared to the period 2008-2011 ‘Other professional, scientific etc.’ declined by some 6.1 percentage points, whereas ‘Sports activities etc.’ and ‘Other manufacturing; increased by 6.1 and 3.7 percentage points, respectively. Non-EEA sponsorships for work varied only marginally in other industries. The Coast to Capital LEP has the lowest proportion of shortage list related CoS applications.

- Enterprise M3 LEP: ‘Information and communication’ (34.4%), ‘Computer programming, consultancy and related activities’ (26.7%) and ‘Telecommunications’ (7.2%). Compared to the period 2008-2011 the two top categories have swapped ranks – ‘Information and communication’ CoS applications increasing by 4.6 percentage points and ‘Computer programming etc.’ declining by 9.8 percentage points. Telecommunications is new in the top 3 with an increase in share of CoS applications by 6.4 percentage points. Overall, however, the ‘Information and Communication’ industrial section accounts for 68.4% of all CoS applications in the Enterprise M3 LEP, a marginal increase (1.3 percentage points) compared to the earlier period.

- South East Midlands LEP: ‘Activities of head offices; management consultancy activities’ (45.2%) and ‘Computer programming, consultancy and related activity’ (44.8%). Compared to the period 2008-2011 ‘Activities of head offices etc.’ has increased its share of CoS visa applications in the South East Midlands LEP substantially (14.1 percentage points); ‘Computer programming etc.’, while accounting for the 2nd highest share of non-EEA CoS applications in the period 2012-March 2014, experienced a substantial decline (14.5 percentage points).

From Table 5 and the above bullet points it is South East LEP, Coast to Capital LEP and Oxfordshire City Region LEP differ the most from the general South East pattern.
4.2 Occupational profile CoS visa applicants

Figure 14 examines in greater detail the type of jobs (occupations) Tier 2 migrants aim to fill. As detailed in Table 4 close to 45% of CoS applications relate to occupations on the official shortage list, but with considerable variation across LEPs in the South East – ranging from almost 60% in the South East LEP to broadly 35% in the Coast to Capital LEP. Given the change of SOC classification in 2013 these estimates are only based on 2013/14 data. As the classification changed in April 2013 this is an estimate of the April 2013-March 2014 share of CoS visa application on the shortage list.

Figure 14 Certificate of Sponsorship (Tier 2 & Tier 5) 2008-March 2014, South East by occupation

Source: Home Office/Performance Unit.
Note: Authors' calculations.

The occupational profile of Tier 2 applicants largely corresponds to that outside the South East, but differs with respect to the share of finance industry related applicants. A key reason for this difference is the dominance of London in the comparison. Moreover, the occupation profile of CoS visa applicants for the South East (66.2) is more concentrated in the Top-12 CoS visa-applicant occupations than outside the South East (52.0%) – see Table 6 and Appendix 6.

Box 4 SOC 2000 and SOC 2010

As explained in Box 2 the shift from SOC 2000 to SOC 2010 has had significant impact on the occupational classification of CoS visa applications. For instance ‘IT software professionals 2132’ – the largest category in Figure 14 – no longer exists in SOC 2010. In SOC 2010 this category has been replaced by a number finer classifications (2134-2137, 2139, 2426, 3132 and 5245). These finer classifications are, however, not exclusive to the old 2132 as a subset of these (2135-2137 and 2139) also replace 2131. When comparing CoS data over the period 2008-2011 and 2012-2014, without taking into account the reclassification, the category 2132 has declined by some 11.8 percentage points. However, the categories 2135, 2136 and 2139 combined account for some 11.6 percentage points. These are also in the top 12 (but are not exclusive to 2132). In the following analysis no temporal analysis is therefore provided.
While Tier 2 migration by definition is likely to be skilled migration Tier 2 migration to the South East reflect the strength of the knowledge intensive and urban economies of the area along with engineering and medical professions.

IT related occupations appear in the top 15 in both regions, but financial service occupations are more dominant in the Outside South East category (e.g. ‘Finance and investment analysts/advisers (3534)’, ‘Accountants, chartered and certified (2421)’ and ‘Managers and chartered secretaries, financial (1131)’). Only ‘Technicians, IT user support (3132)’ is in the top 15 for the South East, and not in the top 15 outside the South East (or within the same concentration ratio). ‘IT project and programme managers (2134)’, ‘Engineering professionals (2129)’ and ‘Researchers n.e.c. (2329)’ are not in the top 15 outside the South East, but are within the same concentration ratio as the SE top concentration ratio.

Table 6 also analyses the extent to which the South East CoS occupational profile is similar in the LEPs across the South East. Except for the final row (which shows Top-12 concentration ratios) the table contains a series of bivariate correlation indices.

The dominance of ‘IT software professionals (2132)’ CoS visa applicants (see Box 4) in a number of LEPs ensure that there is generally a high correlation between the general pattern South East and patterns at LEP level. However, three LEPs differ from this general assessment (in declining order to difference):

- **Oxfordshire City Region LEP**: where a number of occupations relating to research; scientific research; finance and investment; teaching/lecturing in higher education; and, marketing associate professionals are more frequent.
South East LEP: where the share of nurses (in ‘Health and social care’ and ‘Nursing and midwifery’); artists; medical practitioners; clergy; social workers; mechanical engineers; and, design and development engineers is greater.

Coast to Capital LEP: where the share of ‘Sports and fitness occupations’; ‘Managers in marketing and sales’; ‘Physicists, geologists and meteorologists’; and Engineers (civil, mechanical and production/process) and engineering professionals are greater.

5. Conclusion

Recent research shows that EEA migrants since 2001 have tended to make a net fiscal contribution — that is, migrants contribute more to public finances than they withdraw (benefits, tax credits, consumption of public services) or paid their way. This is also reflected in forecasts of the UK’s public sector debt where higher migration scenarios are associated with lower levels of public debt as the population ages. For non-EEA migrants the fiscal impact is lower and in some studies negative. Alternative studies also show the sensitivity of these findings to key assumptions. Overall, however, the fiscal impact of international migration is small relative to GDP.

Across the South East the report shows that international migration (EU and non-EU) provides an important source of labour supply for a number of industries in the South East and occupations that currently are experiencing significant shortage of domestic labour supply (as defined by the official shortage occupation list). The report shows that a high proportion of CoS visa applications in 2013/14 related to the official shortage list. The ability of business to recruit skilled labour internationally as well as domestically is important to continued economic development and growth in a number of sectors that are the backbone of the South East economy. Moreover, migrants are concentrated in a number of occupations with above average reported hard-to-fill vacancies and are an important source of labour supply across a range of shortage occupations.
Bibliography


- Migrant labour in the Greater South East, Update 2012 v3
- Migrant labour in Buckinghamshire Thames Valley LEP, Update 2012 v3
- Migrant labour in Coast to Capital LEP, Update 2012 v3
- Migrant labour in South East LEP, Update 2012 v3
- Migrant labour in Oxfordshire City Region LEP, Update 2012 v3
- Migrant labour in Solent LEP, Update 2012 v3
- Migrant labour in Thames Valley Berkshire, Update 2012 v3
- Migrant labour in Enterprise M3 LEP, Update 2012 v3
- Migrant labour in South East Midlands LEP, Update 2012 v3
Appendix 1 Sectoral and occupational employment in the South East compared to England

Figure A1.1 Industry of employment – South East and England (% points)

Note: See Figure 8.

Figure A1.2 Occupational classification – South East and England (% points)

Note: See Figure 8.
### Table A2.1 Reasons for hard-to-fill vacancies by industry (%).

<table>
<thead>
<tr>
<th>Reason</th>
<th>Agriculture</th>
<th>Mining and quarrying</th>
<th>Manufacturing</th>
<th>Electricity, Gas and Water</th>
<th>Construction</th>
<th>Wholesale and retail</th>
<th>Hotels and restaurants</th>
<th>Transport, Storage and Comms</th>
<th>Financial services</th>
<th>Business services</th>
<th>Education</th>
<th>Public admin.</th>
<th>Health and social work</th>
<th>Community, social and other activities</th>
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Source: UKCES (2014)
Table A2.2 Reasons for hard-to-fill vacancies by occupation (%).

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<td>34</td>
</tr>
<tr>
<td>CONTEXTUAL FACTORS</td>
<td>35</td>
<td>29</td>
<td>26</td>
<td>37</td>
<td>27</td>
<td>37</td>
<td>39</td>
<td>37</td>
<td>43</td>
</tr>
</tbody>
</table>

Source: UKCES (2014).
**Appendix 3 Shortage Occupation List**

Table A3.1 Tier 2 Shortage Occupation List from 6 April 2014

<table>
<thead>
<tr>
<th>Code</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1123)</td>
<td>Production managers and directors in mining and energy</td>
</tr>
<tr>
<td>2112</td>
<td>Biological scientists and biochemists</td>
</tr>
<tr>
<td>2113</td>
<td>Physical Scientists</td>
</tr>
<tr>
<td>2119</td>
<td>Natural and social science professionals not elsewhere classified</td>
</tr>
<tr>
<td>2121</td>
<td>Civil engineers</td>
</tr>
<tr>
<td>2122</td>
<td>Mechanical engineers</td>
</tr>
<tr>
<td>2123</td>
<td>Electrical engineers</td>
</tr>
<tr>
<td>2124</td>
<td>Electronics Engineers</td>
</tr>
<tr>
<td>2126</td>
<td>Design and development engineers</td>
</tr>
<tr>
<td>2127</td>
<td>Production and process engineers</td>
</tr>
<tr>
<td>2129</td>
<td>Engineering professionals not elsewhere classified</td>
</tr>
<tr>
<td>2135</td>
<td>IT Business analysts, architects and systems</td>
</tr>
<tr>
<td>2136</td>
<td>Programmers and software development professionals</td>
</tr>
<tr>
<td>2142</td>
<td>Environmental Professionals</td>
</tr>
<tr>
<td>2211</td>
<td>Medical practitioners</td>
</tr>
<tr>
<td>2217</td>
<td>Medical Radiographers</td>
</tr>
<tr>
<td>2231</td>
<td>Nurses</td>
</tr>
<tr>
<td>2314</td>
<td>Secondary education teaching professionals</td>
</tr>
<tr>
<td>2442</td>
<td>Social workers</td>
</tr>
<tr>
<td>2461</td>
<td>Quality control and planning engineers</td>
</tr>
<tr>
<td>3113</td>
<td>Engineering technicians</td>
</tr>
<tr>
<td>3218</td>
<td>Medical and dental technicians</td>
</tr>
<tr>
<td>3411</td>
<td>Artist</td>
</tr>
<tr>
<td>3414</td>
<td>Dancers and choreographers</td>
</tr>
<tr>
<td>3415</td>
<td>Musicians</td>
</tr>
<tr>
<td>3416</td>
<td>Arts officers, producers and directors</td>
</tr>
<tr>
<td>3421</td>
<td>Graphic designers</td>
</tr>
<tr>
<td>3541</td>
<td>Buyers and purchasing officers</td>
</tr>
<tr>
<td>5215</td>
<td>Welding trades</td>
</tr>
<tr>
<td>5235</td>
<td>Aircraft maintenance and related trades</td>
</tr>
<tr>
<td>5249</td>
<td>Line repairers and cable jointers</td>
</tr>
<tr>
<td>5434</td>
<td>Chefs</td>
</tr>
</tbody>
</table>

*Source:* gov.uk.
Appendix 4 Certificate of Sponsorship (Industry) by LEPs

Figure A4.1 Outside South East

Source: Home Office/Performance Unit.
Note: Authors' calculations. * denotes industrial sections; remaining categories are industrial divisions (nested within industrial sections).

Figure A4.2 Buckinghamshire Thames Valley LEP

Source: Home Office/Performance Unit.
Note: Authors' calculations. * Denotes industrial sections; remaining categories are industrial divisions (nested within industrial sections).
Figure A4.3 South East LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations. * Denotes industrial sections; remaining categories are industrial divisions (nested within industrial sections).

Figure A4.4 Oxfordshire City Region LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations. * Denotes industrial sections; remaining categories are industrial divisions (nested within industrial sections).
Figure A4.5 Solent LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations. * Denotes industrial sections; remaining categories are industrial divisions (nested within industrial sections).

Figure A4.6 Thames Valley Berkshire LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations. * Denotes industrial sections; remaining categories are industrial divisions (nested within industrial sections).
Figure A4.7 Coast to Capital LEP

Source: Home Office/Performance Unit.
Note: Authors' calculations. * Denotes industrial sections; remaining categories are industrial divisions (nested within industrial sections).

Figure A4.8 Enterprise M3 LEP

Source: Home Office/Performance Unit.
Note: Authors' calculations. * Denotes industrial sections; remaining categories are industrial divisions (nested within industrial sections).
Figure A4.9 Enterprise M3 South East Midlands LEP^*

Source: Home Office/Performance Unit.

Note: Authors’ calculations. ^ Only covers areas falling within South East Region. * Denotes industrial sections; remaining categories are industrial divisions (nested within industrial sections).
Appendix 5 Certificate of Sponsorship (Occupation) by LEPs

Figure A5.1 Outside South East

Source: Home Office/Performance Unit.
Note: Authors’ calculations.

Figure A5.2 Buckinghamshire Thames Valley LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations.
Figure A5.3 South East LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations.

Figure A5.4 Oxfordshire City Region LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations.
Figure A5.5 Solent LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations.

Figure A5.6 Thames Valley LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations.
Figure A5.7 Coast to Capital LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations.

Figure A5.8 Enterprise M3 LEP

Source: Home Office/Performance Unit.
Note: Authors’ calculations.
Figure A5.9 South East Midlands LEP *

Source: Home Office/Performance Unit.

Note: Authors’ calculations. * Only covers areas falling within South East Region.
Appendix 6 Census 2011: UK, EU and non-EU born resident population

Map A6.x1 Tier 2 visa applications per 1000 residents, SE (2008-March 2014)

Source: Home Office/Performance Unit.

Map A6.x2 Tier 5 visa applications per 1000 residents, SE (2008-March 2014)

Source: Home Office/Performance Unit.
Map A6.3 UK born population in the South East and South East LEP

Source: ONS, Census 2011.

Map A6.4 EU born population in the South East and South East LEP

Source: ONS, Census 2011.
Map A6.5 Non-EU born population in the South East and South East LEP

Source: ONS, Census 2011.