ESRC Centre for Population Change Working Paper

Number 17

Spatial, sectoral and temporal trends in A8 migration to the UK 2004-2011 Evidence from the Worker Registration Scheme

David McCollum

Lorraine Cook

Canford Chiroro

Alison Platts

Franca MacLeod

Allan Findlay

March 2012

ISSN2042-4116

ABSTRACT

Since the enlargement of the European Union on 1st May 2004, large numbers of migrants from the A8 countries (Poland, Czech Republic, Latvia, Lithuania, Slovakia, Slovenia, Hungary and Estonia) have joined the UK labour market and East-Central Europe has become one of the principal source regions of migrants to Britain. Nationals from these states now constitute some of the largest foreign-born populations in the country. As part of the transitional arrangements following accession, A8 migrants were required to register under the Worker Registration Scheme (WRS) if they took up employment in the UK for one month or longer. The WRS operated between May 2004 and April 2011.

The WRS represents a uniquely detailed source of information on East-Central European labour migration to the UK in terms of the employment taken up by A8 migrants immediately after arrival in the UK. The research presented here analysed administrative data from the WRS in order to shed light on spatial, sectoral and temporal trends in registration flows. The findings in this report can help inform understanding of migration patterns, and responses to them, at the national and local government levels.

The volume of labour migration flows from East-Central Europe has been substantial, with 1,133,950 registrations recorded over the lifetime of the WRS (May 2004 – April 2011). These flows have been concentrated in particular segments of the labour market, with most A8 migrants engaging with the hospitality and agricultural sectors and often working through recruitment agencies as opposed to directly for employers. The volume of new arrivals from the A8 countries has decreased since the onset of the recession in 2008 but still remained substantial at the end of the WRS period. The demand for migrant labour has been relatively consistent in agriculture compared to other sectors of the economy during the recession, suggesting that employers in this sector may still require overseas workers as they struggle to source labour regardless of prevailing labour market conditions. In other sectors the requirement for overseas workers had receded to a large extent by 2011. Conceptually this points to A8 migrant labour serving distinct 'functions' in the UK labour market.

KEYWORDS

East-Central European migration; recession; Worker Registration Scheme

DISCLAIMER

The views expressed in this report are those of the lead author and do not necessarily represent those of the Scottish Government, Convention of Scottish Local Authorities, Applied Quantitative Methods Network or the Universities of St Andrews or Dundee.

EDITORIAL NOTE

The research documented in this Working Paper was funded through the AQMeN (Applied Quantitative Methods Network) Collaborative Small Grants.
Lead author, David McCollum is a Research Fellow at the Centre for Housing Research, University of St Andrews.
Lorraine Cook is Policy Officer at the Convention of Scottish Local Authorities (COSLA) Strategic Migration Partnership; a network whose remit includes helping Scottish councils respond to and plan for in-migration.
Canford Chiroro is a PhD candidate at the Centre for Environmental Change and Human Resilience, University of Dundee.
Alison Platts and Franca MacLeod are both analysts in the Strategic Research team at the Scottish Government.
Allan Findlay is Professor of Geography at the University of St Andrews and member of the ESRC Centre for Population Change.

Corresponding Author: Dr David McCollum; dm82@st-andrew.ac.uk.

ACKNOWLEDGEMENTS

Financial support from the Applied Quantitative Methods Network (AQMEN) Collaborative Small Grants Scheme is gratefully acknowledged.

The ESRC Centre for Population Change Working Paper Series is edited by Teresa McGowan

SPATIAL, SECTORAL AND TEMPORAL TRENDS IN A8 MIGRATION TO THE UK 2004-2011
EVIDENCE FROM THE WORKER REGISTRATION SCHEME

TABLE OF CONTENTS

1. INTRODUCTION

This research analyses administrative data from the Worker Registration Scheme (WRS) in order to shed light on temporal, spatial and sectoral trends in East-Central European migration to Scotland specifically and the UK generally. Since the accession of the A8 countries (Poland, Czech Republic, Latvia, Lithuania, Slovakia, Slovenia, Hungary and Estonia) to the European Union on 1st May 2004 citizens from these countries have had the right to participate in the British labour market. As a consequence of significant disparities in wage levels, large numbers of A8 migrants have come to work in the UK, and in a short space of time East-Central Europe has become one of the principal source regions of migrants to Britain, and nationals from these states now constitute some of the largest foreign-born populations in the country. As part of the so-called seven year 'transitional measures' permitted under EU legislation, between 1st May 2004 and 30th April 2011 A8 migrants were required to register under the Worker Registration Scheme (WRS) if they wished to take up employment in the UK for a period of one month or longer.

The volume of inflows from the new EU member states has been significant and these flows have been the single biggest wave of foreign in-movement ever experienced by the UK (Bauere *et al*, 2007). Table 1 below shows figures for the top ten countries in terms of their net migration (immigrants minus emigrants) to the UK 2005-2009. Poland had by far the largest net migration of nationals to UK, with 393,000 more Polish nationals living in the country in 2009 than in 2005. This is over four times as many as Pakistan, the next biggest net source. Four of the top ten source countries of migrants to the UK were A8 or A2 (Romania and Bulgaria) countries.

Country	**Net migration 2005-2009**
1: Poland	393,000
2: Pakistan	89,000
3: India	81,000
4: Lithuania	46,000
5: Romania	38,000
6: Nigeria	31,000
7: Slovakia	28,000
8: China	25,000
9: Germany	24,000
10: Brazil	23,000

Table 1: Net migration of foreign nationals to UK 2005-2009 (numbers)
Source: Author's analysis of Annual Population Survey data, ONS 2010

Table 2 shows the countries which have had the largest percentage increase in the number of nationals living in the UK 2005-2009. The countries with the biggest growth have had spectacular increases and were nearly all East-Central European states which have recently joined the EU. For example the number of Polish nationals living in the UK increased by 289 per cent between 2005 and 2009.

Country	Population in UK 2005	Population in UK 2009	Change 2005-2009
1: Poland	136,000	529,000	+289%
2: Romania	15,000	53,000	+253%
3: Cyprus	11,000	33,000	+200%
4: Bulgaria	12,000	34,000	+183%
5: Lithuania	30,000	76,000	+153%
6: Slovakia	24,000	52,000	+117%
7: Latvia	12,000	26,000	+117%
8: Brazil	23,000	46,000	+100%
9: Pakistan	101,000	190,000	+88%
10: Thailand	12,000	22,000	+83%

Table 2: Stock of nationals in the UK 2005-2009 (percentage increase)
Source: Author's analysis of Annual Population Survey data, ONS 2010

Trends in A8 migration have changed over time, with large numbers coming following the accession, and net migration (immigrants minus emigrants) of A8 migrants to the UK peaking at 80,000 in 2007. Since then overall levels of immigration from the A8 countries have dropped. It is estimated that around half of A8 migrants to the UK do not remain over the longer term (Blanchflower *et al*, 2007), and statistics show that outmigration has increased. However, the UK is still gaining more A8 migrants than it is losing (ONS, 2011b), and it is estimated that at the beginning of 2009 migrants from these states made up 1.3 per cent of the working age population in the UK (Dustmann *et al*, 2010).

This investigation uses the data contained in the WRS to explore the geography of A8 migration to the UK in more detail, investigating the types of labour market sectors that A8 migrants engage in and how this has evolved in the period between 2004 and the global economic recession, which was still on-going when the WRS ended in 2011. The key contribution of this research is that, for the first time, key temporal, spatial and sectoral trends in A8 migration to the UK are captured for the complete seven year lifespan of the WRS.

2. DATA AND METHODS OF ANALYSIS

2.1 THE WORKER REGISTRATION SCHEME

At the time of accession of the A8 states in May 2004, the UK was one of only three countries (along with Ireland and Sweden) to permit citizens from these countries unrestricted access to its labour market (Salt and Millar, 2006). The WRS was introduced by the British government to monitor the flows of migrants from the new 'Accession 8' countries (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia) entering the UK to take up employment for a period of one month or longer. The Scheme ran for 7 years from May 2004 to April 2011[1]. A8 migrants were required to register under the WRS with the Home Office for an initial fee of £50 (eventually rising to £90) and this process, whilst not imposing any restrictions on the free movement of labour (bar the registration fee), provided the government and researchers with an important source of labour market information about migrants from the accession countries (Portes and French, 2005). The data recorded by the WRS included: nationality, industry, occupation, hours worked, hourly pay, gender and age (Bauere *et al*, 2007). WRS applicants had to re-register (at no charge) if they changed employer, or took on an additional job, although substantial numbers did not do so (Migration Advisory Report, 2009). Thus, each application to the WRS represents one job rather than one applicant. However, to avoid double-counting, each applicant is represented only once in the WRS figures released by the Home Office (Bauere *et al*, 2007). Data are provided by applicants not applications, with each applicant included once with information relating to their first registered job (Mercia Research and Strategy, 2006; Worcester Research, 2007). The WRS thus only provides data on a migrant's first job in the UK (initial registration) and not their subsequent jobs (re-registrations). Cyrus and Malta joined the EU at the same time as the A8 countries and their citizens were also granted access to the UK labour market. However unlike A8 nationals, citizens of Cyprus and Malta were not required to register under the WRS to work in the UK. The volume of nationals from these states in the UK has grown rapidly in recent years, especially from Cyprus (Table 2).

[1] The WRS ended on 30th April 2011 as the EU Treaty of Accession stipulated that Member States could only enact transitional measures on the A8 countries for a maximum of seven years

2.2 THE ANALYSIS

Data derived from the WRS were analysed in order to investigate:

1: The origins of A8 nationals

2: The sectoral breakdown of WRS registrations.

3: The relative importance of A8 migration to particular sectors of the economy, with estimates produced by comparing the volume of WRS registrations in particular sectors with the total number of jobs in these sectors.

4: The geographic breakdown of WRS registrations at Government Office Region and local authority level.

5: The relative prevalence of A8 migration in regional and local labour markets, measured as the volume of WRS registrations in Government Office Regions and local authorities as a percentage of the overall number of workforce jobs in these areas.

6: Temporal changes in the volume of WRS registrations.

7: The impact of the recession on immigration from East-Central Europe as measured by changes in WRS registrations between 2008 quarter two and 2009 quarter two by sector, Government Office Region and local authority.

8: The nature of the relationship between the volume of inflows of A8 migrants and labour market and demographic circumstances in receiving local authorities in Scotland, by developing a linear regression model to test the predictive power of conditions in local authorities in terms of the number of WRS registrations that they were recorded as receiving i.e. how did labour market and demographic factors affect the number of migrants that an area received?

In most cases the results are presented at the UK-wide level. However where appropriate WRS data at the Scottish level are also presented and differences and similarities with general UK trends highlighted.

2.3 SOME CAVEATS

This analysis uses the WRS because it is the only UK-wide source of statistical information which allows for examination of temporal, spatial and sectoral patterns in A8 migration. However the WRS data contain some significant limitations which need to be acknowledged. Perhaps its most serious weakness is that the WRS undercounted the actual volume of migrants into the country, partly due to it not recording migrants who were not employed or who were self-employed. Thus the WRS data can only be a source of information on East-Central European labour migration to the UK, rather than source of information on all A8 migration flows. Any analysis has to be seen in that context. However the WRS also undercounted the volume of labour migrants because not all employed migrants complied with the requirement to register. For example, local primary surveys in Scotland found that up to a third of employed A8 migrants were not registered under the WRS (Fife Partnership, 2007; Glasgow City Council, 2007).

Another caveat is that migrants were required to register when they started work, but not when they left their job. Thus the WRS only provides data on inflows of migrants. Importantly, it also records only migrants' initial destination and sector in the UK, as the data provided on WRS registrations relates to applicants and their first registered job rather than on all applications. Thus the results reported below are based on migrants' first jobs and locations in the UK and do not capture their subsequent geographic or occupational mobility. Another difficultly relates to how the WRS data is categorised. In the case of this analysis the greatest problem is that migrants working through recruitment agencies in a variety of industrial sectors are classified as working in the 'administration, business and management' sector as labour providers are part of this segment of the economy. It is therefore not possible to determine from the WRS which sectors of the economy A8 agency workers are engaged in.

Despite these limitations the WRS is worthy of study. Not only does it provide much more detailed information than other administrative sources (such as National Insurance Number allocations) but, unlike local surveys, it permits UK-wide analysis of temporal, spatial and sectoral trends in A8 migration patterns.

3. RESULTS

3.1 ORIGINS OF A8 NATIONALS

The WRS contains information on the origins of A8 nationals to the UK. Figure 1 below shows the breakdown by nationality of all WRS registrations May 2004 – April 2011 for the whole of the UK and for Scotland. As might be expected Poland, being the most populous of the A8 countries, is by far the biggest sender of East-Central European migrants. Lithuania, Latvia and Slovakia are the next most significant sending countries, whereas relatively few immigrants arrived from Slovenia and Estonia. Scotland received relatively more Poles and fewer Lithuanians and Slovakians than the UK generally.

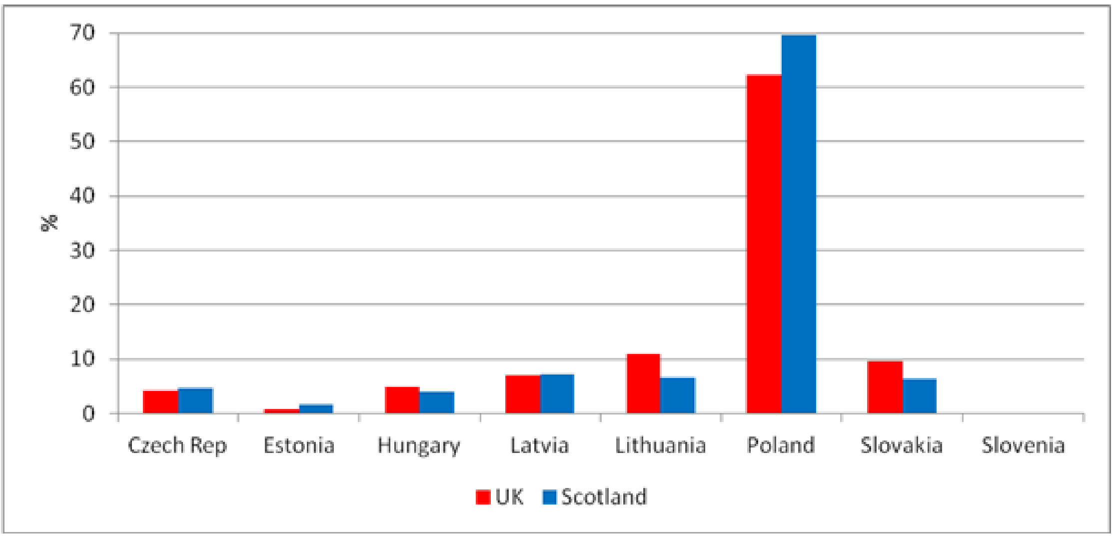


Figure 1: Nationality of WRS registered A8 migrants May 2004 – April 2011, UK and Scotland
Source: Author's analysis of WRS data

Figures 2 and 3 demonstrate how the relative proportion of migrants from the A8 countries has changed over time in the UK and Scotland between April 2006 and April 2011. At both the UK and Scotland levels most A8 migrants came from Poland throughout the whole period during which the WRS was in operation. However it is interesting to note the decline over time in the share of A8 migrants coming from Poland. Between 2006 and 2008 over 70 per cent of WRS registrations at the UK and Scotland level were Poles. The share of A8 nationals coming from other countries increased over time, and from mid-2009 onwards fewer than 50 per cent of registrations in the UK were to Poles. In Scotland the percentage of registrations to Poles declined from a peak of around 80 per cent in the beginning of 2007 to just under 60 per cent from the end of 2009 onwards. The countries which have increased their share of A8 migrants most in recent years were Lithuania, Latvia and Hungary. The rapid increase in inflows from these countries and relative decline of numbers arriving from Poland may be related to labour market circumstances in these countries. States such as Latvia and Lithuania have been particularly negatively affected by the global economic downturn whereas the Polish economy has performed relatively well (Aslund, 2010). The nature of labour market opportunities in the A8 countries is likely to be significant 'push' factors in relation to migration to the UK.

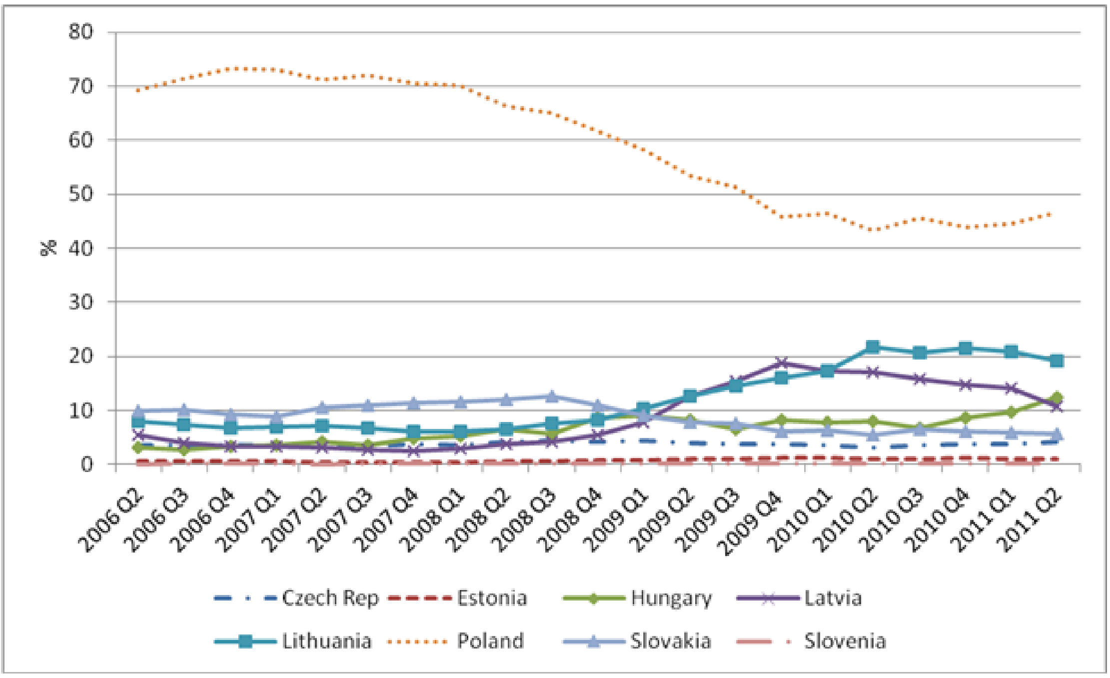


Figure 2: Composition of A8 migrants to the UK by nationality April 2006 - April 2011
Source: Author's analysis of WRS data

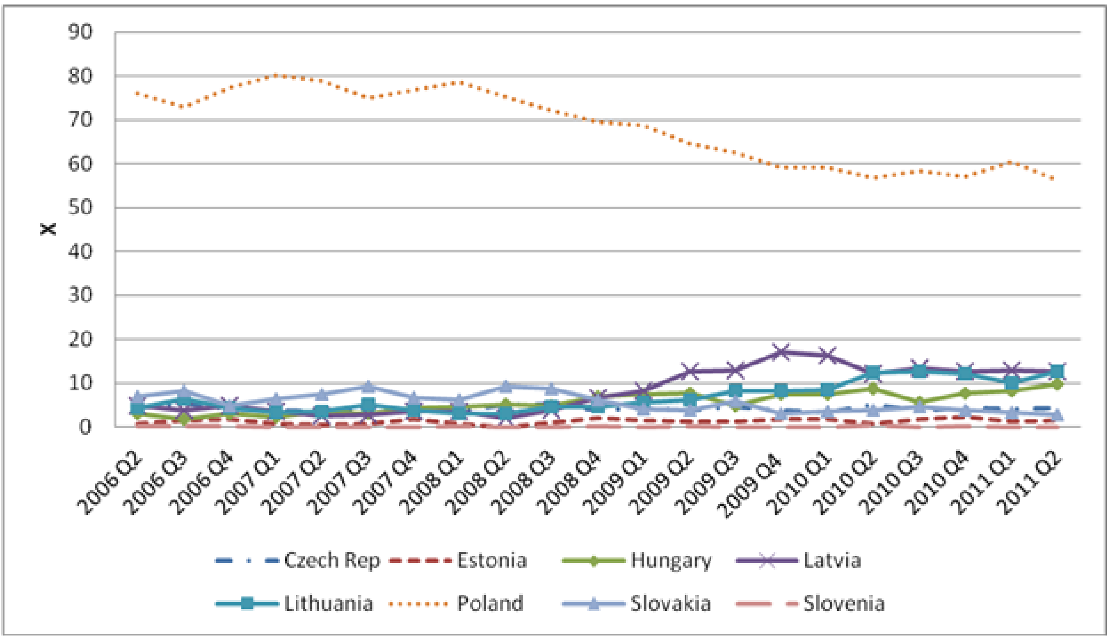


Figure 3: Composition of A8 migrants to Scotland by nationality April 2006 - April 2011
Source: Author's analysis of WRS data

3.2 LABOUR MARKET PROFILE OF A8 MIGRANTS

A total of 1,133,950 registrations were recorded over the lifetime of the WRS (1st May 2004 to 30th April 2011). Figure 4 below displays the sectoral breakdown of all registrations. At first glance, a very large volume of A8 migrants appear to have worked in the administration, business and management sector (42.8% of all registrations). However, the high figure in this grouping is a consequence of the way that registrations were categorised in the WRS. Most of the migrants categorised within this sector were employed by recruitment agencies, which are classified as belonging to the administration, business and management sector. However, these migrants' employment, to a large part, involved working in other parts of the economy, such as agriculture, food processing or hospitality for example (Home Office, 2009). Apart from this ambiguous grouping, the next most significant sectors in terms of A8 employment were hospitality and catering (17.4% of all registrations), agriculture (9.6%), manufacturing (6.4%) and food processing (5.5%).

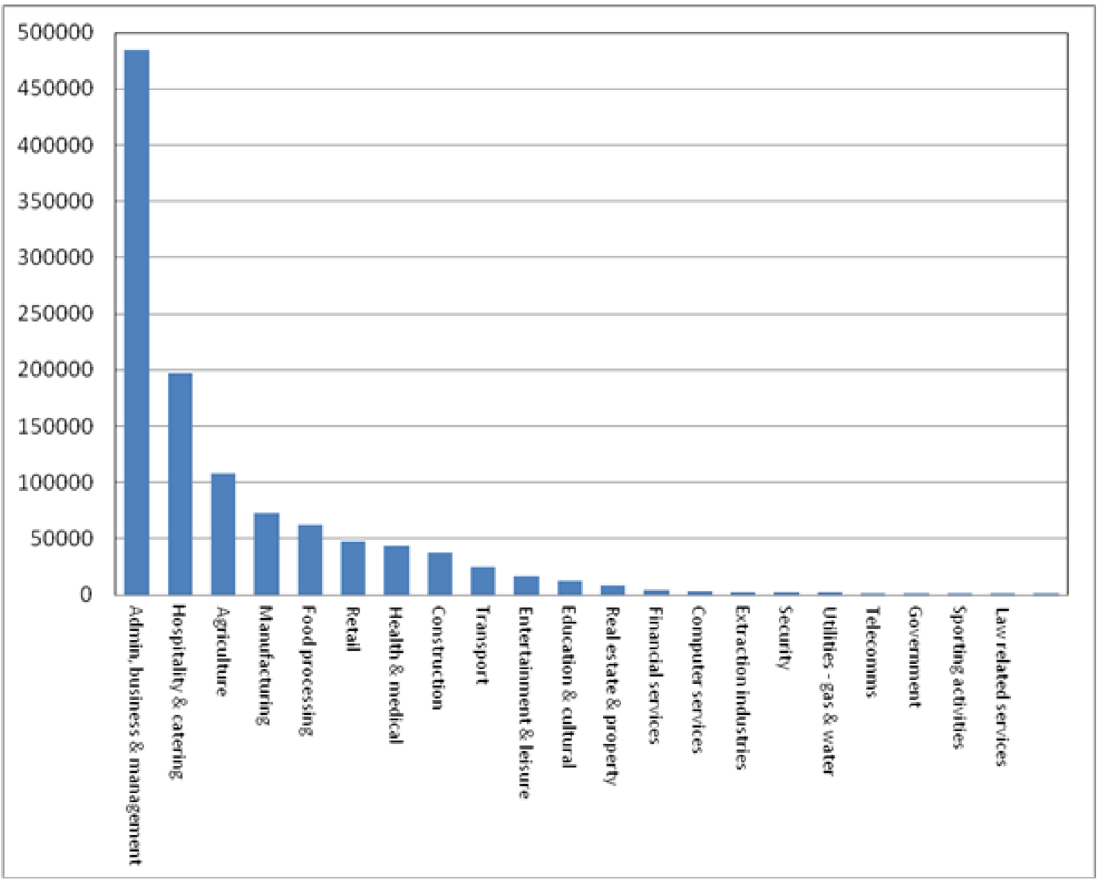


Figure 4: WRS registrations May 2004 – April 2011 by sector, UK
Source: Author's analysis of WRS data

Figure 5 repeats this analysis for Scotland. Again the 'administration, business and management' (23%), hospitality (21.7%), agriculture (17.3%), food processing (12.6%) and manufacturing (6.1%) sectors account for the bulk of registrations.

The concentration of registrations in sectors such as hospitality and catering and with recruitment agencies suggest that A8 migrants predominantly entered employment in the UK in forms of employment that were accessible to them, given the relatively low skill nature of many of the jobs in these sectors, and often used agencies as a means of connecting with employment opportunities in the British and Scottish labour markets. Agency work, agricultural jobs and back of house hospitality roles may be the most accessible forms of employment for those lacking sufficient English language skills or recognised qualifications or experience to obtain employment in other, more 'desirable' parts of the labour market.

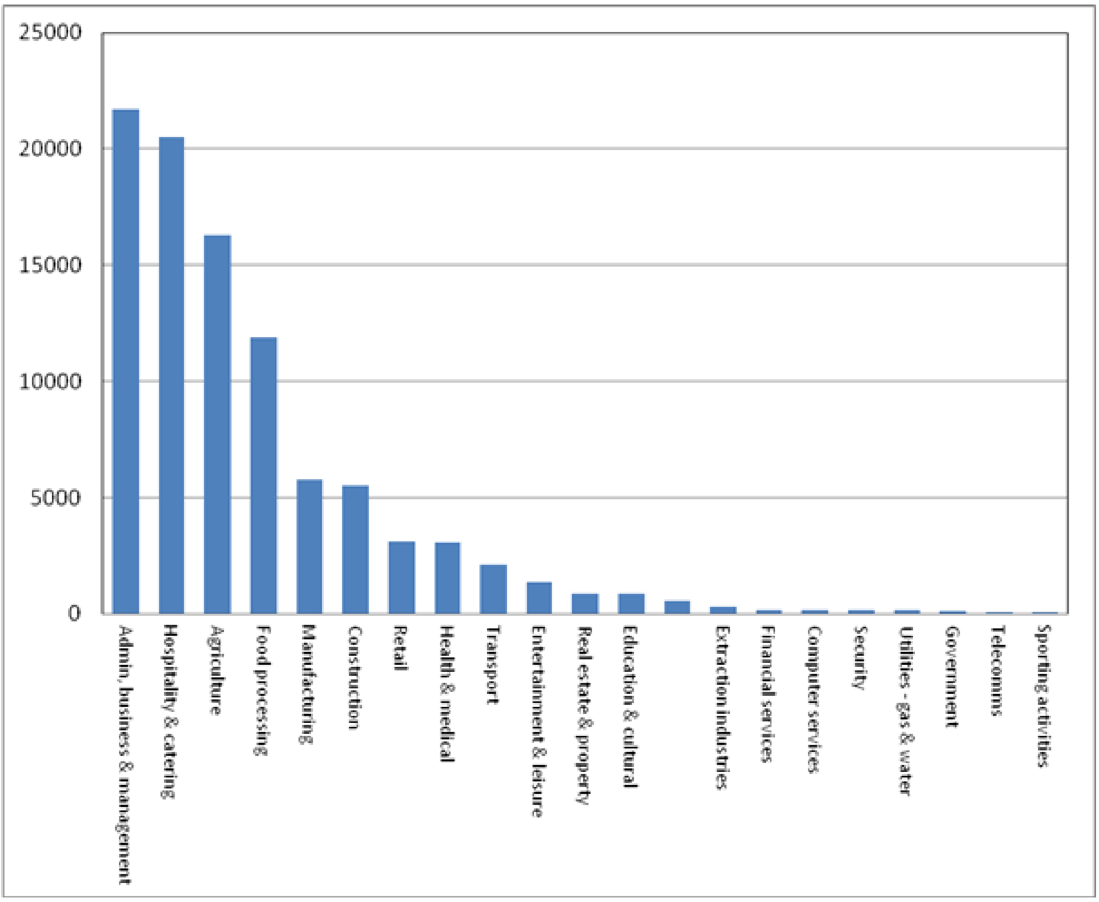


Figure 5: WRS registrations May 2004 – April 2011 by sector, Scotland
Source: Author's analysis of WRS data

Figure 6 shows the level of WRS registrations in the five most common sectors of A8 employment for the UK as a whole and for Scotland. As already noted, most registrations in the administration, business and management sector were actually migrants working in other sectors but employed through agencies. The data suggest, therefore, that in Scotland a much smaller proportion of A8 migrants worked through agencies than was the case in the UK generally, and that a greater share worked directly for employers in the agricultural, food processing and hospitality sectors. Thus in Scotland employers have displayed a greater propensity to recruit A8 workers directly than was the case in the UK generally, where employers were more likely to use recruitment agencies as a means of engaging with East-Central European migrant labour. The lower proportion of A8 migrants apparently working in agency jobs in Scotland than in the UK generally could be related to the lower prevalence of flexible working patterns in Scotland relative to the UK generally (ONS, 2008). 'Flexible' working patterns in this instance includes those on flexi-time, annualised hours, term-time working, job sharing, nine day fortnight, four and a half day week and zero hours contracts (not contracted to work a set number of hours but paid for the actual number of hours worked).

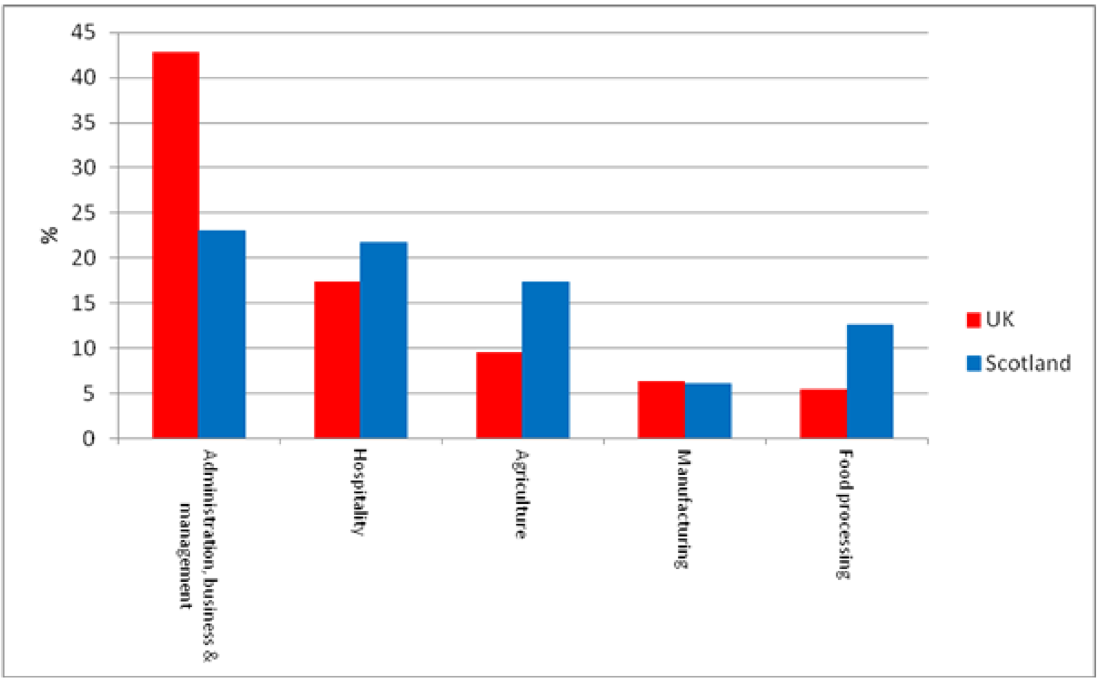


Figure 6: Proportion of WRS registrations in selected sectors May 2004 – April 2011, UK and Scotland
Source: Author's analysis of WRS data

3.3 RELATIVE SIGNIFICANCE OF A8 MIGRATION ACROSS DIFFERENT SECTORS

The analysis described above reveals the aggregate number of WRS registrations in various sectors of the UK and Scottish labour markets. In this section estimates are given of the relative importance of A8 migration to particular parts of the economy. These are produced by comparing the total number of registrations May 2004 – April 2011 in a given sector by the total number of employees working in that sector in 2011. These crude calculations are not intended as detailed estimates of the specific proportion of A8 migrants in each sector but to hint at the relative importance of A8 migrants to key sectors of the British and Scottish economies. The results of these calculations are shown in Table 3.

What is perhaps most striking about the findings is the extent to which A8 migrants form a relatively significant proportion of the UK and Scottish agricultural workforces. Less than one per cent of all jobs in the UK are in agriculture (ONS, 2011a), yet the data suggest that up to a quarter of all employees in this sector in 2011 could have been A8 workers. This finding ties in with previous analysis of WRS registrations and the belief that the agribusiness sector is particularly reliant on migrant labour as employers in this industry perennially struggle to source labour domestically, even in times of recession (see Findlay *et al*, 2010; McCollum and Findlay 2011a; McCollum and Findlay, 2011b). A8 migrants also constitute a relatively significant part of the hospitality workforce, perhaps reflecting employers' use of migrant labour in response to labour shortages in this sector prior to the recession (see page 28 of this report).

The calculations show that A8 migrants made up a similar proportion of the workforce in the UK and Scotland (both 3.6%). However East-Central European migrants form a slightly more significant proportion of the Scottish agricultural workforce than is the case in the UK generally. Figures 4 and 5 showed the 'administration, business and management' sector as having the largest volume of WRS registrations May 2004 – April 2011. However, this sector is excluded from the analysis shown in Table 3 because of the fundamental differences between conventional data on employee jobs in this sector (i.e. the number of people actually working in administration, business or management jobs) and WRS categorisations of registrations in this classification (mainly employees of recruitment agencies working for them in a variety of sectors). Thus a comparison of WRS registrations in the administration, business and management sector against total employee jobs in the same sector would be meaningless.

Sector	WRS registrations May 2004-April 2011 as percentage of employee jobs April 2011	
	UK	Scotland
Agriculture	25.0%	29.6%
Hospitality and catering	10.1%	11.4%
Manufacturing	2.9%	3.3%
Construction	1.8%	3.2%
Transport	1.7%	1.9%
Retail	1.0%	0.8%
Health and medicine	1.1%	0.7%
Total (all sectors in economy)	3.6%	3.6%

Table 3: Relative importance of A8 migrants by sector, UK and Scotland
Source: Author's analysis of WRS data and ONS quarterly jobs series (2011a).

3.4 THE GEOGRAPHY OF A8 MIGRATION – GOVERNMENT OFFICE REGION LEVEL

Figure 7 below shows the total number of WRS registrations May 2004 – April 2011 as disaggregated by Government Office Region. The regions with the greatest inflows of migrants were the more economically buoyant labour markets such as London, the South-East and East England. The North-East, Wales and Northern Ireland are the regions which received the fewest A8 migrants. This may be expected since these regions have relatively low resident populations generally and are geographically and economically peripheral parts of the United Kingdom, which may mean that they are seen as less attractive destinations than areas such as the buoyant South-East of England.

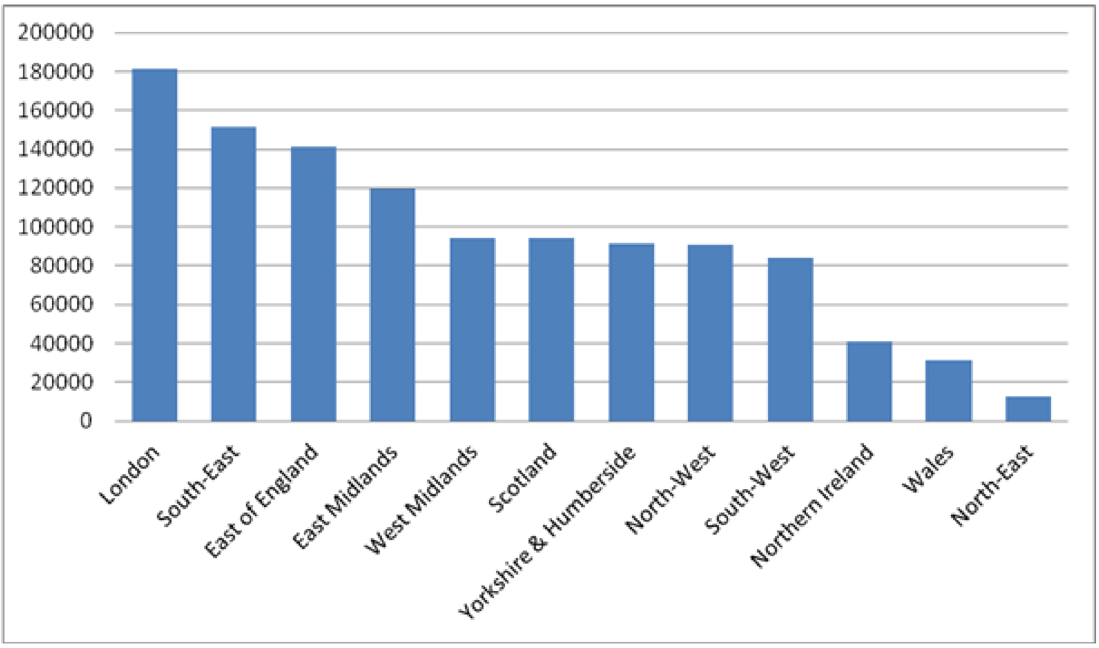


Figure 7: WRS registrations May 2004 – April 2011 by Government Office Region
Source: Author's analysis of WRS data

As with the sectoral analysis, the relative significance of A8 migration to particular regions of the UK can be estimated by comparing the total volume of registrations May 2004 – April 2011 against the number of workforce jobs in each region in 2010 (the most recent data available at the time of analysis). These calculations (Figure 8) show that regions such as the East Midlands and East England received high numbers of registrations and that A8 migrants made up relatively large proportions of their workforces. The North-East and Wales received low numbers of registrations and in these areas A8 migrants made up relatively minor segments of their workforces. On the other hand Northern Ireland had few registrations, but these migrants made up a relatively significant part of their workforce. These estimations point towards a more complex geography of A8 migration than is initially apparent when one looks at absolute numbers of WRS registrations (Figure 7), meaning that it is worth exploring the pattern of migration at more subtle spatial scales than Government Office Regions. Scotland is very similar to the UK as a whole in terms of the share of its workforce that is made up of A8 nationals.

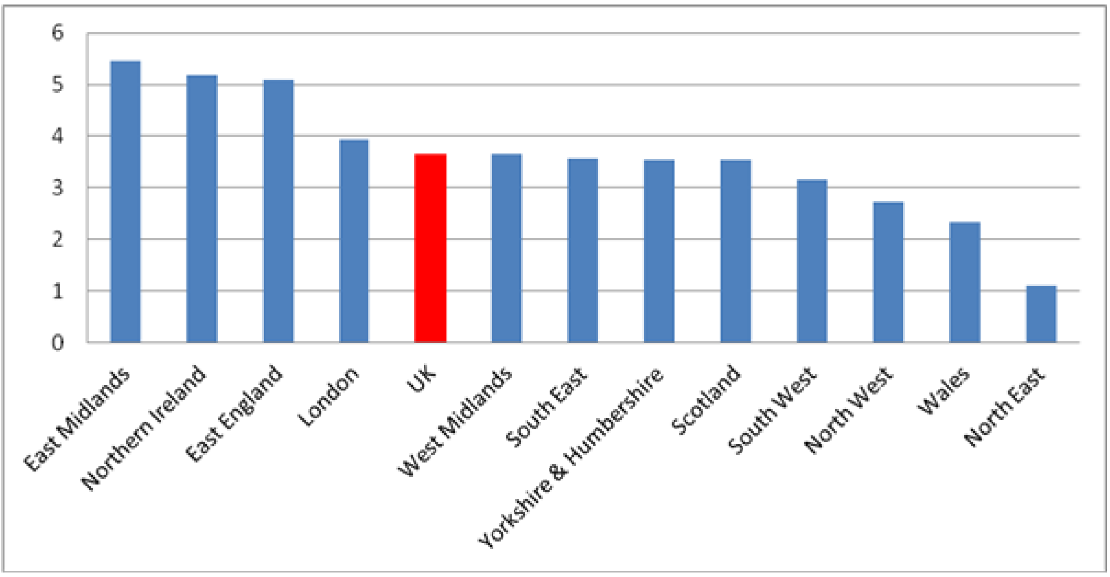


Figure 8: A8 migrants as percentage of workforce jobs by Government Office Region
Source: Author's analysis of WRS data and ONS, 2011a

3.5 THE GEOGRAPHY OF A8 MIGRATION – LOCAL AUTHORITY LEVEL

The WRS also allows for analysis of registrations at the local authority level. Table 4 displays lists of the 'top ten' local authorities in terms of total WRS registrations May 2004 – April 2011 along with estimates of the proportion of their workforces that are A8 migrants. The local authorities with the greatest inflows of A8 migrants are a mix of metropolitan boroughs (Westminster, Camden, Birmingham, Leeds and Edinburgh) and towns and rural areas such as Northampton, Peterborough, Herefordshire and Boston. This mixture is a notable fixture of A8 migration to Britain. Unlike many previous waves of immigration, the initial destinations of East-Central European migrants have been remarkably geographically dispersed as opposed to being centred on major conurbations with an existing history of receiving immigrants. This change in settlement patterns has had a significant impact on some local authorities who, prior to 2004, had had only limited experience of immigration (Pollard *et al*, 2008). The final column in Table 4 identifies the local authorities with the biggest inflows of A8 migrants relative to their labour force size. This time the 'top ten' is dominated by rural local authorities where labour intensive arable farming is an important part of the local economy. In line with the sectoral analysis, it is reasonable to infer that A8 migrants constitute an important part of the UK's seasonal crop production workforce and that this is reflected in the geography of A8 migration. This supposition is explored later in this report (see page 26).

Local authority (and Government Office Region)	Total WRS registrations May 2004 – April 2011		Local authority (and Government Office Region)	Total WRS registrations May 2004 – April 2011 / employee jobs in 2011
Westminster (London)	33,025		Boston (East Midlands)	91.7%
Northampton (East Midlands)	21,175		Fenland (East England)	47.9%
Peterborough (East England)	18,145		East Cambridgeshire (East England)	35.8%
Camden (London)	15,405		Kings Lynn and West Norfolk (East England)	35.5%
Birmingham (West Midlands)	14,900		Gedling (East Midlands)	35.2%
Boston (East Midlands)	13,755		Herefordshire (West Midlands)	34.3%
Herefordshire (West Midlands)	13,035		South Holland (East Midlands)	34.1%
Leeds (Yorkshire and Humberside)	12,940		Arun (South East)	27.8%
Luton (East England)	12,815		Breckland (East England)	26.8%
Edinburgh (Scotland)	12,585		Angus (Scotland)	24.7%

Table 4: Top ten local authorities according to total volume of WRS registrations May 2004 – April 2011 and inflow of A8 migrants relative to number of employee jobs **Source:** Author's analysis of WRS data and ONS Annual Population Survey 2011

Table 5 shows the total volume of WRS registrations for each local authority in Scotland and estimates of the relative proportion of A8 migrants in the workforces of each area (ranked from highest to lowest). As was the case in the UK-wide analysis (Table 4), the areas in Scotland which received the highest absolute inflows of A8 migrants were a mixture of large cities (Edinburgh and Glasgow) and mainly rural local authorities (Perth and Kinross, the Highlands and Aberdeenshire). A8 migrants again form the most relatively significant proportions of the workforces in rural areas such as Angus, Perth and Kinross and Aberdeenshire where labour intensive agriculture is common, Again, these patterns may reflect the distinctive function served by East-Central European labour migrants in the UK's agribusiness industry (see page 32 for further discussion). These estimates may prove more useful for local authorities in terms of planning services than relying on absolute numbers of registrations alone. The intention here is not to calculate the share of local populations that are A8 migrants: 92 per cent of people living in Boston are clearly not going to be East-Central Europeans. The high figures are a consequence of the fact that the WRS counts numbers coming in but not out of the UK, meaning that the figures of A8 migrants in an area are inherently artificially inflated. So registrations figures for Boston and other areas will include people who migrated there at some point between 2004 and 2011 but that have since left the area or country. To an extent this over counting will be balanced by the undercounting of some migrants (because many of them did not register). These calculations do however represent a useful way of comparing the relative importance of A8 migration across local labour markets.

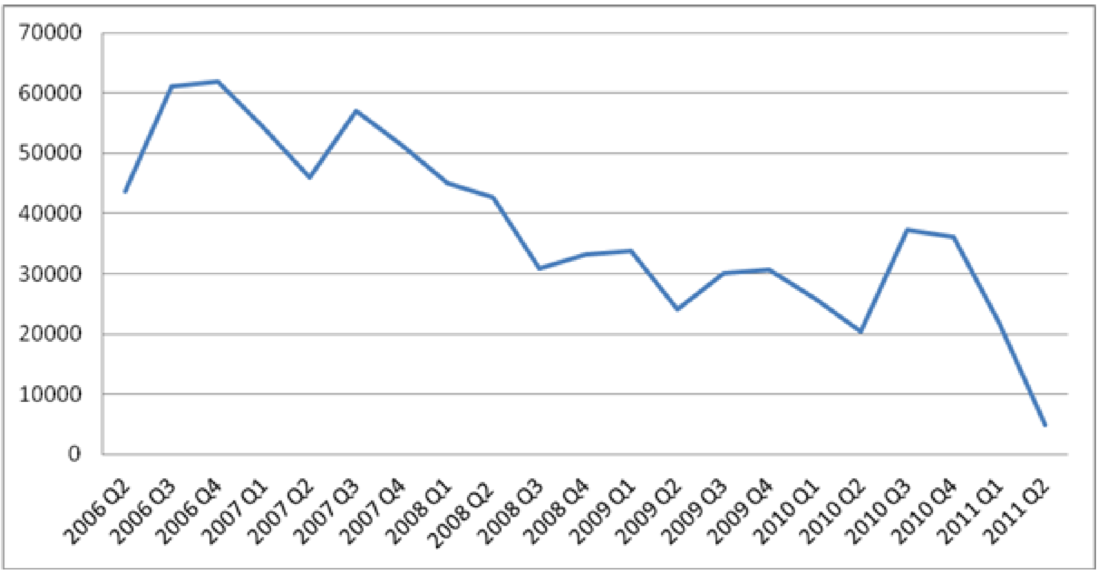
Local Authority	WRS registrations May 2004 – April 2011	WRS registrations May 2004 – April 2011 / workforce jobs 2011
Angus	4,945	24.7
Perth and Kinross	10,300	23.4
Aberdeenshire	7,450	14.1
Highland	7,980	12.7
Argyll and Bute	1,865	9.8
Scottish Borders	2,355	9.4
West Lothian	3,755	7.4
Fife	6,180	7.0
Edinburgh, City of	12,585	6.3
Moray	1,325	6.3
Shetland Islands	480	6.0
Aberdeen City	5,935	5.5
Stirling	1,645	5.5
Eilean Siar	315	5.3
East Lothian	975	5.1
Midlothian	935	4.5
Dumfries and Galloway	1,410	4.1
Glasgow City	10,905	3.9
Dundee City	2,120	3.7
Total	94,395	3.6
North Lanarkshire	3,080	3.5
Falkirk	1,355	3.2
Renfrewshire	1,700	3.2
South Lanarkshire	2,110	2.9
East Renfrewshire	330	2.8
Clackmannanshire	215	2.4
Orkney Islands	130	2.2
East Dunbartonshire	275	2.0
East Ayrshire	655	1.6
North Ayrshire	380	1.5
Inverclyde	190	1.3
South Ayrshire	410	1.3
West Dunbartonshire	135	1.0

Table 5: Total WRS registrations May 2004 – April 2011 and WRS registrations as a proportion of workforce jobs 2011

Source: Author's analysis of WRS data and ONS Annual Population Survey 2011

3.6 IMPACT OF THE RECESSION

Figure 9 below shows the volume of quarterly WRS registrations from April 2006 to April 2011. What is most noticeable is the steady drop off in registrations from late 2007 onwards, and the steep drop off from late 2010.

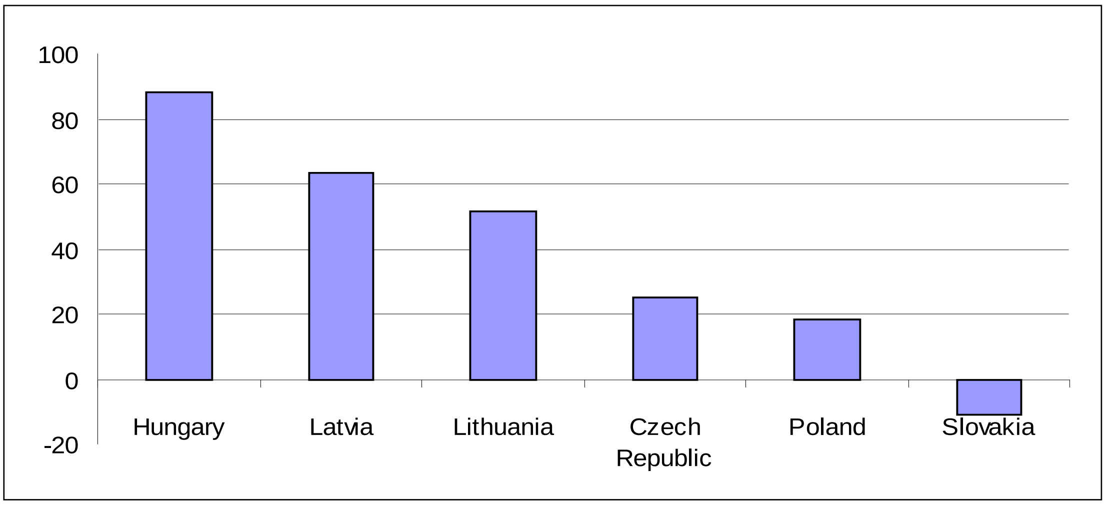


*Note that the low figure for 2011 Q2 is likely to be the consequence of the WRS ending in April 2011. Hence this 'quarter' only contains one month's worth of registrations (April) as opposed to three (April – June)

Figure 9: Quarterly WRS registrations April 2006 – April 2011
Source: Author's analysis of WRS data

The downward trend in A8 migrants coming to the UK in line with the recession, as shown in Figure 9, is in marked contrast to the significant inflows observed in the years immediately following the A8 accession. What is interesting however is that large numbers of A8 migrants have nevertheless continued to enter the UK at a time of rising unemployment. For example there were 416,755 new registrations between January 2008 and the ending of the WRS in April 2011. In order to explore the impact of recession on the numbers of arrivals of new migrant workers, and the demand for them, sectoral and spatial changes in WRS registrations are further investigated.

Although some A8 migrants undoubtedly left the UK following the start of the recession, the UK was still gaining more A8 migrants than it was losing throughout this period (ONS, 2011b). In fact Annual Population Survey data (Figure 10) indicates that the number of nationals in the UK from most of the A8 states has actually increased over the period 2007/08 to 2008/09. Based on these trends, it is worth considering why immigration to the UK from the A8 countries has continued despite Britain being in recession and experiencing declining employment rates.



Note: *Estonia and Slovenia are not included as their low sample sizes in the Annual Population Survey make estimates of their population size unreliable.

Figure 10: Percentage change in nationals of A8 states in the UK between July 2007 – June 2008 and July 2008– June 2009
Source: Author's analysis of Annual Population Survey data, ONS 2010

One reason for overseas workers continuing to arrive is the so-called 'complementary' nature of much of the work undertaken by A8 migrants (Tamas and Munz, 2006). A body of evidence indicates that many migrants accept jobs in the UK that employers find hard to fill from the domestic labour market (Rogaly, 2008; Cangiano *et al*, 2008), even during periods of economic downturn. Although agriculture, like other sectors of the economy, has been affected by the recession, demand for migrant labour remains because of the labour intensive production systems (Rogaly, 2008). In industries such as agribusiness migrant labour is therefore complementary to the UK labour force, and thus during the recession the stock of A8 workers has not decreased (as shown in Figure 10). The spatially concentrated nature of these production systems has in turn produced geographically uneven patterns of migrant labour demand during the recession (see Findlay *et al*, 2010; McCollum and Findlay, 2011b).

The second quarter of 2008 is widely seen as the last quarter of 'normal' economic activity before the onset of the recession. ONS records this as the quarter that saw an end to sixteen years of unbroken GDP growth, followed by an increase in the unemployment claimant count and redundancy levels and a fall in job vacancy levels (ONS, 2009c). By quarter two of 2009 the economy was at the lowest point of the recession and new WRS registrations were in a trough. Thereafter the decline in the fortunes of the economy began to slow and WRS registrations picked up slightly (ONS, 2009b). In order to analyse the overall effects of the recession on migration in more detail, new migrant registrations in the second quarter of 2008 are compared with those of the second quarter of 2009.

3.6.1 CHANGE IN WRS REGISTRATIONS BY SECTOR

Table 6 shows the change in WRS registrations in the UK between 2008 (quarter two) and 2009 (quarter two) for the top ten sectors in which A8 migrants were employed. All of these sectors recorded a drop in new WRS registrations, but the level of contraction was uneven. When the overall rate of decline in new registrations (all sectors) of 43.8 per cent was compared with the decline in each individual sector, it was found that the recession resulted in a disproportionate large reduction in new A8 migrants in the real estate and construction sectors compared to the overall trend. When compared using Chi-square tests, the difference between observed and expected reductions in the transport and manufacturing sectors, as well as real estate and construction, were also shown to be statistically significant from what would be expected had the change in registrations been uniformly distributed across all sectors. Conversely, there was a much lower than expected reduction in the inflow of migrants to the agricultural and food processing sectors.

WRS sector	**% change**
Real estate and property*	-77.78
Construction and land*	-75.48
Transport*	-69.83
Manufacturing*	-65.97
Retail	-49.47
Administration, business and managerial*	-41.99
Hospitality and catering	-40.75
Health and medical	-35.71
Food processing*	-34.41
Agricultural activities*	-28.52
Average for all sectors	**-43.85**

Table 6: Decline in WRS registrations by sector 2008 Q2 – 2009 Q2
Source: Author’s analysis of WRS data
Note: *Chi-Square significance 0.001

Table 7 shows the change in the number of WRS registrations in the top five sectors in which A8 migrants were employed. It compares these trends with employment change for all employees in these sectors. Not surprisingly, both A8 registrations and employment levels generally have decreased over the course of the recession. However, these changes have been sectorally uneven. WRS registrations in construction declined by 76 per cent compared to a decline of 44 per cent across all sectors. This indicates that migrants' employment in construction has been particularly sensitive to the job losses that have occurred in that sector. Agriculture emerges as different from other sectors in terms of trends in employment patterns. A8 migrants certainly make up a much larger proportion of the workforce in agriculture than they do in any other sector in the UK and yet, as the figures in Table 6 show, demand for A8 migrant labour, although reducing, has been much less affected by the recession than in other sectors (registrations in this sector only declined by 29% compared to a decline of 44% across all sectors).

Sector*	Change in WRS registrations 2008 Q2 – 2009 Q2	Sector (SIC equivalent)	Change in total number of employees 2008 Q2 – 2009 Q2
Agriculture	-28.5%	Agriculture, forestry and fishing	-8.7%
Construction and land	-75.5%	Construction	+0.2%
Hospitality	-40.8%	Hotels and catering	-2.9%
Manufacturing	-66.0%	Manufacturing	-7.6%
All sectors	-43.9%	All sectors	-2.9%

*WRS data classification

Table 7: Change in WRS registrations and employee jobs by sector 2008 Q2 – 2009 Q2
Source: Author's analysis of WRS and ONS data, 2011a

3.6.2 SPATIAL CHANGES IN WRS REGISTRATIONS

The sectoral pattern outlined above is visible when one considers the geography of how A8 migration trends have varied over the course of the economic downturn. Table 8 shows the areas in the UK with the most A8 registrations May 2004 – December 2006 as a proportion of total population size in 2006 (as calculated by Bauere *et al*, 2007). Added to these estimates is a measure of how new WRS registrations have changed over the recession (2008 Q2 – 2009 Q2). Prior to the recession (third column) the top concentrations of A8 migrants were found in a mixture of urban and rural local authorities. With the recession, three of the four rural areas (South Holland, Fenland and Herefordshire) have seen a below UK average drop in WRS registrations. On the other hand, half of the six urban areas (City of London, Northampton and Peterborough) experienced higher than UK average declines in WRS registrations with the recession. These figures broadly support the view that, although the recession has brought about a reduction in the number of new A8 migrants coming into the UK as a whole, the effect has been geographically uneven with lower reductions in rural agricultural labour markets than in other areas, especially urban areas where the decline has generally been more rapid.

Local authority	Mainly rural or urban*	WRS registrations (Q2 2004 – Q4 2006) as % of total population	Change in WRS registrations Q2 2008 – Q2 2009
City of London	Urban	294	-47%
Boston	Urban	97	-20%
Westminster	Urban	62	-33%
Northampton	Urban	53	-52%
South Holland	Rural	50	0%
Peterborough	Urban	45	-47%
Fenland	Rural	40	+4%
East Cambridgeshire	Rural	39	-74%
Herefordshire	Rural	38	-29%
Dungannon**	N/A	37	-65%
UK	N/|A	8	-44%

*Based on '% rural' local authority classification (ONS 2009a)
**Classification only includes England and Wales

Table 8: Top ten local authorities: A8 citizens registered per thousand of total population, Q2 2004 – Q4 2006 and change in WRS registrations Q2 2008 – Q2 2009.
Source: Adapted from Bauere *et al*, 2007 and author's analysis of WRS

3.6.3 PRIMARY QUALITATIVE DATA

Primary data collected by the author in interviews conducted with the users (employers) and providers (recruitment agencies) of A8 migrant labour in the hospitality and food production and processing sectors across the UK between January 2010 and October 2010 substantiates the findings discussed above (see McCollum and Findlay, 2011a). In almost all of the interviews, A8 migrant labour was viewed in positive terms, with these workers being described as having a strong work ethic and often being compared favourably with the local labour supply. However, as was the case with the WRS data analysis, the research identified significant spatial, sectoral and temporal variations in how A8 labour was perceived and utilised.

The perception of migrant labour as 'essential' was found most frequently amongst employers in rural areas involved in the food production and processing sectors.

> *'The Eastern Europeans are really important and we'd struggle without them and that's because we have struggled to get the staff locally and there are a number of reasons for that… we're not in a town so you need your own transport to actually get here. And the perception of the work here was that it was low paid and dirty and long hours so that meant that we couldn't attract people'.*
>
> *(Jack, human resources director, food processing firm, rural Scotland)*

In urban areas and in the hospitality sector, the overall perception of A8 migrant labour was as a positive but not essential supply of labour, but in rural areas and in the food production and processing sectors it was described as a core workforce. This has had implications for the demand for migrant labour in recession. Like the WRS data, the interviews suggest that the impact of the recession on demand for migrant labour has differed between urban and rural areas and between agribusiness and sectors such as hospitality. In urban areas and in the hospitality sector the demand for A8 migrant labour has decreased substantially as the recession means fewer jobs generally and increased competition for them amongst UK workers:

> *'Before the recession in the hospitality sector there were more jobs than we had people for so that created the demand for Eastern Europeans to fill those positions. But now those jobs aren't there and we have got quite a high number of unemployed people in the UK so the demand for bringing in the extra people to fill those jobs is just not there'.*
>
> *(Gerald, director, labour provider firm, urban Scotland)*

However, in the agribusiness sector and in rural areas the demand for migrant labour has been more resilient as employers complain of struggling to source indigenous workers regardless of prevailing economic circumstances:

'Most of my workers are Eastern Europeans and that is because the locals don't seem to want to work here, the pay isn't great and it's pretty boring work... just before the recession I was worried about getting workers but now I've got lots of people coming in or phoning up and looking for a job but again they're all Eastern Europeans - you never get the locals doing that'.
(Frank, production manager, food processing plant, rural Scotland)

A common theme in the research interviews was dissatisfaction with the WRS, with interviewees frequently describing it as merely an unjust 'tax' on A8 migrants. These sentiments have an impact on the findings described in this report since the cost and lack of enforcement meant that many migrants did not register with the WRS.

'Don't start me off on the Worker Registration Scheme, I mean it doesn't help us and the temps don't get any benefit from it either because they have just arrived and they have to make sure that they save £90 over four weeks to register. But apparently they will not prosecute you if you do not do it so there is no incentive to do it so you think: what is the point of the exercise - other than the government making money? So some of them don't do it. But the other side of the coin is that you have supermarkets and their auditors - oh they make such a fuss about the WRS. You will fail an audit if you haven't got a Worker Registration Scheme on file for somebody that is working in a factory that the supermarket is auditing… so you have to do it for that reason'.
(Isabella, director, labour provider firm, rural England)

Many of the interviewees claimed that East-Central European workers had a 'superior' work ethic to indigenous workers and that overseas workers were essential to their functioning because of the perceived reluctance of local workers to work for them. However this view could be critiqued for being over simplistic, one-sided and for failing to consider the full set of reasons why they struggle to attract indigenous workers. This includes factors such as unfavourable working conditions, low wages and insecure work.

3.7 IMMIGRATION AND LOCAL DEMOGRAPHIC AND ECONOMIC CONDITIONS

A number of factors could potentially influence the volume of A8 migration to particular areas. A linear regression model was developed in order to test the nature of the relationship between the level of WRS registrations and demographic and labour market circumstances in local authorities in Scotland. The model was intended to test the predictive power of conditions in local authorities in terms of the number of WRS registrations in them, as it might be hypothesised, for example, that more economically buoyant areas will attract more immigrants. In this model the dependent variable was quarterly figures of WRS registrations for each of the 32 local authorities in Scotland between April 2006 and April 2011 (quarterly figures prior to April 2006 are not available). This generated a total of 672 data points. The independent variables included in the analysis were demographic and labour market conditions at the local authority level, including quarterly claimant count unemployment figures, quarterly employment rate figures (only available up to 2011 quarter 1 at the time of analysis), quarterly figures of Jobcentre Plus listed vacancies, gross average weekly earnings (only available annually and from 2008 onwards), proportion of the resident population of working age (only available annually and until 2010), overall population size (only available annually and until 2010) and quarterly figures for the proportion of the workforce employed in elementary occupations (only available up to 2011 quarter 1 at the time of analysis).

The results from the regression modelling (Table 9) suggest that the number of vacancies notified by Jobcentre Plus and to a lesser extent the unemployment rate have been good predictors of the number of WRS registrations in Scottish local authority areas between April 2006 and April 2011. Higher WRS registrations were associated with higher vacancy levels and lower unemployment rates. This implies that the destinations of A8 migrants in Scotland may have been influenced by the labour market opportunities that existed in them, with migrants favouring relatively buoyant local labour markets. Employers and labour providers may also play a role in these trends since they may try and attract migrant labour to particular places in response to labour shortages. The other factors investigated were not found to be statistically significant independent drivers of WRS registration numbers.

Independent variable	Standardised coefficients
Claimant count unemployment rate	-0.300*
Employment rate	0.072
Jobcentre Plus listed vacancies	0.598***
Gross average weekly earnings	-0.097
Proportion of resident population of working age	0.012
Population size	0.195
Proportion of workforce in elementary occupations	0.005

*P<0.05, **P<0.01, ***P<0.001

Table 9: Relationship between WRS registrations and local demographic and labour market conditions in Scottish local authorities April 2006 – April 2011: results of regression analysis
Source: Author's analysis of WRS data, Annual Population Survey, Jobcentre Plus vacancies – summary analysis, Annual Survey of Hours and Earnings and ONS mid-year population estimates, all available via NOMIS (http://www.nomisweb.co.uk/)

4. DISCUSSION AND CONCLUSIONS

Since the enlargement of the EU in 2004, large numbers of migrants from the A8 countries have elected to participate in the UK labour market. The research described in this report analysed administrative data from the Worker Registration Scheme (WRS) to shed light on spatial, sectoral and temporal trends in these significant flows. Migrants from the A8 countries were required to register under the WRS if they took up employment in the UK for a period of one month or longer between May 2004 and April 2011, meaning that this dataset represents a uniquely detailed source of information on East-Central European migration to the UK from the accession to the recent recession. Despite its limitations (such as the fact that self-employed and non-employed migrants were not required to register, and that many employed migrants did not register under it, and that few re-registered when they moved jobs), the WRS is the only dataset which allows for analysis of the initial labour market characteristics of A8 labour migrants at the national scale and at lower geographies and which allows for consideration of change over time.

A number of key findings have emerged from this research. The analysis has confirmed that the volume of labour migration flows from East-Central Europe was substantial, with well over a million WRS registrations approved between May 2004 and April 2011. These labour migration patterns have been linked to specific segments of the British and Scottish labour markets, with most A8 workers engaging with the hospitality and agriculture sectors and often working through recruitment agencies as opposed to directly for employers (Figure 4 and Figure 5). The concentration of registrations in these categories may be a consequence of the 'entry-level' nature of many of the jobs in these sectors, meaning that they represent the easiest route into work for many newly arrived migrants. Agency work, agricultural jobs and back of house hospitality roles may be the most accessible forms of employment for those lacking sufficient English language skills or recognised qualifications or experience to obtain employment in other, more 'desirable', parts of the British labour market.

The analysis at the Scotland level indicates a lower propensity for A8 migrants to work through recruitment agencies than is the case in the UK generally (Figure 6). This suggests that Scottish employers may have been more likely to employ migrant labour directly themselves rather than draw on this source of labour through agencies. This could be because flexible working patterns (such as zero hour contracts) are less prevalent in Scotland than they are in the UK generally (ONS, 2008).

Another important finding from the research was that A8 migrants constitute a substantial part of the UK and Scotland's agricultural and hospitality workforces (Table 3). Sectoral analysis of the change in WRS registrations over the recession points towards continued demand for migrant labour in the agribusiness sector relative to other parts of the economy (Table 6 and Table 7). These trends lead to the supposition that employers in other sectors drew on migrant workers as a flexible source of labour to supplement existing labour supplies in the economic boom times prior to the recession, but with the onset of the economic downturn the requirement to turn to migrant labour to fill labour and skills shortages has to a large extent diminished. However, in the agribusiness sector employers appear to struggle to source labour regardless of prevailing economic conditions, hence the relatively strong and continued demand for migrant labour into the recession (see Findlay *et al*, 2010; McCollum and Findlay 2011a; McCollum and Findlay, 2011b for a more detailed discussion of these theorisations).

These trends are observable when one considers the geography of A8 migration to the UK. In terms of absolute numbers of registrations largely urbanised regions and urban local authorities were often the most popular destinations for migrants (Figure 7 and Table 4). However, A8 migrants appear to constitute the most significant proportions of the workforces of rural local authorities, especially in the arable farmland areas in East England and the East Midlands (Table 4). The seasonal aspect of agricultural and hospitality jobs has implications for how local authorities plan services for A8 migrants. The cyclical nature of recruitment and employment in these sectors is likely to result in relatively transient migrant worker populations, often in rural areas (see Green *et al,* 2009). This remoteness and the high rate of 'churn' in these sectors are likely to present particular challenges for local authorities seeking to engage with and provide services for East-Central European workers. Another challenge for policymakers will be provision for the non-working migrants who are family members of the WRS registered workers documented in this analysis. In a study of A8 migrants in Liverpool, around half were in partnerships and around a quarter had children (Scullion and Morris, 2009). At the UK level around 14 per cent of A8 migrant workers had at least one dependent (non-working partner or child) with them when they registered under the WRS i.e. upon or soon after arriving in the UK (Glossop and Shaheen, 2009).

The analysis of the WRS also shows clear impacts of the recession in terms of the volume and nature of migration flows from the A8 countries to Britain. The overall volume of registrations declined markedly in a way that mirrored the onset of recession and worsening of the UK labour market conditions (Figure 9). This may be expected since the recession would have resulted in a decline in the demand for workers from overseas since the quantity and quality of the labour pool locally available to employers would have increased with rising unemployment levels. This development is reflected in the finding that the number of WRS registrations fell in all of the sectors analysed (Table 6).

However, the volume of new registrations varied across different sectors and substantial numbers of migrants from the A8 countries continued to arrive in the UK despite its economy being in recession. Quarterly WRS registrations have remained in excess of 20,000 throughout the economic downturn (Figure 9) and Annual

Population Survey data indicates that the number of nationals from most of the A8 countries resident in the UK actually increased between mid- 2007-2008 and mid-2008-2009 (Figure 10). The continued migration of A8 nationals to the UK may be due to continued demand for migrant labour in particular locations and parts of the economy in spite of the recession. In line with this theory, WRS registrations have remained relatively steady in the agriculture sector (Table 6). Interviews with employers and recruitment agencies in this industry imply that this part of the economy struggles to attract indigenous labour regardless of prevailing economic conditions and is thus heavily reliant on migrant labour.

The global recession has also had an impact on the origin of East-Central European migrants to Scotland and the UK (Figure 2 and Figure 3). Poland was the largest single source of migrants throughout the period May 2004 – April 2011 but the proportion of A8 migrants who were Polish decreased following the onset of the recession whilst the share originating from Lithuania and Latvia has grown. This is likely to be a reflection of the contrasting fortunes of these countries' economies in recent years.

A final part of the analysis involved statistical modelling to explore the nature of the relationship between the economic and demographic circumstances of local authorities in Scotland and the volume of A8 migrants that they received between April 2006 and April 2011. The number of Jobcentre listed vacancies was the most significant determinant of the variables tested in terms of accounting for inflows of A8 migrants and claimant count unemployment was also found to be an influence on WRS registrations. Registrations were higher where more job vacancies were listed and unemployment was lower. These patterns suggest that overseas workers may be most attracted to places where there are the greatest labour market openings for them. Employers and labour providers may also play a role in these trends since they may try and attract migrant labour to particular places in response to labour and skills shortages.

This analysis has shed light on a very significant recently emerging immigration flow to the UK. It is hoped that this work can contribute to both our specific understanding of the nature of A8 migration trends to the UK and the more general relationship between international labour market migration and recessionary circumstances. This research can potentially inform how governments (UK and Scottish) approach immigration policy and how they and local authorities respond to flows. For example the analysis has shown the parts of the country and economy which have high and low absolute inflows of A8 migrants and their relative significance to regional and local labour markets and segments of the economy. The relative estimates may prove more useful for local authorities than relying on absolute numbers of registrations alone. For example they could help organisations to 'target' their resources and support services towards particular locations or industrial sectors. Local authorities and other organisations such as colleges can play an important role in helping migrants advance in the labour market, particularly if they are under-employed in the UK. This could be achieved through enhanced provision of and accessibility to services such as English language classes. For example English as a Second Language (ESL) classes often run at times and locations which made it difficult for workers to fit them round their working hours (Cook *et al*, 2010). Many local authorities are developing strategic responses to migration in order to sustain and grow their populations to counteract the challenges of an ageing population and to develop their local economies. Building a strong local population evidence base is an important element of these efforts and it is hoped that this analysis represents a useful contribution in this respect.

The research identified the agricultural sector as being reliant on migrant labour in spite of recession and high UK unemployment levels. This has implications for how the UK government might legislate for short-term immigration to address seasonal spikes in demand for labour in the agribusiness sector. The Seasonal Agricultural Workers Scheme currently permits Romanians and Bulgarians to enter the UK and work on farms on a short-term basis. However in 2011 only 21,250 SAWS permits were issued and the future of the scheme is uncertain. These findings could potentially be used to argue for continued or even extended provision for agribusinesses to draw on seasonal migrant labour. This is of importance because farmers in the UK report labour shortages, even with A8 workers potentially available to them (Local Government Association, 2009).

Conceptually, the research, in identifying and considering the uneven sectoral and spatial effects of recession on immigration patterns, has aided understanding of the nature of the relationship between international labour migration and business cycles. East-Central European migration has been shown to serve two distinct labour market functions. In most cases migrants act as a flexible supply of labour that can be drawn on in times of economic boom when labour demand exceeds local labour supply. The demand for migrant labour serving this function is highly sensitive to business cycles since recession results in immigrants no longer being required to boost labour supply (this was shown to be the case in sectors such as construction, see Table 7). In sectors where employers find it difficult to source labour regardless of prevailing economic conditions overseas workers form a more important if not core part of the workforce. Demand for this 'complementary' labour is, in turn, less sensitive to recession.

Despite its significant flaws the Worker Registration Scheme formed the basis of this research as it represents the only dataset that permits analysis of spatial, sectoral and temporal trends in A8 migration flows to Britain. The results from the latest decennial UK national census (held in 2011) should be available in the near future. This will contain a wealth of information for researchers on A8 migrants since the census contains much more detailed information than the WRS and has much wider coverage as it surveys the whole population and not just those East-Central Europeans who were employed and completed a WRS form. A valuable piece of future research in this respect could be analysis which sets out the socio-demographic and labour market profile of citizens from the A8 states in Britain and compares their labour market profile against other migrant groups and the indigenous workforce generally. Romania and Bulgaria entered the European Union at the beginning of January 2007. Under European legislation transitional arrangements limiting their access to the UK labour market must expire at the end of 2013. Future research could explore the nature of the migration flows which result from this development and consider the extent to which they mirror or differ from the trends in A8 migration to the UK between 2004 and 2011 which have been detailed in this report.

REFERENCES

Aslund, A. (2010). *The last shall be first: the East European financial crisis, 2008-10.* Pearson Institute for International Economics. Washington DC.

Bauere, V., Densham, P., Millar, J. and Salt, J. (2007). 'Migrants from Central and Eastern Europe: local geographies'. *Population Trends* volume 129. pp 7-19.

Blanchflower, D., Saleheen, J. and Shadforth, C. (2007). 'The Impact of the Recent Migration from Eastern Europe on the UK Economy'. Institute for the Study of Labour. Discussion Paper Number 2615. Available at: ftp://ftp.iza.org/dps/dp2615.pdf Accessed 6th January 2012.

Cangiano, A., Shutes, I., Spencer, S. and Leeson, G. (2008). *Migrant Workers in Ageing Societies.* Compas. Oxford.

Cook, J., Dwyer, P. and Waite, L. (2010). 'The Experiences of Accession 8 Migrants in England: Motivations, Work and Agency'. *International Migration* Volume 49 Issue 2. pp 54-79.

Dustmann, C., Frattini, T. and Halls, C. (2010). 'Assessing the Fiscal Costs and Benefits of A8 Migration to the UK'. *Fiscal Studies* Volume 31 Number 1. pp 1-41.

Fife Partnership. (2007). 'Migrant workers in Fife – Survey 2007'. Fife Research Co-Ordination Group. Available at: http://admin.1fife.org.uk/uploadfiles/publications/c64_MigrantWorkersSurveyKnowFifeFindingsV1_2.pdf
Accessed 6th January 2012.

Findlay, A. , Geddes, A. and McCollum, D. (2010). 'International Migration and Recession'. *Scottish Geographical Journal* Volume 126 Number 4. pp 299-320.

Glasgow City Council. (2007). 'A8 nationals in Glasgow'. Blake Stevenson's Report. Available at: www.improvementservice.org.uk/.../1848-a8-nationals-in-glasgow/
Accessed 6th January 2012.

Glossop, C. and Shaheen, F. (2009). '*Accession to Recession: A8 Migration in Bristol and Hull'.* Available at: http://www.centreforcities.org/771.html
Accessed 12th March 2012.

Green, A., De Hoyos, M., Jones, P. and Owen, D. (2009). 'Rural Development and Labour Supply Challenges in the UK: The Role of Non-UK Migrants'. *Regional Studies* Volume 43. pp 1261-1273.

Home Office. (2009). *Accession Monitoring Report May 2004 – March 2009.* Available at: http://www.bia.homeoffice.gov.uk/sitecontent/documents/aboutus/reports/accession_monitoring_report/report-19/may04-mar09?view=Binary
Accessed 17th March 2010.

Local Government Association. (2009). 'Impact of the recession on migrant labour'. Available at: http://www.partnershipdevelopmentproject.org.uk/The_impact_of_the_recession_on_migrant_labour1.pdf
Accessed 10th February 2012.

McCollum, D. and Findlay, A. (2011a). 'Employer and labour provider perspectives on Eastern European migration to the UK'. Centre for Population Change Working Paper Number 14. Available at: http://www.cpc.ac.uk/publications/2011_WP14_McCollum_Findlay.pdf
Accessed 20thJanuary 2012

McCollum, D. and Findlay, A. (2011b). 'Trends in A8 migration to the UK during the recession'. *Population Trends* 145. pp 1-13.

Mercia Research and Strategy. (2006). **'**The extent, size and characteristics of the migrant workforce in the Vale of Evesham'. Mercia Research and Strategy. Redditch.

Available at: http://www.wychavon.gov.uk/cms/pdf/wdc-rural-migrant-exec-summary-may06.pdf
Accessed 10th February 2012.

Migration Advisory Report. (2009). 'Review of the UK's transitional measures for nationals of member states that acceded to the European Union in 2004'. Available at: http://www.ukba.homeoffice.gov.uk/sitecontent/documents/aboutus/workingwithus/mac/a8-report/0409/review-transitional?view=Binary
Accessed 12th March 2012.

Office for National Statistics. (2008).'Regional Trends' Number 40, 2008 Edition. Available at: http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-54803
Accessed 19th January 2011.

Office for National Statistics. (2009a). 'LA classification'. Available at: www.ons.gov.uk/ons/guide-method/geography/products/area-classifications/rural-urbandefinition-and-la/rural-urban-local-authority--la--classification--england-/index.html
Accessed 13th May 2011.

Office for National Statistics (2009b). **'**Slowdown in the decline of the labour market'. News release. Available at: http://www.statistics.gov.uk/pdfdir/lmr1109.pdf
Accessed 26th March 2010.

Office for National Statistics (2009c). **'**The Impact of the recession on the labour market'. Available at: http://www.statistics.gov.uk/downloads/theme_labour/impact-of-recession-on-LM.pdf
Accessed 26th March 2010.

Office for National Statistics (2010). 'Population by country of birth and nationality from the Annual Population Survey'. Available at: www.ons.gov.uk/ons/search/index.html?contenttype=Publication&pubdateRangeType=allDates&newquery=%27Annual+Population+Survey%27&pageSize=50&applyFilters=true
Accessed 17th December 2010.

Office for National Statistics (2011a). Annual Population Survey. Employee Jobs by Industry. Available at: www.ons.gov.uk
Accessed 20th December 2011.

Office for National Statistics. (2011b). **'**Migration Statistics Quarterly Report Number 8, February 2011'. Available at: http://www.statistics.gov.uk/pdfdir/mig0211.pdf
Accessed 11th May 2011.

Office for National Statistics (2012). 'Mid-Year Population Estimates'. Available at: http://www.nomisweb.co.uk/
Accessed 6th January 2012.

Pollard, N., Latorre, M. and Sriskandarajah, D. (2008). 'Floodgates or turnstiles? Post-EUenlargement migration flows to (and from) the UK'. Institute for Public Policy Research. London.

Portes, J. and French, S. (2005). 'The impact of free movement of workers from Central and Eastern Europe on the UK labour market: early evidence'. Department for Work and Pensions. Working Paper Number 18. DWP. Leeds.

Rogaly, B. (2008). 'Intensification of Workplace Regimes in British Horticulture: The Role of Migrant Workers'. *Population, Space and Place* Volume 14. pp 497-510.

Salt, J. and Millar, J. (2006). 'Foreign labour in the United Kingdom: current patterns and trends'. Office for National Statistics. Labour Market Trends. Special Feature. October 2006.

Scullion, L. and Morris, G. (2009). 'Migrant Workers in Liverpool: A Study of A8 and A2 Nationals'. Salford Housing and Urban Studies Unit. University of Salford. Available at: http://www.shusu.salford.ac.uk/cms/resources/uploads/File/Liverpool%20migrant%20worker%20report.pdf
Accessed 12th March 2012.

Tamas, K. and Munz, R. (2006). **'**Labour Markets Unbound? EU Enlargement, Transitional Measures and Labour Market Effects'. Institute for Fiscal Studies. Stockholm.

Worcester Research. (2007). 'A study of migrant workers in Stratford-on-Avon District'. Available at: http://www.warwickshireobservatory.org/observatory/observatorywcc.nsf/0/E0649D8027A7C61380257314003A7ABF/$file/stratford%20draft%20version%2022%20june.pdf
Accessed 10th February 2012.

ESRC Centre for Population Change
Building 58, Room 2001
Faculty of Social and Human Sciences
University of Southampton
SO17 1BJ

T: +44 (0)2380 592579
E: cpc@soton.ac.uk
www.cpc.ac.uk

To subscribe to the CPC newsletter and keep up-to-date with research activity, news and events, please register online: www.cpc.ac.uk/newsletter

You can also follow CPC on Twitter, Facebook and Mendeley for our latest research and updates:

www.facebook.com/CPCpopulation

www.twitter.com/CPCpopulation

www.mendeley.com/groups/3241781/centre-for-population-change

The ESRC Centre for Population Change (CPC) is a joint initiative between the University of Southampton and a consortium of Scottish universities including St Andrews, Edinburgh, Stirling and Strathclyde, in partnership with the Office for National Statistics and National Records of Scotland.