Migrant Workers in the East Midlands Labour Market

A report for *emda*

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MIGRANT WORKERS IN THE EAST MIDLANDS LABOUR MARKET 2010

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Final Report

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CONTENTS

Acknowledgements

Summary

Introduction

In 2006 the Institute for Employment Research (IER) at the University of Warwick was commissioned to draw together and assess available intelligence on the size, profile and economic impact of migrant labour in the East Midlands economy. The findings of that study were published in early 2007 in a report entitled *Migrant Workers in the East Midlands Labour Market 2007*.

The report outlined how following the Accession of the so-called 'A8' countries of Central and Eastern Europe to the European Union (EU) in May 2004 the UK, and the East Midlands in particular, saw a substantial influx of migrant workers from these 'new' origin countries in addition to ongoing inflows of migrant workers from other parts of the world. Since that report was produced there have been some important economic and policy changes with the potential to impact on migration flows and on the labour market. In particular:

- the economic context has changed markedly with the onset of economic crisis and recession;
- more EU Member States have opened up their labour markets to A8 migrants (so increasing the number of 'alternative destinations' for prospective migrants); and
- substantial changes have been made to managed migration policy relating to migrant workers wishing to come to the UK from outside the European Economic Area (EEA).

In this changed economic and policy context it is important that a renewed assessment is made of the impact of migrant workers on the East Midlands labour market in order to inform the strategic and economic development activities of *emda* and partner organisations concerned with regional and sub-regional policy development.

In 2009 the IER at the University of Warwick was commissioned to provide an update of previous intelligence on the profile and economic impact of migrant labour in the East Midlands economy. The current report – *Migrant Workers in the East Midlands Labour Market 2010* – provides this updated assessment. As was the case previously, this study is desk-based, drawing on available evidence from secondary data sources (see Annex 1 for a review of the data sources used) and the academic and policy literature.

Migration and migrant workers: definitional issues

'Migration' is a term that is in widespread use, but is one that is inconsistently defined. Several different definitions of 'migrant' are used in the literature and this can lead to confusion in popular and policy debates. Global economic integration means that labour has become more mobile across international boundaries and it is with such international moves that this report is concerned (as opposed to internal moves within the East Midlands or the UK).

Most official national and international statistical bodies adopt the United Nations definition of an international 'migrant' – i.e. someone who changes his or her country of usual residence for at least a year. Whilst policies at both national and local levels have to adjust to changes in long-term international migration, many workers come to the UK for a shorter period in response to labour market opportunities - as in the case of workers from EU countries which are close together geographically and where international travel is relatively easy and cheap. Such short-term moves (sometimes referred to as 'circular migration') have not been

included in official statistics on migration, but the arrival of some of these workers is captured by administrative data sources.

The concern of this study is with 'migrant workers' who move from their country of usual residence and are in employment, or are seeking employment, in the East Midlands (irrespective of their intended or actual length of stay in the UK). Therefore it aims to derive a picture of the changing flows of migrants into the region, drawing upon a range of disparate (and sometimes inconsistent) data sources. It should be noted that there is much less information available on emigration and on the length of time migrants stay in the region.

The policy context for migration

Migration policy at EU and national levels sets the legal framework for migration. In examining migrant workers in the East Midlands there is an important distinction between the principle of 'free movement' within the EU and 'managed migration' of migrant workers from outside the European Economic Area to the UK.

The UK was one of only three of the existing Member States of the EU (along with Ireland and Sweden) to open its borders to migrant workers from the A8 countries (the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia) in 2004. Over the period from 2006 to 2009 the majority of the other pre-existing fifteen EU countries removed initial restrictions to free access, leaving only Germany (importantly the largest economy in the EU) and Austria with restrictions in place at the end of 2009.

There have been important changes in managed migration policy since the previous study was undertaken. Work permits and an array of other work and study routes to the UK have been replaced with the phased implementation from 2008 of a Points Based System (PBS) designed to meet UK skills needs – with an emphasis on highly skilled individuals to contribute to UK growth and prosperity and skilled workers (with a job offer) to fill specific gaps in the UK workforce.

The economic context for migration

Surveys of migrant workers indicate that economic motivations (i.e. working and earning) are the dominant reasons for migration. According to neoclassical economic theory migration (and subsequent return) decisions are based on individuals' rational assessment about maximising earnings from employment over a period (i.e. an individual would move for a more lucrative job and then return once target earnings have been achieved or economic conditions have improved). This suggests that migrant workers act in accordance with labour market opportunities in their origin country, the destination country and competing destination countries.

The large inflows of A8 migrants to the East Midlands (and to other parts of the UK) in the period from 2004 to 2006 (described in the previous report) coincided with three circumstances favouring migration from Central and Eastern Europe to the UK:

- a buoyant labour market in the UK;
- marked variations in relative unemployment rates between key migrant source countries (such as Poland) and the UK; and
- exchange rate differentials that favoured migration to the UK.

The UK and other EU Member States, along with most countries in other parts of the world, witnessed an economic downturn in 2008/09 - albeit some have fared worse than others.

Although the UK unemployment rate is lower than the EU average, in general, the 'gap' between economic circumstances between the UK and several A8 countries has narrowed and exchange rate differentials have become less marked. Hence the economic context for migrant workers coming to the East Midlands is less favourable than it was formerly. 'Buffer theory' suggests that migrant workers will return home at a time of recession, so freeing up jobs for the local population. However, as outlined above, the likelihood of migrant workers returning home in times of recession in the UK is also influenced by economic conditions in their home countries and in alternative destination countries.

Moreover, migrant workers do not make decisions solely on economic grounds; non-economic factors are important too. These non-economic factors may relate to family considerations, wanting to learn and practise a new language, or a desire for 'discovery' (especially amongst young people with no particular family ties or responsibilities). Social networks may perpetuate migration even when initial triggers (e.g. economic factors) that first prompted flows decline in importance. On the demand side of the labour market, employers may adjust their working practices to expect a continuing flow of migrants to meet their requirements for labour, in preference to local workers. These factors suggest that while a downturn in inflows to, and outflows from, the East Midlands might be expected in the context of recession, migration is not a 'tap' that turns on and off.

The changing volume and characteristics of migrant workers in the East Midlands

Data on National Insurance Number (NINo) allocations to overseas nationals from all parts of the world reveal a steady increase in immigration from 2002, peaking at 42,000 in 2007 (up from fewer than 20,000 in 2004) and then a decline to 33,000 in 2008, followed by some stabilisation in 2009. A marked downturn in moves to the East Midlands (and other parts of the UK) is also evident after 2006 and 2007 from the Worker Registration Scheme (WRS) data covering employees from A8 countries. Likewise there was a decline in Work Permit approvals (covering migrants from outside the European Economic Area [EEA]) after 2006.

The national origins of migrants coming to the East Midlands have changed substantially over the last decade. NINo allocations data shows that at the start of the decade, India, Portugal, Iraq, South Africa and Zimbabwe were the most common origins, but Poland became the largest country from 2004 onwards, with India remaining the second largest country of origin. India accounts for the largest single proportion of work permit approvals (three in every ten during the period from 2006 to 2008), with the Philippines and China accounting for the next largest shares. WRS data covering A8 migrants shows that Poles dominate A8 migration, with the second largest nationality being Slovaks. However, the proportion of WRS registrations accounted for by Poles has decreased markedly since 2007, while the numbers of Latvians and Lithuanians have been increasing recently.

Migrant workers are overwhelmingly young adults. This reflects the greater propensity for mobility – both internally and internationally – amongst young people. Males outnumber females amongst migrant workers. While the trend has been for an increase in the number of WRS registrations from females, the share of females amongst work permit approvals decreased between 2006 and 2008.

While all local authority districts in the East Midlands saw an increase in migrant workers in the years immediately after the expansion of the EU in 2004, the spatial distribution of migrant workers within the region is uneven. Data on NINo allocations to overseas nationals from all countries indicate that migrant workers are mainly concentrated in the larger cities (with Leicester as the largest single destination) and in the agricultural region of south-east Lincolnshire. Migrants arriving via different routes display different local distributions, with work permit approvals being more concentrated in the three largest urban centres (Leicester,

Nottingham and Derby) and A8 migrants having a more dispersed spatial distribution. Different national groups of migrants also display different local concentrations.

There are also important differences in the industrial and occupational distribution of migrant workers arriving in the UK via managed migration routes and A8 migrants. Work permit approvals in the East Midlands are concentrated in Health & Medical Services (albeit there has been a marked reduction in work permit approvals in this sector from 2006); Hospitality & Catering; Education & Cultural Activities; Manufacturing; and Administrative, Managerial & Business Activities. Nurses, Other Health-related, Managerial, Engineering, Research and Teaching Occupations predominate – although there has been a reduction in the number of nurses in recent years. Information from WRS registrations shows that migrants from A8 countries are concentrated in Agriculture, Food Processing, Manufacturing, Hospitality & Catering and Distribution-related industries. Many are agency workers (in Manufacturing and other industries), so indicating that agencies and other labour market intermediaries play a prominent role in facilitating access to employment by migrant workers. A8 migrants are also disproportionately concentrated in elementary and operative occupations.

Focus on selected migrant sending countries

Given the relative lack of information on outflows of migrant workers from UK data sources and in order to provide some richer insights into changes in migration in the context of recession, four case studies – focusing on Poland, India, the Philippines and Lithuania – drawing on the wider literature and country-specific data sources were undertaken. These four case study countries are all major source countries for migrants to the East Midlands but encompass some important differences in terms of geography and migration policy context: Poland and Lithuania are A8 countries within the EU, while India and the Philippines are more geographically distant countries where migrant workers to the UK are covered by managed migration policies.

The precise timing and severity of the recession in the UK and the different sending countries has resulted in fluctuations in the migrant flows from all four of the case study countries considered. With changing economic conditions, different migrant sending countries have enacted various, contrasting, policies towards their overseas citizens. Following outflows of migrants to the UK in the period from 2004 and as economic conditions in Eastern Europe improved, Poland and Lithuania began to encourage their citizens to return. The Philippines, conversely, have attempted to increase migration, with the hope that remittances will enable their economy to weather the recession.

The case studies of Poland and Lithuania show that these migrant workers appear to respond rapidly to changing conditions in their countries of origin. Relative improvements to the economies of Poland and Lithuania since Accession (prior to the economic crisis) have acted as pull factors to encourage migrants to return, although the scale of this return is somewhat debated. However, Lithuania, along with the other Baltic States, was particularly hard hit by recession, and subsequently inflows to the UK have increased once again. This illustrates why migrants from A8 countries are viewed as the most responsive to short-term fluctuations in conditions in the UK and their country of origin. Many of these migrants view their migration as temporary, and there is evidence of circular migration, where migrants return temporarily to their country of origin as conditions there improve relative to the UK, with the expectation that they will emigrate again in response to subsequent changes in the economy of either their home country or the UK (or elsewhere). Indeed, around three-fifths of all WRS registrants (covering all A8 countries) to the East Midlands planned to stay less than three months, and this proportion has increased over time; (although it should be borne in mind that intended and actual durations of stay may be quite different).

Migrants from both India and the Philippines have become a dominant group in a particular sector - IT in the case of Indians and health and social care, particularly nursing, in the case of migrants from the Philippines. However, while concentration in the expanding IT industry has allowed Indian migrants in the UK to remain relatively unaffected by the recession, the Filipinos in the UK have been hit not only by the recession, but by UK policies to cut the recruitment of nurses (except for those with certain particular specialist skills) from abroad. The latter instance illustrates the importance of policies in both destination and origin countries in shaping migration flows.

Employment of migrant workers in the East Midlands

Features of employment of migrant workers (defined as those born outside the UK) within a broader labour market context, including comparisons with the experience of UK-born workers, was explored using Labour Force Survey (LFS) data over the period from 2007 to 2009. Migrant cohorts arriving before 1992, between 1992 and 2003 and from 2003 onwards are distinguished.

Areas of employment (both industries and occupations) are described as 'migrant dense' (MD) if the share of employment for migrant workers arriving in the UK since 1992 exceeds the share of employment for the UK-born workforce.

MD industries include a number of Manufacturing industries (notably Food Processing and Clothing), Hotels & Restaurants, Transport, Storage and Communication. In general, MD industries have lost employment between 2007 and 2009 (albeit they are not the only industries to have done so), with the job losses being particularly marked for Manufacturing and Transport & Storage. The impact was broadly equal for migrants and non-migrants. Some other industries have continued to see an increase in jobs, but employment has grown faster for migrant workers than for the UK-born. This suggests that migrant workers in the East Midlands are being displaced from the MD industries most badly affected by the economic downturn and are moving into other industries.

At a broad level of disaggregation there are only two *MD occupations*: Process, Plant and Machine Operatives and Elementary Occupations (i.e. the two least skilled SOC Major Groups). Post-2003 migrants are much more likely than earlier migrant cohorts to work in such occupations, and, conversely, are less likely than earlier migrant cohorts to work in higher skilled employment. The bi-polar distribution of migrant employment in highest and lowest skilled jobs, which is apparent for earlier migrant cohorts, is not evident for this most recent cohort of post-2003 migrant workers. In Process, Plant and Machine Operatives, migrant employment declined between 2007 and 2009 while employment of UK-born workers increased. In contrast, within the small employment decline in Elementary Occupations, there was a shift in employment from UK-born to migrant workers.

It is clear that both migrant workers and UK-born workers have felt the impacts of recession. Despite the fact that some MD industries have been hard hit by the economic downturn, there is little or no evidence regarding the negative impact of migrant employment on UK-born workers. This lack of observable impact of economic migration on employment amongst UK-born workers confirms the findings of recent national studies. The employment of migrant workers has proved quite resilient, with migrant workers moving into different areas of work, especially in the service sector.

In general, higher levels of migrant employment do not appear to be associated with particularly marked or disproportionate adverse effects during recession. For example, at the local scale there is no strong relationship between changes in the numbers of migrant workers and unemployment change.

Migrant workers and wages

There have been concerns that an increase in migrant workers boosts labour supply and may lead to a general suppression of wage levels in those parts of the labour market where migrant workers are employed. In general, analyses of LFS and Annual Survey of Hours and Earnings (ASHE) data reveal that the effects of migration on overall average earnings within migrant dense areas of the labour market are relatively small.

Wages in MD occupations and industries are similar in the East Midlands and other parts of the UK. The narrower 'gap' between wages in MD occupations/industries and other occupations/industries that is evident in the East Midlands than in the rest of the UK, is a function of regional wages being lower than the national average in non-MD occupations/industries.

After controlling for differences in the composition of the workforce using multivariate regression techniques, adjusted relative wage differentials for people employed in MD occupations remain relatively stable over time for both the East Midlands and the rest of the UK, and increased migration after 2004 had no discernable effect. However after controlling for personal and job-related characteristics, the rate of growth of earnings in MD occupations relative to other occupations declined between 2003/4 and 2004/5 (i.e. at the time of free movement of A8 migrants). This decline was greater in the East Midlands than in the remainder of the UK and points to a widening of the earnings gap between MD and non-MD occupations. Beyond 2005, wage growth in MD occupations remained lower in the East Midlands compared to elsewhere in the UK.

There is evidence that wage growth declined as the economy moved into recession. This decline in wage growth was particularly apparent in MD occupations, and was greater in the East Midlands than in the rest of the UK. The decline in relative wages particularly affects more recent migrants: the labour market segmentation of these groups in areas of the labour market characterised by low quality jobs means that wider labour market conditions can influence wage relativities. The relative pay penalty associated with being a migrant worker has more than doubled since 2001/2, and this increase is greater in the East Midlands than in the rest of the UK. The sharpest decline in relative earnings was experienced by migrant workers who had lived in the UK for less than five years (but some weaker influences were evident for longer established migrants). This suggests that more recent migrants in less skilled occupations are particularly vulnerable to being paid at levels that may not constitute a 'living wage', with implications in terms of poverty.

Migrant workers' contribution to GVA

Estimates of the contribution made by migrant workers to regional Gross Value Added (GVA) presented in the previous study on *Migrant Workers in the East Midlands Labour Market 2007* have been updated using more recent data. As previously, three sets of estimates of the migrant contribution were developed:

- the base estimate - derived from the industrial distribution of migrant workers and regional GVA by industry data;
- a wage-adjusted estimate - taking into account the occupational specialisation of migrant workers (notably the concentration of most recent migrant workers in less skilled/lower paid occupations); and
- a LFS-reflated estimate adjusted for the potential undercount of migrant workers by the LFS.

The LFS-related estimates provide the best indication of the migrant contribution to regional GVA and so constitute the preferred measure for reporting.

In 2009, people born outside the UK contributed an estimated 10.0 per cent of the value of GVA in the East Midlands region. This figure is slightly higher than the estimated figure of 9.6 per cent (circa 2005), as reported in the previous study. Migrant contribution to GVA peaked at an estimated 10.6 per cent in 2008, declining slightly thereafter, concurrent with the impact effect of recession.

The concentration of recent migrant workers (i.e. the post 2003 migrant cohort) in lower value added industries and, more especially, in lower skilled/paid occupations is also an important factor influencing estimates of migrant workers' contribution to GVA.

Effect of the economic downturn and changes in numbers of migrant workers: future prospects for the East Midlands

During the recession the number of migrant workers arriving in the East Midlands has declined. This prompts the question as to whether this downturn is a permanent feature, or merely a temporary blip – with a revival of in-flows and an upsurge in demand for migrant labour resuming as the economy recovers.

While the overall demand for migrant labour was sustained during the recession, it is estimated that the need for workers with employment profiles characteristic of post-2003 migrant workers declined by 5-6 per cent during the period from the start of 2007 to the end of 2009. However, employment projections suggest that demand for migrant workers is likely to recover as the economy emerges from recession.

Migrant employment is concentrated in industries with high labour turnover, and employment in these industries increased during the recession. If the prime determinant of demand for migrant workers is the availability of job opportunities, then that demand is likely to remain robust. Matching the supply of migrant workers with demand will require the diversification of migrant workers into new areas of work. This can easily be facilitated by the expansion of the service sector which will increasingly provide opportunities in 'high turnover' industries (e.g. Distribution, Retailing, Hotels & Catering).

Obviously it is difficult to know what the volume, profile and labour market impact of migrant workers will be in the future. Uncertainty about the future numbers and characteristics of migrant workers emphasises the need to enhance the capability of the regional labour market and institutions to adapt to changing circumstances.

Comparisons with the previous report

The economic and policy context for labour migration has changed since the previous report, with the onset of global recession and with changes to migration policy – including the more widespread easing of restrictions on free movement of migrant workers from Central and Eastern Europe by more EU Member States and the introduction of the PBS in the UK. Unfortunately, data from the PBS has not been available for analysis in this study.

There is evidence for a reduction in inflows of migrant workers to the UK since the previous report, but the extent of return migration is difficult to measure and remains disputed. Moreover, the reduction in migrant worker inflows appears to be stabilising, rather than continuing. While some migrant workers – particularly those with free movement rights and where ease of travel is easiest – will have returned, others have remained.

The migrant contribution to regional output has increased slightly since the previous study. The continuing labour market segmentation of migrant workers in particular occupations and industries hit hard by the recession and with traditionally high labour turnover, and the marked concentration of more recent migrants (i.e. the post-2003 cohort) in less skilled occupations, have been contributory factors here. For this most recent migrant cohort the typical 'bi-polar' distribution of previous migrant cohorts (i.e. concentrations at the upper and lower ends of the skills spectrum) is not evident.

The spatial distribution of migrant workers across the region remains uneven. As previously, those migrant workers on work permits are disproportionately concentrated in the main urban centres in the west of the region, while there are some significant concentrations of A8 migrants in some rural, as well as urban, areas.

Conclusions and policy implications

Shortcomings in available data sources mean that it is difficult to make accurate estimates of the numbers of migrant workers in the East Midlands, and of changes therein. Yet it is clear that flows of migrant workers are shaped by economic circumstances and changes in policy. There is an ongoing need for improvements in statistics in order to monitor flows of migrant workers (as traditionally defined), as well as looking at 'mobility' more generally – particularly since such changes may have important sectoral, occupational and local impacts.

The results of the analyses of the employment of migrant workers underscore concerns that some employers may be using successive waves of migrants to fill jobs at the lower end of the labour market and are under-utilising their skills. This may have detrimental effects for the migrant workers themselves, who stand to gain in monetary, self-development and employment terms from improved utilisation of their skills, and for the longer-term development of the regional economy. Other research suggests that employers have a predominantly positive attitude towards migrant workers, but that some tend to have stereotyped negative views of UK-born workers – especially for less skilled jobs. While the latter group of workers may copy the more positive attributes of the former, it is also possible that as migrants become better established they may become more like UK-born workers – in turn fuelling demand for 'new' migrants.

On the basis of the sectoral, occupational and sub-regional analyses conducted for this report, the effects of recession cannot be particularly associated with migrant employment: higher migrant employment does not appear to have made matters worse. While both migrant workers and UK-born workers have suffered job losses in recession, overall migrant workers have proved resilient in moving into employment opportunities in other parts of the economy – particularly those characterised by higher labour turnover. This indicates that migrant workers may be less 'risk averse' than others in taking up employment opportunities – especially those where prospects are uncertain.

It appears that the recession has exacerbated slower and lower wage growth in MD occupations at the lower end of the occupational spectrum. Together with the increase in the relative pay penalty associated with being a migrant worker, this emphasises the importance of prioritising the enforcement of monitoring surrounding registration for NI/PAYE, the national minimum wage, and health and safety to ensure effective 'floors' in terms of the quality of employment among these vulnerable groups.

Looking ahead, changes in the sectoral and occupational distribution of employment have implications for the changing demand for migrant workers. While managed migration is likely to be of continuing importance in attracting highly skilled labour and in meeting shortages in

skilled occupations, it is likely that other migrant workers will continue to play a key role in those areas of employment typified by high turnover.

1.   Introduction

This report is concerned with providing an update of previous intelligence on the size, profile and economic impact of migrant labour in the East Midlands economy presented in *Migrant Workers in the East Midlands Labour Market 2007*. This was produced by the Institute for Employment Research (IER) at the University of Warwick drawing on evidence up to 2006 and published in early 2007.[1] The update draws on available evidence from secondary data sources and the academic and policy literature.

The previous report outlined how following the Accession of the so-called 'A8' countries of Central and Eastern Europe to the European Union (EU) in May 2004 the UK, and the East Midlands in particular, saw a substantial influx of migrant workers from 'new' origin countries in addition to ongoing inflows of migrant workers from other parts of the world. Since the previous report was produced the economic context has changed markedly with the onset of recession, more EU Member States have opened up their labour markets to A8 migrants (so increasing the number of 'alternative destinations' for prospective migrants) and changes have been made to managed migration for migrant workers from outside the European Economic Area (EEA) with the introduction of a Points Based System (PBS) (see section 2). In this changed policy and economic context it is important that a renewed assessment is made of the impact of migrant workers on the East Midlands labour market in order to inform the strategic and economic development activities of *emda* and partner organisations concerned with regional and sub-regional policy development.

Hence, the overarching *aims* of this *Migrant Workers in the East Midlands in 2010* report are to provide:

- an as up-to-date as possible assessment of the contribution of migrant workers (both those who have freedom of movement and those subject to entry via other routes) to the East Midlands regional economy; and
- an assessment of the impact of recession on the volume of migrant labour in the East Midlands – with a particular focus on employment and productivity in migrant dense sectors.

More specifically, drawing on a review of the academic and policy literature (covering a range of disciplines and secondary data sources), the study is intended to:

- use a range of data sources (each with their own strengths and weaknesses) to provide an updated estimate of the number of migrant workers in the East Midlands, by local area / sub-region, sector, occupation, country of origin, age, gender and ethnicity;
- estimate the contribution made by migrant workers to the regional economy in terms of Gross Value Added;
- provide an updated estimate of the impact of migrant workers on wage rates, with a particular focus on low paid occupations;
- discuss the effect of economic downturn of inflows of migrant workers to the East Midlands – drawing on concepts from the literature about what would be expected and an analysis of administrative sources; and
- discuss the possible impact of a reduction in the migrant workforce on the regional labour market – including the vulnerability and adaptive capability of particular sectors and local areas to deal with changes in migrants' stocks and flows.

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[1] Green A.E., Jones P.S. and Owen D.W. (2007) *Migrant Workers in the East Midlands Labour Market*, Final Report to the East Midlands Development Agency.

2.   Policy and Economic Background to Migration

Key points

- Global economic integration means that labour and capital have become more mobile across international boundaries.
- There is an important distinction between the principle of free movement within the European Union (EU) and managed migration of workers from outside the European Economic Area to the UK.
- The UK was one of only three of the existing Member States of the EU to open its borders to migrant workers from the 'A8' countries of Central and Eastern Europe in 2004.
- A Points Based System has been implemented to manage migration flows from outside the European Economic Area to the UK from 2008 in order to meet skills needs.
- Student migration plays an important role in some local economies, particularly in cities and towns with Universities. Students can play an important role in the workforce while they are studying as well as providing skills for future economic development.
- Large inflows of A8 migrants in the period from 2004 to 2006 coincided with a buoyant labour market in the UK and exchange rate differentials that favoured migration. The culmination of various events at this time made migration to the UK a particularly attractive option.
- All EU Member States witnessed an economic downturn in 2008, albeit some have fared worse than others.
- Although the UK unemployment rate is lower than the EU average, in general, the 'gap' between economic circumstances between the UK and several A8 countries has narrowed and exchange rate differentials have become less marked.

2.1   Introduction

Global economic integration has involved the increased mobility of capital and labour. Some labour markets have become global and international migration has become more complex. Developments in information and communication technologies have facilitated the ease of recruitment on an international basis and individuals who are internationally mobile are able to maintain close and regular contact with their country of birth. Moreover, in real terms international travel has become cheaper. However, this process has been an uneven one, with some restrictions placed upon the movement of labour. Such restrictions and associated changes in the thrust and detail of migration policies (at UK and EU levels, and in other countries) have important implications for the volume and geographical patterns of migrant flows and of the characteristics of migrant workers.

2.2   Migration policy

2.1.1   Free movement

Migration policy (at EU and national levels) sets the legal framework for migration flows and for recording of particular types of moves. Mobility of workers between EU Member States is a key element for the Europe 2020 Strategy[2] and the implementation of the European Employment Strategy, as underlined in the European Commission's Action Plan on Skills and Mobility in 2002, was designed to further the principle of the freedom of movement for

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[2]   COM (2010) 'Europe 2020: A strategy for smart, sustainable and inclusive growth', Brussels, 3.3.2010, COM (2010) 2020.

workers and underlined the importance of labour market mobility in advancing the European Employment Strategy. Labour mobility between regions and between jobs is seen as a crucial element in making Europe a more competitive, flexible and adaptable economy.[3]

In terms of migration policy there is an important distinction for the UK (and so for the East Midlands) between *free movement in the EU* (albeit with some restrictions [as outlined below]) and *managed migration policy* covering countries outside the European Economic Area (EEA). Further details underlying this distinction and implications for migration flows are outlined below.

Despite the fact that mobility was a founding principle of the EU, some restrictions on the movement of labour remain. At the time of successive EU enlargements there were concerns amongst the EU15 Member States that large in-flows of workers from Central and Eastern European countries would depress wages and impact negatively on employment rates of local workers. Under transitional arrangements Member States could restrict free movement of workers for five years from Accession[4] and an additional two years in case of serious disturbances of labour markets (i.e. for up to seven years in total). On 1 May 2004 ten Member States (the 'A10') joined the EU: the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia and Slovakia (known as the 'A8') and Cyprus and Malta.[5] On 1 January 2007 a further two Member States (known as the 'A2') joined the EU: Bulgaria and Romania. Details of transitional arrangements for the EU15 Member States (at May 2009) are shown in Table 2.1.

Table 2.1: **Transitional arrangements for A8 and A2 migrants in EU15 Member State labour markets, 1 May 2009**

Member State	A8 workers	A2 workers
UK	*1 May 2004 - Access – mandatory Worker Registration Scheme for employees*	*Restrictions with simplifications*
Ireland	1 May 2004 – Free access	Restrictions
Sweden	1 May 2004 – Free access	1 May 2007 – Free access
Finland	1 May 2006 – Free access	1 May 2007 – Free access
Greece	1 May 2006 – Free access	1 May 2009 – Free access
Spain	1 May 2006 – Free access	1 May 2009 – Free access
Portugal	1 May 2006 – Free access	1 May 2009 – Free access
Italy	27 July 2006 – Free access	Restrictions with simplifications
Netherlands	1 May 2007 – Free access	Restrictions with simplifications
Luxembourg	1 November 2007 – Free access	Restrictions with simplifications
France	1July 2008 – Free access	Restrictions with simplifications
Denmark	1 May 2009 – Free access	1 May 2009 – Free access
Belgium	1 May 2009 – Free access	Restrictions with simplifications
Austria	Restrictions with simplifications	Restrictions with simplifications
Germany	Restrictions with simplifications	Restrictions with simplifications

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[3]   COM (2007) 'Mobility, an instrument for more and better jobs: The European Job Mobility Action Plan (2007-2010)', Brussels, 6.12.2007, COM (2007) 773 final.

[4]   For the first two years following Accession access to the labour markets of the EU Member States that formed part of the EU before the respective Accessions has depended on the national law and policy of those Member States. Such national measures could be extended for a further period of three years.

[5]   Cyprus and Malta immediately became full members of the Free Movement of Workers Agreement (with no restrictions) upon Accession to the EU on 1 May 2004.

Table 2.1 shows that the majority of the EU15 retained restrictions on the right of workers from the A8 to legally work in their countries for at least two years: along with the UK, only Sweden and Ireland opened their labour markets in May 2004. After two years (i.e. in May 2006) Greece, Spain, Portugal, Finland and Italy opened their labour markets. The Netherlands and Luxembourg followed in 2007 and France in 2008. Then five years after Accession, in May 2009, Belgium and Denmark opened their labour markets. This left Germany (the largest economy in the EU) and Austria with restrictions. It is also pertinent to note that these two countries are geographically closer to the A8 countries. The UK (and Ireland) was amongst the countries that placed restrictions on A2 workers entering their labour markets.

The asymmetrical opening of the labour markets meant that workers from Central and Eastern Europe helped shape the geography of post-Accession moves and has tended to lead to concentrations in a few EU countries – including the UK.[6] It is partly for this reason that the inflow of Polish workers to the UK, which has a relatively open and de-regulated labour market, equals one of the largest migratory flows in UK history.[7] These flows have connected local and national labour markets across international borders.[8] The enhanced ease of movement of labour created a new form of transient migration, which has blurred the boundaries between the concepts of migration and commuting. In practice there may be important differences between intended and actual length of stay. For these reasons 'free movement' flows have proved to be particularly difficult to measure[9] so providing obstacles to policy makers responding and adapting to this large demographic change and its labour market consequences.

2.1.2 Managed migration policy

Free movement of EU citizens to the UK contrasts with 'managed migration' flows from outside the European Economic Area (EEA). Immigration regimes have changed over time: the immediate post World War II period to the early 1960s may be characterised as a liberal immigration regime of unrestricted access, then from 1962 to 1998 there were increasing restrictions and immigration controls, from 1989 to 1996 there was increasing preoccupation with asylum, while the period from 1997 to 2005 may be characterised as one of the 'grudgingly opening door'. The period from 2005 has been one of 'managed migration', with the post 2005 official attitude being: 'Making migration work for Britain'.[10] The PBS has been implemented over the period from 2008, so replacing an array of other work and study routes into the UK. The philosophy behind the four tiers of the PBS that are implemented at the time of writing are as follows:

- *Tier 1* – highly skilled individuals to contribute to growth and productivity.

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[6] For further discussion of these 'diversion effects' see Ruhs, M. (2006) Greasing the Wheels of the Flexible Labour Market: East European Labour Immigration in the UK, *COMPAS Working Paper* 38 , Centre on Migration, Policy and Society, University of Oxford.

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

[8] It is salient to note here that the A8 migration flows (of migrants from Central and Eastern Europe) were more spatially dispersed and showed a greater orientation to rural areas than previous flows of international migrants that tended to focus on major cities.

[9] Deficiencies in migration statistics have received increasing prominence in recent years – for example, see House of Commons Treasury Committee (2008) 'Counting the Population', *HC Paper* 183-I, The Stationery Office, London. http://www.parliament.the-stationery-office.co.uk/pa/cm200708/cmselect/cmtreasy/183/183.pdf

[10] This may be characterised as: 'Britain needs immigrants – however, only those immigrants that Britain needs' (personal communication, Professor Ron Skeldon, University of Sussex).

- *Tier 2* – skilled workers with a job offer, to fill specific gaps in the UK workforce – in accordance with an approved shortage occupation list,[11] largely following recommendations by the Migration Advisory Committee (MAC).
- *Tier 4* – students.
- *Tier 5* – youth mobility and temporary workers – allowed to work in the UK for a limited period to satisfy non-economic objectives.

The remaining tier is suspended at the time of writing:

- *Tier 3* – limited numbers of low-skilled workers needed to fill temporary labour shortages.

Migrant workers and students must gain points to qualify for each specific tier before they can apply for permission to enter, or remain in, the UK. Points are awarded, depending on the tier, based on the qualifications, experience, age, earnings, maintenance and language competence of the candidate. A notable change in the migration regime relative to the period covered by the previous study for *emda* is that international students now have the right to work in the UK for a limited period and this appears to have resulted in a substantial increase in applications to enter the UK under tier 4 of the PBS. This might indicate a regional shift in the balance of migration towards South Asia; (indeed in January 2010, following a marked rise in applications in the final quarter of 2009 compared with the final quarter of 2008, the UK Border Agency has temporarily suspended UK Tier 4 [General] Student Visa applications for the UK from northern India, Nepal and Bangladesh). (For further details of the role and importance of international student migration see Annex 2.)

In May 2010 the Conservative-Liberal Democrat Coalition Government announced a policy intention to place an annual limit on non-EU economic migrants admitted to UK. This illustrates the role of policy in helping to shape migration flows.

2.3 Changing economic circumstances

2.3.1 *International and national trends*

The marked inflows of A8 migrants to the East Midlands and the UK in the period from 2004 to 2006 outlined in the previous report coincided with a buoyant labour market (as well as restricted 'alternative destinations' as many EU15 countries retained restrictions on migrant workers from Central and Eastern Europe – as highlighted in Table 2.1). This emphasises that economic conditions and the policy framework interact to shape the volume, direction and characteristics of migration flows. From 2008 economic conditions have changed dramatically with the economic downturn and recession. Whereas in a period of economic growth there was little, if any, evidence of negative impacts of migrant workers on the economy and the labour market, in the changed economic context there are renewed concerns about the impact of immigration at national, regional and local levels, with particular emphasis on competition for jobs between migrant workers and the UK-born population (or UK nationals) and possible depression of wage levels if migrant workers are willing to work for lower wages and under worse conditions than their UK counterparts. In turn, such a situation raises concerns about reduced employment levels and a reinforcement of the 'low pay-low skill equilibrium'. A separate issue is the use of 'posted' labour by international contractors which prompted wildcat strikes at Immingham and other power

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[11]   There is scope for the list of approved 'shortage occupations' to change over time. For example, in April 2009 the list of shortage occupations was adjusted to include Care Assistants and Home Carers at a reduced qualification and experience threshold than had been the case previously. For the shortage occupation list at December 2009 see: http://www.bia.homeoffice.gov.uk/sitecontent/documents/workingintheuk/shortageoccupationlist.pdf The list includes selected scientific, engineering, medical, technician, nursing and caring occupations with particular specialisms.

stations around the UK in early 2009, highlighting concerns about competition for jobs between local workers and those coming to the UK from elsewhere.[12] This report examines the evidence for the East Midlands relating to some of these concerns.

However, economic conditions have changed markedly not only in the UK, but also elsewhere. Table 2.2 shows employment rates and unemployment rates, and recent changes therein for EU economies. Member States are ranked on the latest unemployment rates (generally relating to late 2009). A8 and A2 countries are distinguished in italics.

Table 2.2:   Employment and unemployment rates and recent change in EU Member States

Member State	Period	Employ-ment rate (%)	Change on year (%)	Period	Unemploy-ment rate (%)	Change on year (%)	Unemploy-ment rate 15-24 (%)
Latvia	*Jul-Sep 09*	*59.8*	*-9.2*	*Nov-09*	*22.3*	*12.1*	*43.6*
Spain	Jul-Sep 09	59.7	-4.8	Nov-09	19.4	5.4	39.4
Estonia	*Jul-Sep 09*	*63.4*	*-7.0*	*2009 Q3*	*15.2*	*8.7*	*32.1*
Lithuania	*Jul-Sep 09*	*60.4*	*-4.6*	*2009 Q3*	*14.6*	*8.2*	*:*
Slovak Republic	*Jul-Sep 09*	*60.1*	*-3.0*	*Nov-09*	*13.6*	*4.6*	*31.8*
Ireland	Jul-Sep 09	61.8	-6.2	Nov-09	12.9	5.2	28.8
Hungary	*Jul-Sep 09*	*55.5*	*-1.8*	*Nov-09*	*10.8*	*2.7*	*28.9*
Portugal	Jul-Sep 09	65.8	-2.3	Nov-09	10.3	2.4	21.5
France	Jul-Sep 09	64.6	-0.8	Nov-09	10.0	1.7	24.9
Eurozone	Apr-Jun 09	64.9	-1.2	Nov-09	10.0	2.0	20.2
Greece	Jul-Sep 09	61.7	-0.5	2009 Q3	9.7	2.2	:
Total EU15	Apr-Jun 09	64.8	-1.2	Nov-09	9.5	2.0	20.0
Finland	Jul-Sep 09	69.3	-2.8	Nov-09	8.9	2.2	23.1
Sweden	Jul-Sep 09	72.9	-2.8	Nov-09	8.9	2.1	25.1
Poland	*Jul-Sep 09*	*59.9*	*-0.1*	*Nov-09*	*8.8*	*2.0*	*22.6*
Italy	Jul-Sep 09	57.5	-1.5	Nov-09	8.3	1.2	26.1
Belgium	Jul-Sep 09	61.4	-1.2	Nov-09	8.1	1.2	21.8
Czech Republic	*Jul-Sep 09*	*65.2*	*-1.5*	*Nov-09*	*7.9*	*3.4*	*20.1*
UK	**Jul-Sep 09**	**69.8**	**-1.7**	**Nov-09**	**7.9**	**1.9**	**19.7**
Bulgaria	*Jul-Sep 09*	*63.1*	*-1.9*	*Nov-09*	*7.8*	*2.7*	*19.0*
Germany	Jul-Sep 09	71.0	-0.3	Nov-09	7.6	0.5	10.2
Denmark	Jul-Sep 09	76.3	-2.3	Nov-09	7.2	3.4	12.6
Romania	*Jul-Sep 09*	*60.4*	*-0.1*	*2009 Q3*	*7.2*	*1.5*	*:*
Malta	Jul-Sep 09	55.1	-1.0	Nov-09	7.0	0.8	13.8
Slovenia	*Jul-Sep 09*	*68.3*	*-1.8*	*Nov-09*	*6.8*	*2.6*	*15.7*
Cyprus	Jul-Sep 09	70.0	-1.0	Nov-09	6.2	2.5	16.5
Luxembourg	Apr-Jun 09	65.7	1.3	Nov-09	6.0	0.8	17.8
Austria	Jul-Sep 09	72.3	-0.5	Nov-09	5.5	1.5	12.0
Netherlands	Jul-Sep 09	77.0	-0.5	Nov-09	3.9	1.2	7.7

Source: Office for National Statistics Labour Market First Release, January 2010 - taken from '19: International Summary', as published by EUROSTAT. Youth unemployment is taken directly from Eurostat.
Note: ':' denotes 'not available'

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[12]   See http://news.bbc.co.uk/1/hi/england/humber/7869873.stm

It is notable that in virtually all countries youth unemployment rates are considerably higher than the aggregate unemployment rate. While this reflects the fact that young people have been particularly hard hit by recession, it is of particular importance from a migration perspective because young adults are the most mobile section of the population. Across the EU the youth unemployment rate in November 2009 was 20 per cent and in the UK the rate was only marginally lower. However, in several A8 countries the youth unemployment rate is higher than the EU average – most markedly so in Latvia where the youth unemployment rate exceeded 40 per cent at this time.

The UK unemployment rate remains lower and the employment rate higher than the EU average. The increase in the unemployment rate in the UK from late 2008 to late 2009 was similar to the EU average, while the decrease in the employment rate was slightly greater than the EU average. The Member States with the highest unemployment rates are Latvia, Spain, Estonia, Lithuania, the Slovak Republic and Ireland (i.e. three of the A8 economies), and it is these Member States that have witnessed the highest increases in unemployment over the year. Poland – which has been the largest single source of migration to the UK in recent years (as outlined in section 5) - has a higher unemployment rate, and a markedly lower employment rate than the UK. According to these figures the experience of the UK is by no means exceptional vis-à-vis other EU Member States.

Figure 2.1 traces trends in exchange rates for the Polish Zloty and the Euro vis-à-vis Sterling. The number of Polish Zlotys to the £ peaked at the time of the A8 Accession in 2004, at over 7 Zlotys to the £. Thereafter there was some reduction, and this was particularly pronounced during 2007 and 2008, with 4.3 Zlotys to the £ in December 2008. An upturn followed, but during 2009 the exchange rate remained below the levels experienced in the period from 2005 to early 2007. The trend in the number of Euros to the £ has shown somewhat less volatility, but the marked reduction in the strength of Sterling vis-à-vis the Euro from September 2007 to early 2009 is evident. These changes in exchange rates suggest the potential financial gain to be realised by taking a job in the UK has become less pronounced since the time of Accession of the A8 countries.

Figure 2.1:   Exchange rates: Polish Zloty and Euro to Sterling, 2000-2010
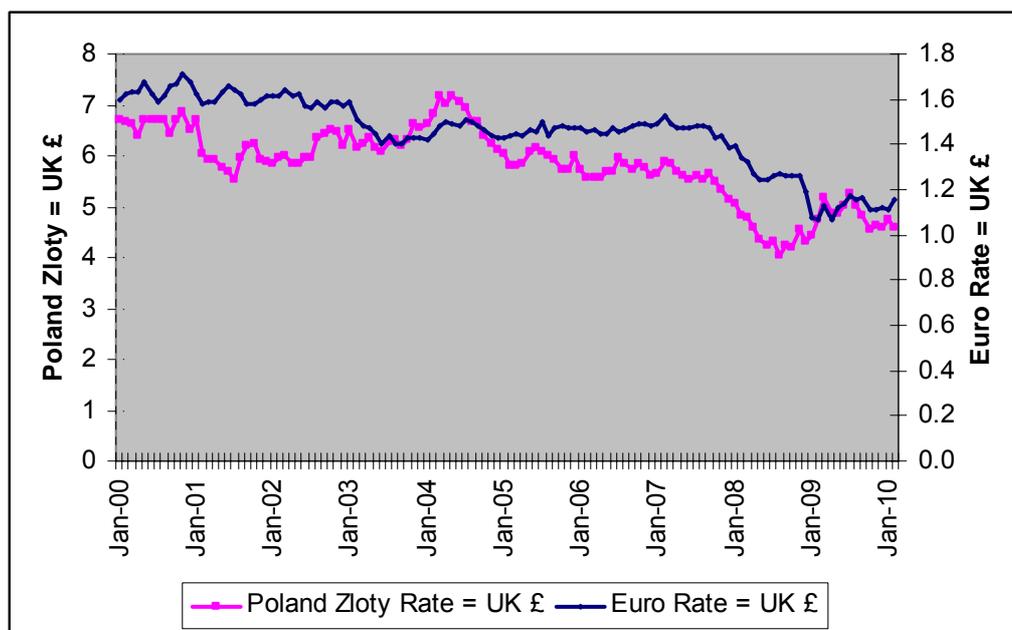
Source: UK Trade Info, HM Revenue & Customs.

2.3.2   Regional trends

In common with other regions of the UK, deterioration in labour market conditions was evident in the East Midlands from 2008. According to the Annual Population Survey, in the year from April 2004 to March 2005 the unemployment rate for people of working age in the East Midlands was 4.3 per cent. By the year ending July 2009 the unemployment rate for people of working age in the East Midlands had risen to 7 per cent (similar to the UK rate). The number of working age individuals in the region who were unemployed rose from 87,300 to 155,500 over the same period.

The full impact of the recession on the regional economy and labour market is not known as yet. What is clear, however, is that the recession in the region has been broad: it has affected all local areas and most sectors. By late 2009 there was some indication from business surveys that economic conditions in the region were improving slowly, but that levels of activity remained relatively low and had certainly not recovered to pre-recession levels. Businesses dependent on discretionary expenditure continued to report difficult conditions. The retail sector and hotels & restaurants have been adversely affected by the decline in consumer expenditure. The latter is of particular importance in providing employment opportunities for migrant workers.

As nationally, sectors such as manufacturing and construction in the East Midlands have seen job losses during the recession. Manufacturing remains more important in the East Midlands than nationally in terms of the share of total jobs that it accounts for. Some parts of manufacturing remain strong, but jobs have been lost disproportionately at the less skilled end of the occupational spectrum where migrant workers are concentrated (as outlined in sections 5.5 and 7). In some parts of manufacturing it is likely that recession has exacerbated pre-existing structural weaknesses.

It is especially difficult to gauge the importance of migrant employment in construction, given the importance of self-employment in this sector, but it is evident that employment prospects have contracted markedly in both the residential, commercial and industrial segments of the construction sector.

To date (i.e. at the end of May 2010) the private sector has borne the brunt of job losses. However, looking forward, the public sector is likely to be hard hit in the face of budgetary constraints. Even with economic recovery, it is likely to be some time before employment levels recover to those experienced before the economic crisis.

2.4   Conclusions

Globalisation of economic activity and increasing ease of travel have meant that international migration is increasing and the share of migrants in the total population is growing in most countries of the world. In the EU, there is also a view that there is a need to increase labour migration in order to increase productivity and labour market flexibility to levels comparable to those prevailing in the USA. Though barriers to international mobility have been steadily reduced, inter-country mobility within the EU remained low until the expansion of 2004, after which large numbers of workers from A8 countries migrated to the UK, Ireland and Sweden (the only countries to open their labour markets to them initially). At the same time, the pressure of migration to Europe from the less developed countries has continuously increased.

In many EU countries, unemployment (especially for young people) remains stubbornly high and hence there is the potential for conflict over jobs going to migrant workers at the expense of local workers. At both EU and national levels, governments have responded by attempting to manage migration. The aim has been to facilitate the inter-EU migration of less

skilled people to match the pattern of labour demand but to permit only higher-skilled migrants from outside the EU.

There is evidence that labour migrants respond to economic differentials, mainly where these are extreme (as in the case of the A8 countries). There are no clear indicators as to how the international pattern of migration will respond during the slow recovery from the severe economic recession of 2008/9.

3.   Literature review

Key points

- According to neoclassical economic theory migration decisions are based on individuals' rational decisions about maximising earnings.
- 'Buffer theory' suggests that migrant workers will return home at a time of recession, so freeing up jobs for the local population.
- Migrant workers perceive opportunities in the light of socio-economic conditions in the origin country, the destination country and competing destination countries. Hence, the likelihood of migrant workers returning home in times of recession in the destination country is also influenced by economic conditions in two, three or more countries.
- When origin and destination countries are close together – as in the case of A8 and other EU countries - short-term moves (sometimes referred to as 'circular migration') become easier.
- Social networks may perpetuate migration even when initial triggers (e.g. economic factors in this case) that first prompted flows decline in importance.
- Agencies and other labour market intermediaries play a prominent role in facilitating access to employment by migrant workers. They may act to regulate the supply of flexible and migrant labour to match the demands of employers.
- There are concerns that employers may be using successive waves of migrants to fill jobs at the lower end of the labour market and under-utilising their skills. This may have detrimental effects for the longer-term development of the regional economy.
- Research suggests that employers have a predominantly positive attitude towards migrant workers, but tend to have stereotyped negative views of native UK workers – especially for less skilled jobs. While the latter may copy the more positive attributes of the former, as migrants become better established, they may become more like UK-born workers.

This section presents a review of the evidence on two related themes: first, frameworks which have been used to understand changing migration stocks and flows with changing economic circumstances, and secondly, the economic and labour market impacts of such changes in migrant workers.

3.1   Understanding migration stocks and flows

3.1.1 Economic and non-economic factors

There is a long, rich and wide-ranging social science tradition of theorising and explaining migratory flows. Frameworks used run from push-pull explanations, to uneven economic development, human capital theory, and social network theory with migrants being viewed either as individuals, members of family units, or as being set in a nexus of institutional and structural forces. All of these theories are relevant to understanding the flows of migrant workers into and out of the UK and their experiences within the East Midlands labour market.

A neoclassical perspective[13] suggests that migration and return decisions are based on rational cost benefit evaluations in the context of the goals of maximising anticipated lifetime earnings. Other economic theorists contend that migration results from market failures in the countries of origin and migrants return once they have achieved their target savings.

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[13]   Sjaastad L.A. (1962) 'The costs and returns of human migration', *Journal of Political Economy* 70, 80-93.

Surveys of migrant workers indicate that economic motivations (i.e. working and earning) are the dominant reasons for migration amongst migrant workers.[14]

Social and cultural factors - including joining family members, travelling and seeing another country,[15] improving language skills, etc – are also influential in migration decisions of some individuals, but generally are of secondary importance. However, it is important that such factors are not overlooked; social and psychological factors associated with migration can add value to a macroeconomic perspective. Moreover, migrants are heterogeneous: each individual migrant has his/her own biography and story, in which different factors (economic, social and familial) are more or less important in decision-making.

The ongoing role of social networks is also an important consideration. Such networks play a key role in understanding the spatiality of migration flows[16] and in affecting migrant decision making by providing information and facilitating adjustment.[17] Once started, community and migrant organisations may help to sustain networks, and some social networks may transform themselves into migrant brokers. It is also the case that through the different stages of the migration process, migrants are creating and recreating networks, which in turn facilitate and influence migration and labour market decisions. As McGovern (2007)[18] points out, each act of migration creates additional social ties for future migrants, so extending the range of other migrants. These may serve both to ease recruitment, but may also pose problems for retention.[19] The salient point here is that social networks may perpetuate migration even when initial triggers (e.g. economic factors in this case) that first prompted flows decline in importance. Likewise, cautioning against viewing migration solely in economic terms as a disequilibrium phenomenon, Pijpers (2008)[20] highlights the ambiguities associated with migration, arguing that 'orderly' moves in response to economic factors do not correspond with 'messy' real East-West migration dynamics in the EU, which are foremost temporary and circulatory in nature.

Nevertheless, in relation to labour migrants, economic factors generally receive foremost attention. A review of the literature suggests that key economic 'push' factors from origin countries include a lack of life chances, lower wages and living standards and a lack of available opportunities to utilise skills in the home country (often as a consequence of high unemployment). Key economic 'pull' factors include higher wages and job opportunities, and the financial returns that might be realised in the short- or medium-term.

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[14] For example, see Green A.E., Jones P.S. and Owen D.W. (2007) *The economic impact of migrant workers in the West Midlands*, West Midlands Regional Observatory, Birmingham; Green A.E., Owen D.W. and Jones P.S., with Owen C., Francis J. and Proud R. (2008b) *Migrant workers in the South East Regional Economy*, South East England Development Agency, Guildford.

[15] Some migrants who initially come to the UK for purposes of 'exploration'/'discovery' (i.e. to travel and to experience life in the UK) may subsequently decide to settle permanently, while for others short-term migration to the UK may be a precursor to migration to other destinations – see Williams (2007) 'Listen to me, learn with me: International migration and knowledge', *British Journal of Industrial Relations* 45, 361-82.

[16] Epstein G.S. (2008) 'Herd and network effects in migration decision-making', *Journal of Ethnic and Migration Studies* 34, 567-83.

[17] However, network externalities are not always positive – e.g. a continuing flow of migrants may inflate competition for jobs and lead to tensions between the local population and migrants.

[18] McGovern P. (2007) 'Immigration, labour markets and employment relations: problems and prospects', *British Journal of International Relations* 45, 217-35.

[19] Pemberton S. and Stevens C. (2009) 'The Recruitment and Retention of Central and Eastern European Migrant Workers in the United Kingdom: A Panacea or a Problem Under the New Policies of 'Managed Migration'?*' Regional Studies*, First published on 27 November 2009 (iFirst).

[20] Pijpers R. (2008) 'Problematising the 'orderly' aesthetic assumptions of forecasts of East-West migration in the European Union', *Environment and Planning A* 40, 174-88.

3.1.2 Recession and migration

Of particular importance here, given the economic crisis are theories and evidence relating to the impact of recession on migrant workers. The concept of 'buffer theory' suggests that migrant workers will return home at a time of recession, so freeing up jobs for the local population. In a paper placing migration in the recession that commenced in 2008 in a broader historical and theoretical context by analysing evidence on migration flows during previous economic downturns in the UK and Europe, and considers implications from the past for the present, Latham *et al.* (2009)[21] suggest that on the basis of past experience, immigration tends to fall as unemployment rises, but only to a limited extent, and then it tends to pick up again before an improvement in the employment situation. So rather than stimulating large outflows of migrant workers, it is suggested that after an initial outflow, there are unlikely to be increasing numbers of migrant workers leaving the UK.

In a review of migration and the economic downturn, Papademetriou *et al.* (2009)[22] note that the factors affecting the likelihood that an economic downturn in destination countries will shape migration decisions include the relative importance of economic factors vis-à-vis other considerations (e.g. social, cultural and political [as outlined above]) and the extent to which an 'opportunity differential' remains. The migrant worker has a 'dual (or triple) frame of reference', encompassing the current destination country, alternative destination countries and the origin country, and 'opportunity differentials' are perceived in light of all of these. In relation to changing economic conditions, the extent to which origin and destination countries' economic cycles are aligned is crucial. Migrant workers may not leave their destination country to return home unless labour market prospects in the origin country are substantially better. However, alongside such 'external' influences relating to economic conditions in origin and destination countries, it is also important that 'internal' influences, such as disillusionment, poor working conditions, etc, are also recognised as important factors in migration decisions.[23]

Migrants' intentions are a further important consideration. Those migrant workers who intended to migrate for the long-term or permanently may be less inclined to return to their origin country in the face of an economic downturn than those who had intended to stay on a temporary basis only. Likewise the stronger the ties a migrant worker has in the destination country, the more likely it is that the migrant worker will remain rather than return to the origin country. The expense of returning to the origin country is a further consideration; here it is salient that 'circular' migration (i.e. typically short-term 'shuttling' between countries[24]) is easier when the destination and origin countries are geographically close. It is salient to note here that a key feature of the migration of so called 'free movers' within the EU has been distinctively informal migration strategies – leading to expectations of continuing change and fluctuation in the nature and volume of migration flows in response to changing economic conditions.[25]

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[21] Dobson J., Latham A. and Salt J. (2009) *On the move? Labour migration in times of recession*, Policy Network paper, London.
http://www.policy-network.net/uploadedFiles/Publications/Publications/On%20the%20move%20-%20Labour%20migration%20in%20times%20of%20recession.pdf

[22] Papademetriou D.G., Sumption M. and Somerville W. (2009) *Migration and the Economic Downturn: What to Expect in the European Union*, Migration Policy Institute.

[23] Coats, D. (2008) *Migration Myths: Employment, Wages and Labour Market Performance*, The Work Foundation, London.

[24] Indeed, it has been argued that those undertaking such moves should be treated as 'temporary workers' rather than 'migrants' (see Blanchflower D. and Shadforth C. [2009] 'Fear, unemployment and migration', *Economic Journal* 119, F136-F182.)

[25] Sumption M. and Somerville W. (2009) *The UK's New Europeans: Progress and challenges five years after recession*, Equality and Human Rights Commission Policy Report, Migration Policy Institute, Washington DC.

Evidence at national level concerning A8 migrants covered by the Worker Registration Scheme (WRS) (see section 4 for further details) indicates that in the third quarter of 2009 there were just over 29,000 initial applications to the WRS, compared to over 41,000 in the third quarter of 2008 and 57,000 in the third quarter of 2007.[26] However, much of this decline is due to reduced applications from Poland (see section 5.2 for further details).

In a study concerned with projections of migration inflows under alternative scenarios for the UK and world economies, NIESR suggest the need for a downward revision to migrant projections of around 360,000 by 2015 as a result of the downturn, reducing trend growth by 0.1 to 0.15 per cent per year until 2015.[27] The study also pointed out that the stock of migrants depends on the speed of reaction to economic events and the net flow of migrants, with stock adjustment being more rapid in A8 countries in comparison to the other source regions (e.g. parts of the New Commonwealth). Given the origin profile of migrants varies between local areas, this might suggest that, holding all other factors constant, local areas with a high share of migrants from A8 countries might be most vulnerable to a downturn in the number of migrants.

3.2   Economic and labour market impacts

3.2.1   Changes in migration stocks and flows

A second study on recession and migration commissioned by the Department for Communities and Local Government builds on methodologies utilised by IER in studies of migration and looks at the regional and sectoral distribution of migrants in the UK, the contribution of migrants to GVA, the economic outlook for UK regions and sectors, the effects of the recession on migrant inflows and the risks to regional economic performance.[28] The analyses highlight how several of the sectors that have suffered in recession in the short-term are 'migrant dense' – notably Manufacturing, Construction and Business Services. It is suggested that the population of migrants is likely to fall significantly only in those places where demand for labour is also falling as a result of recession. More generally, it is also important on the basis of non-economic,[29] as well as economic, considerations.

The point raised above about differential local impacts is highlighted in a study published by the Centre for Cities.[30] The report examining the differential impacts of changing labour market and migration dynamics on two cities – Hull and Bristol – indicates how in Hull migrants are predominantly recruited through agencies and employed in factory work, while in Bristol there is greater evidence of settlement and of migrants with higher skills. It is

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[26]   Home Office and ONS (2009). *Control of Immigration: Quarterly Statistical Summary, UK, July-September 2009.*

[27]   NIESR (2009) *Projections of migration inflows under alternative scenarios for the UK and world economies* - Economics paper 3, Communities and Local Government, London.
http://www.communities.gov.uk/publications/communities/projectionsmigration

[28]   Wilson A. and Phillips M. (2009) *Regional Economic Performance: A migration perspective, n the move? Labour migration in times of recession*, Economics Paper 4, Communities and Local Government, London.
http://www.communities.gov.uk/publications/communities/ecoperformancemigration4

[29]   For example, in accordance with family and friendship ties, a desire to learn English, etc. Examples of studies addressing these themes include: Finch T., Latorre M., Pollard N. and Rutter J. (2009) *Shall We Stay or Shall We Go? - Re-migration trends among Britain's immigrants*, ippr, London.

[30]   Glossop C. and Shaheen F. (2009) *Accession to Recession: A8 migration in Bristol & Hull*, Centre for Cities, London.
http://www.centreforcities.org/assets/files/Accession%20to%20Recession%20.pdf

suggested that recession will have rather different impacts in the two cities, in accordance with different migrant and sectoral characteristics.

3.2.2 *Understanding sectoral and occupational concentrations of migrant workers*

Various studies have highlighted how migrant workers are concentrated in particular sectors and occupations. For example, a review by the Local Government Association (2009)[31] highlighted sectors identified by the MAC as frequently using migrant labour: Social Care, Food Processing, Agriculture, Construction, Hospitality, Financial Services and Health. As noted in sections 5 and 7, A8 migrants/more recent migrants, in particular, are concentrated in less skilled occupations in sectors such as Manufacturing and Construction that have been particularly hard hit by recession. To some extent, then, migrant workers have become concentrated in jobs that other workers leave behind.[32] The concept of labour market segmentation[33] has been used to explain the continuing concentration of migrant workers in some industries and occupations. A key question in the context of economic crisis is whether segmentation is challenged and reduced.

In this secondary labour market, characterised by high proportions of entry level jobs, high turnover and unattractive working conditions, and where flexibility (e.g. to provide cover for peaks in production[34]) is required, employment agencies play a key role. Nathan (2008)[35] has guesstimated that between 40 per cent and 50 per cent of A8 migrant workers in the UK work for, or through, agencies. In the US, Peck and Theodore (2007)[36] argue that agencies are embedding themselves within the American labour market – at micro level (meeting the needs of individual enterprises) and at macro level – mediating macroeconomic pressures and socio-economic risks across the labour market as a whole. It is not in the interests of agencies to 'over supply' workers; hence a relatively rapid adjustment to changing economic conditions would be expected. However, whereas temporary workers may be the first to be lost initially at a time of economic downturn, they argue that in recoveries employers add temporary workers in advance of permanent employees, precisely because of their flexibility. Hence, employers may favour temporary employment over permanent contracts during a period of high demand, which may result in some businesses replacing permanent staff with externalised agency labour. In the context of a persistent demand for 'mediated flexibility' migrant workers who are available on a temporary basis represent an attractive proposition for employers. Agencies can play a similar role in the UK in shaping the ways in which local labour markets operate and this may have important implications for some parts of the East Midlands labour market, such as in agriculture and food-processing in Lincolnshire.

3.2.3 *Employers' perspectives and implications*

The methodology adopted for this report is entirely desk-based: no primary research has been undertaken with either migrant workers or employers. This sub-section summarises some of the key themes from research which has concentrated on employers' perspectives on migrant workers – particularly in those less skilled roles that have been 'hard-to-fill'.

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[31] Local Government Association (2009) *The impact of recession on migrant labour*, Local Government Association, London.

[32] McGovern P. (2007) *op cit.*

[33] Piore M. (1979) *Birds of Passage: Migrant Labour and Industrial Societies*, Cambridge University Press, New York.

[34] McKay S. and Markova E. (2008) *Understanding the operation and management of employment agencies in the UK labour market*, Working Lives Institute, London Metropolitan University.

[35] Nathan M. (2008) *Migration and employment agencies: thinkpiece*, paper produced for CLG, London.

[36] Peck J. and Theodore N. (2007) 'Flexible recession: the temporary staffing industry and mediated work in the United States', *Cambridge Journal of Economics* 31, 171-92.

Clearly the role of employers is important in shaping the experience of migrant and other workers, in their role as 'gatekeepers' to the labour market.[37]

A consistent message emerging from studies of employers is that their attitudes towards migrant workers are predominantly favourable. Key attributes of migrant workers (and especially A8 migrant workers) cited by employers are that they tend to be motivated, hard working, willing to work long hours, flexible and reliable; which in turn contributed to enhanced productivity.[38] By contrast to this notion of the 'good worker',[39] UK-born workers tend to be considered less favourably in these terms. In some instances, these positive attributes have been identified as having a 'demonstration effect' which served to encourage other workers to work harder.[40] Indeed, the overwhelmingly positive picture provided by employers was endorsed by the judgement of the House of Lords Select Committee on Economic Affairs (2008)[41] that employers are 'winners' from migration in economic terms – at least in the short-term. It has been noted, however, that: "the 'work ethic' and compliance of migrant workers, celebrated by managers, has an inbuilt obsolescence" (MacKenzie and Forde, 2009: 150),[42] in that as migrant workers became more established their willingness to work long hours and be flexible, etc, might diminish. In turn, this may lead to a need for 'new' migrants to fill less desirable jobs.

Concerns have been raised that the 'low road' model to competitiveness implied by reliance on migrants to fill certain 'migrant jobs' at the lower end of a segregated labour market, characterised by relatively low wages and under-utilisation of migrants' skills, may not be in the best interests of regional economic development in the longer term. This is in contrast to a 'high road' model, drawing upon the skills and experience of migrant workers to address skill shortages and so enhance both skill supply and demand at regional level.[43]

3.3   Conclusion

This section has demonstrated that the factors underlying labour migration are complex. While economic motives predominate, with workers deciding to move countries because of the improvement in economic returns relative to staying in their home country, a wide range of social and contextual factors influence who moves, where they move to and how long they stay for. There is considerable interest in how responsive migrants are to changing economic conditions, whether the current recession will result in return migration and how migration will respond to economic recovery.

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[37]   Rodriguez N. (2004) '"Workers wanted": employer recruitment of immigrant labor', *Work and Occupations* 31, 453-73.

[38]   For example, see Green A.E., Owen D.W., Jones P. with Owen C. and Francis J. (2007) *The Economic Impact of Migrant Workers in the West Midlands,* Report for a consortium of organisations in the West Midlands, West Midlands Regional Observatory, Birmingham; Green A.E., Owen D., Jones P. with Owen C., Francis J. and Proud R. (2008) *Migrant Workers in the South East Regional Economy*, Report prepared for the South East England Development Agency and partners, Guildford.

[39]   Mackenzie R. and Forde C. (2009) 'The rhetoric of the 'good worker' versus realities of employers' use and the experiences of migrant workers', *Work, Employment and Society* 23, 142-59.

[40]   Dench, S., Hurstfield, J., Hill, D., Akroyd, K. (2006). *Employers' Use of Migrant Labour. Main Report*, Home Office Online Report 04/06.

[41]   House of Lords Select Committee on Economic Affairs (2008) 'The Economic Impact of Immigration', *HL Paper* 82-I, The Stationery Office, London.

[42]   Mackenzie R. and Forde C. (2009) *op cit.*

[43]   See Stenning A. and Dawley S. (2009) 'Poles to Newcastle: grounding new migrant flows in peripheral regions', *European Urban and Regional Studies* 16, 273-94; Green A.E., 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* 43, 1261-73*.*

All of these questions will be influenced by whether migrants see their decision to move as a temporary phase in their life or whether they decide to move permanently. The latter will be influenced by their ability to establish a career, whether they are accompanied by dependants who may also have reasons to stay, and whether a community of people of similar origins develops which allows them to maintain customs and support regular contact with their family and friends in their home country.

The management of labour migration flows raises important questions for regional development. The migrants who have entered since about 2000 have played an important economic role in filling skills shortages (particularly in the NHS) and the A8 migrants have provided a new young, energetic and well qualified workforce. There is a worry that this may have compensated for the shortcomings of the existing labour force while saving the cost of improving the capabilities of UK-born workers. The dangers are that employers will become used to employing migrants in low-level jobs, leading to permanent barriers to the inclusion of poorer qualified workers in the labour market, the under-utilisation of the skills of migrant workers, the consequent need to constantly find new sources of energetic migrants and under-investment in developing the skills and capabilities of UK-born workers.

4.   Profile of migrant workers in the East Midlands

- In creating a picture of migration in the East Midlands, this report draws upon several main sources of statistical data on international migration to the region and people of migrant origin living in the region. This section explores the patterns and trends revealed by DWP data on National Insurance Numbers (NINos) allocated to people of non-UK nationality and UKBA registration data from the Worker Registration Scheme (WRS) (covering employees from the A8 countries).

- NINo allocation data provides information on people from all parts of the world who come to the UK for work in all local authority districts. They reveal a steady increase in immigration from 2002 to 2007 and then a decline in 2008 (which seems to have stabilised somewhat in 2009).

- NINo allocations data show the spatial contrasts in the impact of migration, with migrant workers mainly concentrated in the larger cities and the agricultural region of south-east Lincolnshire. Leicester was the largest single destination. The number of migrant workers increased in most parts of the region over time. Those migrant workers coming to the East Midlands on work permits are particularly concentrated in the three main urban areas, while A8 migrants tend to be more spatially dispersed.

- The national origins of people allocated NINos have changed substantially since 2002. At the outset, India, Portugal, Iraq, South Africa and Zimbabwe were the most common origins, but Poland became the largest country from 2004 onwards. India remained the second largest country of origin.

- There is detailed information from the WRS on the national origins, demographics, industry, occupation, wages and hours worked for migrants from the A8 countries. Over one-tenth of all A8 migrants to the UK have come to the East Midlands, with the number of registrations highest in 2006 and 2007, with a marked decline in 2008 and 2009 at both UK and regional scales. Polish people dominate A8 migration, with the second largest nationality being Slovaks. However, the number of Latvians and Lithuanians is increasing (with particular concentrations in Boston, South Holland and Northampton).

- Men outnumber women among overseas NINo allocations, and the gender imbalance is even greater among those on the WRS. The gender balance of migrants towards males was greatest during the years following the expansion of the EU in 2004.

- Migrants coming to work in the region are predominantly young adults, mainly aged between 18 and 34 years. The proportion of migrants on the WRS with dependents has increased over time, and the age of dependents also increased. Around three-fifths of those on the WRS planned to stay less than 3 months, and this percentage increased over time.

- Migrants from the A8 countries tended to work in Agriculture, Food Processing and Distribution-related industries, with many being agency workers. Around three-quarters worked for the minimum wage and nearly all applications were to work for 35 hours or more per week.

- Those migrant workers coming to the East Midlands on work permits display a contrasting sectoral and occupational distribution of employment. They are concentrated in Health & Medical Services, Hospitality & Catering; Education & Cultural Activities; Manufacturing; and Administrative and Managerial & Business Activities; and in Health-related, Engineering, Managerial, Researcher and Teaching occupations.

4.1   Changing volumes and spatial distribution of migrant workers

As noted in Annex 1, different migration data sources are inconsistent in their definition of migrant workers and in their coverage. This creates comparability issues and means that it is difficult to generate an accurate picture of the volume of migrant workers at any one time, especially at local level. Some commentators have attempted to derive estimates of migrant stocks by combining data from different sources and making assumptions about employment rates and registration rates and numbers of migrants leaving the UK. In particular, in 2008 ippr[44] derived current stock estimates of A8 migrants by local authority by comparing LFS and WRS data (assuming that WRS data underestimated total registration by 33 per cent) and further assuming that (on the basis of a survey of migrants) 50 per cent of migrants who had registered since 2004 had returned home. However, such assumptions have been challenged and this report does not attempt to derive a current stock estimate of migrant workers.

The Office for National Statistics (ONS) makes estimates of Total International Migration (TIM) for Government Office Regions and local authority districts based on data from the International Passenger Survey, combined with a range of other regional and local data sources (such as the LFS and 'Flag 4' NHS registration data). According to these TIM estimates international immigration to the East Midlands peaked in the period from 2004 to 2006, while the number of emigrants increased more slowly. At the local authority scale the influence of international migration on population change differed markedly (see Annex 3).

As highlighted in Annex 1, NINo allocations to overseas nationals are an important indicator of international in-migration (albeit keeping in mind the caveats outlined in that section). Their importance stems from the fact that they are necessary for people to work and that they cover all countries of origin. Figure 4.1 shows the trend in such NINo allocations for the East Midlands region over the period from 2002 to the first half of 2009. Allocations peaked at over 42,000 in 2007, up from fewer than 20,000 in 2004. They subsequently declined to around 33,000 in 2008 (and in the first half of 2009 were running at just under half the 2008 level). Hence, a clear decline is evident after 2007 as the economic crisis took hold.

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[44]   Pollard N., Latorre M. and Sriskandarajah D. (2008) *Floodgates or turnstiles? Post-EU enlargement migration flows to (and from) the UK*, ippr, London.

Figure 4.1   National Insurance Number allocations to people of overseas nationality made in the East Midlands, for calendar years from 2002 to 2009
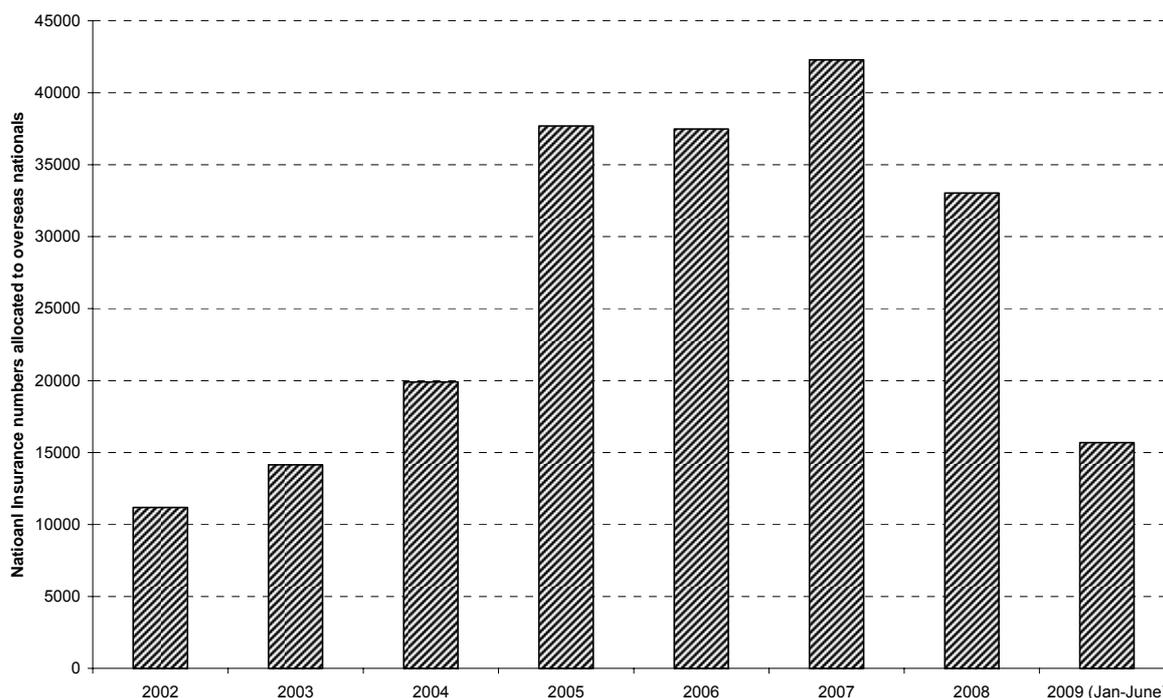
Source: DWP
Note: Data for 2009 only covers the first six months of the year.

Allocations are unevenly distributed across the region. Figure 4.2 presents four maps which illustrate the spatial impact of migration using NINo allocations data. Figures 4.2a and 4.2b present the number of allocations as a percentage of the population of working age (16 to 59 for women and 64 for men), taken from the ONS mid-year population estimates. They demonstrate the increasing share of the working age population accounted for by international migrants over this period and also demonstrate the marked spatial contrasts. Migrants were most strongly concentrated in Leicester and the other major cities and the agricultural region of south-east Lincolnshire in 2004. The largest percentage share was in Boston. The west of the region displayed the smallest percentage of migrants. By 2008, the shares of migrants had increased almost everywhere and all the cities and larger towns stood out as having higher share of migrants than the rural areas, except for south-east Lincolnshire, where the migrant share also increased. Figures 4.2c and 4.2d present NINo allocations as a percentage of the economically active population (taken from the Annual Population Surveys for January to December in 2004 and 2008). These maps depict a strong east-west and urban-rural contrast in the ratio of migrants to the economically active population, with an increasing percentage in the larger towns and cities and the agricultural areas of the east.

Figure 4.3 ranks local authority areas in descending order of the number of NINos allocated to overseas nationals over the period 2004 to 2009. Six local authority areas account for the majority of allocations: Leicester, Nottingham, Northampton, Derby, Boston and South Holland. Leicester alone accounted for 35,180, more than twice the number allocated in Derby, occupying fourth place in the rankings. This reinforces the message that migrant workers are concentrated in the larger cities and the agricultural region of south-east Lincolnshire (see also Annex 5).

19
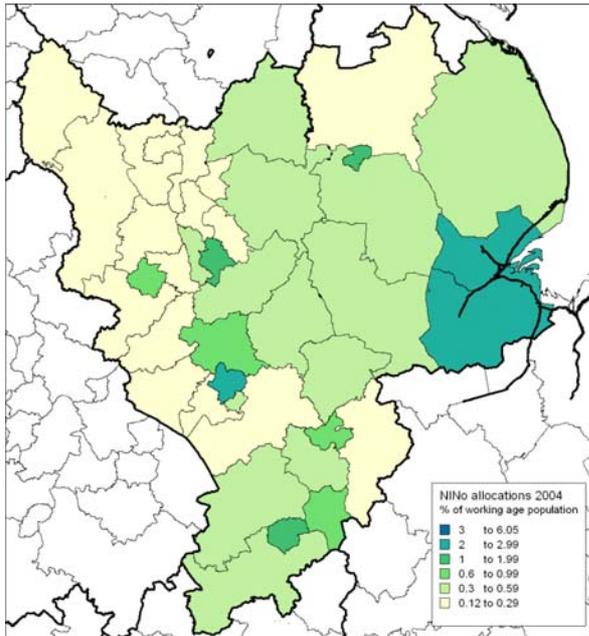
Figure 4.2a: Overseas NINo allocations as a percentage of working age population 2004
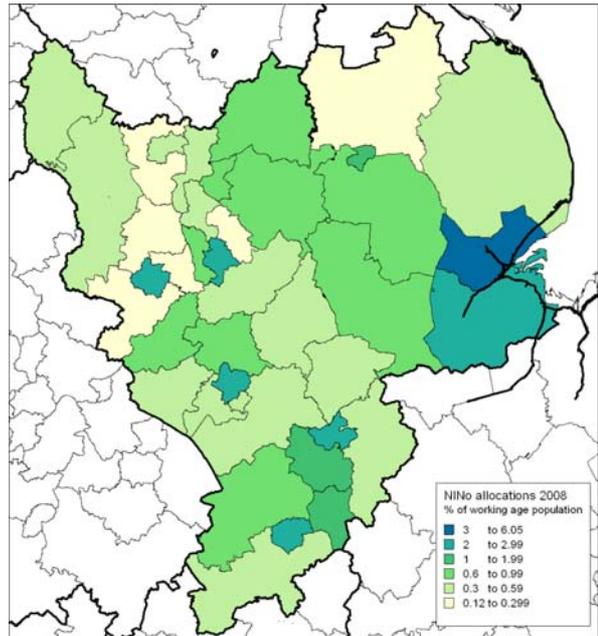
Figure 4.2b: Overseas NINo allocations as a percentage of working age population 2008
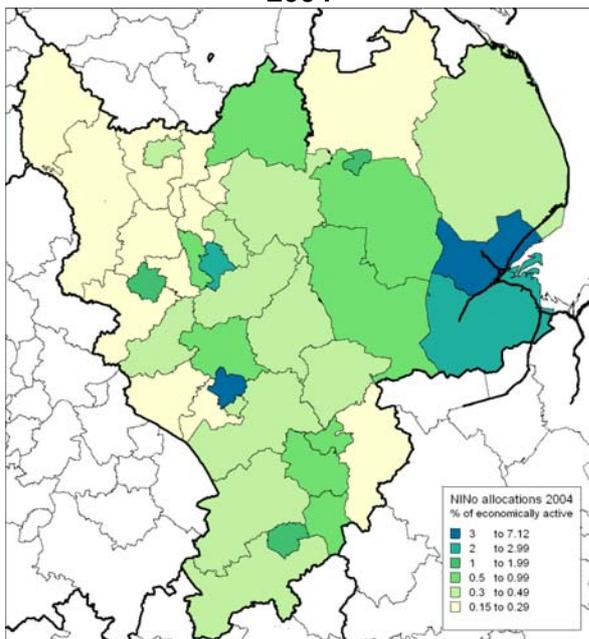
Figure 4.2c: Overseas NINo allocations as a percentage of economically active population 2004
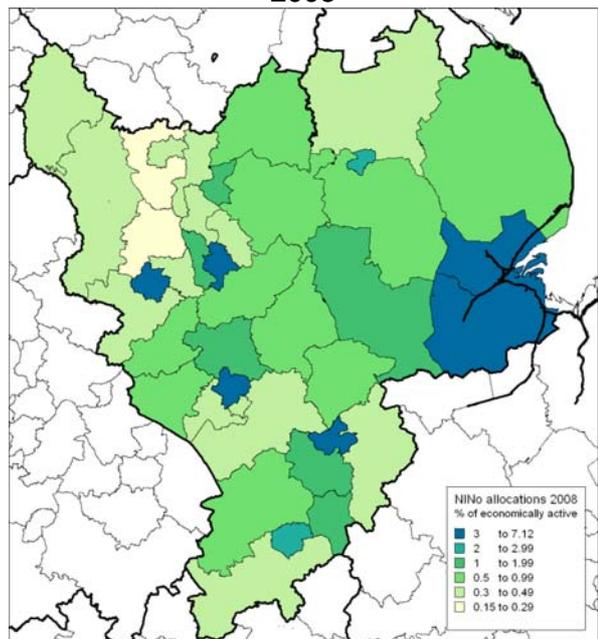
Figure 4.2d: Overseas NINo allocations as a percentage of economically active population 2008

Source: DWP tabulation tool - NINo allocations, ONS Mid Year estimates and APS data.
Note: Digital boundaries are Crown Copyright 2003 and are reproduced with the permission of the Controller of HMSO.

20

Figure 4.3:   Total number of NINos allocated to overseas nationals by local authority area in the East Midlands, 2004-9

NINo allocations to overseas nationals, 2004-9

Local Authority	Value
Leicester	35180
Nottingham	25890
Northampton	20110
Derby	15360
Boston	10790
South Holland	8260
Lincoln	6030
Charnwood	5410
Corby	4830
South Kesteven	4550
Wellingborough	3930
Broxtowe	3450
East Lindsey	3200
Kettering	3150
Mansfield	3000
Bassetlaw	2460
Newark and Sherwood	2430
Daventry	2120
North Kesteven	2080
North West Leicestershire	1830
Rushcliffe	1680
Ashfield	1510
Hinckley and Bosworth	1460
Gedling	1330
Chesterfield	1270
East Northamptonshire	1270
Blaby	1250
South Northamptonshire	1210
Erewash	1130
Harborough	1100
Amber Valley	1050
High Peak	1040
Derbyshire Dales	1000
West Lindsey	960
Melton	950
South Derbyshire	920
Bolsover	890
Oadby and Wigston	860
North East Derbyshire	590
Rutland	550

Source: NINo allocations to overseas nationals, DWP.
Note: Only the January to June period of 2009 is included here.

21

Turning to migrants from specific migration routes, Table 4.1 shows data on approved work permits on an annual basis from 1 January 2004 to 31 December 2008 at unitary authority/local authority district level in the East Midlands; (the latest year for which data was available in the previous report was 2005).

Table 4.1:   Number of approved work permits by local authority, 2004 to 2008

Local Authority	2004	2005	2006	2007	2008	*Total*	% of total regional approvals
Leicester	795	710	655	450	395	*3,005*	14.4
Nottingham	670	620	605	470	455	*2,815*	13.5
Derby	445	445	490	390	360	*2,130*	10.2
Charnwood	290	310	275	280	215	*1,370*	6.6
Northampton	290	355	240	210	195	*1,290*	6.2
Lincoln	200	170	135	110	210	*825*	4.0
Ashfield	225	150	110	90	95	*665*	3.2
South Kesteven	125	120	180	110	105	*635*	3.0
South Northamptonshire	220	115	115	70	75	*600*	2.9
North East Derbyshire	160	135	180	60	50	*585*	2.8
Kettering	180	130	120	80	70	*580*	2.8
Rushcliffe	80	95	145	80	65	*465*	2.2
Blaby	80	70	110	95	90	*450*	2.2
Bassetlaw	125	115	80	40	60	*420*	2.0
Boston	140	80	60	25	25	*335*	1.6
East Lindsey	160	65	55	25	35	*335*	1.6
North West Leicestershire	95	60	70	50	30	*310*	1.5
Daventry	80	75	50	50	40	*295*	1.4
Chesterfield	55	45	35	60	80	*280*	1.3
East Northamptonshire	75	65	45	40	50	*275*	1.3
Wellingborough	65	95	60	30	15	*270*	1.3
Amber Valley	60	60	55	35	40	*250*	1.2
West Lindsey	65	50	55	35	40	*240*	1.2
Broxtowe	50	45	70	40	35	*240*	1.2
Newark and Sherwood	55	50	55	45	35	*240*	1.2
Hinckley and Bosworth	75	45	45	35	20	*220*	1.1
Erewash	60	45	50	30	30	*215*	1.0
High Peak	60	40	40	40	35	*210*	1.0
Mansfield	50	45	45	35	35	*210*	1.0
Derbyshire Dales	65	60	30	25	25	*205*	1.0
Harborough	50	45	35	30	20	*180*	0.9
South Derbyshire	30	45	35	25	25	*160*	0.8
Rutland	35	15	20	35	30	*135*	0.6
Corby	35	25	15	20	30	*125*	0.6
North Kesteven	35	25	30	10	15	*115*	0.6
Bolsover	15	15	10	10	5	*55*	0.3
Gedling	15	5	10	15	5	*45*	0.2
Oadby and Wigston	10	5	†	5	10	*30*	0.1
Total	*5,320*	*4,640*	*4,415*	*3,285*	*3,155*	*20,820*	*100.0*

Source: Work permits (from UKBA via FOI request)

The number of approved work permits has decreased over the period from 2004 to 2008, with the reduction being especially marked from 2006 to 2007. The region's three largest

urban centres - Leicester, Nottingham and Derby – together with Charnwood, account for 45 per cent of all work permit approvals in the period from 2004 to 2008.

Turning to focus on A8 migrants, the cumulative total of *WRS* approved initial applications between May 2004 and September 2009 in the East Midlands is nearly 99,000.[45] Trends in the number of WRS approved initial applications in the East Midlands in the context of trends in the UK and other regions are shown by the counts and indices for the third quarters (Q3) in each year from 2004 to 2009 in Tables 4.2 and 4.3, respectively. In the East Midlands the count peaked in 2006Q3 at nearly 7,000. A year later in 2007Q3 the count was lower at around 6,000. A marked reduction in approved initial applications is apparent between 2007Q3 and 2008Q3, but in 2009Q3 the count was very similar to that in 2008Q3, so indicating stabilisation of the trend. Table 4.3 shows that in 2008Q3 and 2009Q3 the number of initial applications in the East Midlands were at a level of around half of the peak in 2006Q3. In relative terms the decrease in initial applications experienced in the East Midlands is similar to that for the UK as a whole; (London stands out as having experienced a less marked reduction in initial applications than the UK average).

Table 4.2:   WRS approved applications for regions and nations of the UK – 2004Q3 to 2009Q3

Region / Nation	2004Q3	2005Q3	2006Q3	2007Q3	2008Q3	2009Q3
East Midlands	3,965	5,170	6,980	5,935	3,330	3,450
East of England	7,015	6,650	6,485	6,470	3,875	3,955
London	11,965	6,960	6,760	7,160	3,730	4,720
North East	400	575	895	790	370	330
North West	2,540	4,850	5,715	5,265	2,175	1,850
South East	8,210	7,975	8,000	7,325	4,575	4,460
South West	3,310	4,425	5,115	4,765	2,410	2,100
West Midlands	3,170	4,685	6,200	5,075	2,830	2,650
Yorkshire & the Humber	2,025	4,370	5,030	4,825	2,330	2,090
ENGLAND	*42,600*	*45,660*	*51,180*	*47,610*	*25,625*	*26,230*
Northern Ireland	1,120	2,140	2,025	2,000	905	705
Scotland	3,530	5,090	5,860	5,960	3,705	3,125
Wales	835	1,505	2,060	1,540	660	700
Not stated	10	15	25	5	5	5
UNITED KINGDOM	*48,100*	*54,410*	*61,145*	*57,120*	*30,895*	*30,145*

Source: Worker Registration Scheme

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[45]   Note that this is not a measurement of net migration to the region.

Table 4.3:   WRS approved applications for regions and nations of the UK – 2004Q3 to 2009Q3 (index 2006Q3 = 100)

Region / Nation	2004Q3	2005Q3	2006Q3	2007Q3	2008Q3	2009Q3
East Midlands	**57**	**74**	**100**	**85**	**48**	**49**
East of England	108	103	100	100	60	61
London	177	103	100	106	55	70
North East	45	64	100	88	41	37
North West	44	85	100	92	38	32
South East	103	100	100	92	57	56
South West	65	87	100	93	47	41
West Midlands	51	76	100	82	46	43
Yorkshire & the Humber	40	87	100	96	46	42
ENGLAND	83	89	100	93	50	51
Northern Ireland	55	106	100	99	45	35
Scotland	60	87	100	102	63	53
Wales	41	73	100	75	32	34
Not stated	40	60	100	20	20	20
UNITED KINGDOM	***79***	***89***	***100***	***93***	***51***	***49***

Source: Worker Registration Scheme

4.2   Country of origin / nationality

Given that the NINo allocations data cover all parts of the world they are particularly useful in providing insights into changing geographical and nationality profiles of migrants. Table 4.4 provides details on the geographical origins of international migrants to the region. It contrasts the 'traditional' international migration flows from Ireland, the 'Old' and 'New' Commonwealth with those from the EU15, the A10 (i.e. the A8 countries plus Cyprus and Malta) and A2 countries and the rest of Europe.

Table 4.4:   Overseas National Insurance Number allocations in the East Midlands by calendar year and broad geographical region (thousands)

	Total	EU15	A10	Romania/Bulgaria (A2)	Ireland	Other Europe	Old Commonwealth	New Commonwealth	Rest of world
2002	**11.2**	2.1	0.2	0.1	0.2	0.5	0.5	4.6	3.1
2003	**14.2**	2.7	0.4	0.2	0.2	0.6	0.5	6.2	3.5
2004	**19.9**	3.6	3.9	0.3	0.3	0.7	0.6	7.6	3.1
2005	**37.7**	3.8	20.0	0.3	0.3	0.7	0.6	8.4	3.6
2006	**37.5**	3.2	23.1	0.2	0.2	0.6	0.6	6.7	3.0
2007	**42.3**	3.5	25.5	1.2	0.2	0.7	0.6	7.1	3.5
2008	**33.1**	3.1	17.9	1.3	0.2	0.5	0.6	6.3	3.2
2009	**15.7**	1.7	7.4	0.5	0.1	0.3	0.3	3.7	1.8

Source: Department for Work and Pensions. Note: 2009 data refers to January to June only.

The number of people from overseas allocated NINos in the East Midlands almost quadrupled between 2002 and 2007, and the fastest increase was in migrants from the ten countries which joined the EU in 2004 (here termed A10; though most migrants come from the A8 countries of Eastern Europe). The number of migrants from Romania and Bulgaria increased greatly following their Accession in 2007, but are still small, reflecting the considerable restrictions placed on their labour market participation in the UK (as outlined in section 2). There has also been a small increase in migrants from the EU15 countries. The

numbers coming from Ireland, the Old Commonwealth and Europe outside the EU are quite small – only a few hundred per year. However, substantial numbers of migrants originate in the New Commonwealth and the rest of the world.

Turning to individual countries, India, Portugal, Iraq, South Africa and Zimbabwe were dominant origins for NINo allocations in the East Midlands in 2002 and 2003. From 2004 Poland became easily the largest single origin source, followed by India (see Annex 6). This is apparent across most local authority areas in the region (see Annex 7 for data on NINo allocations to overseas nationals by local authority area in the East Midlands in 2008). However, those from India are concentrated in the large cities – notably Leicester and Nottingham.

Analyses of *WRS* application data provides some insights into the changing profile of A8 migrants registering in the East Midlands. Figure 4.4 shows the trend in the number of applications by nationality over the period from 2006Q3 to 2009Q3. This highlights Poles as the dominant group in terms of volume and indicates how the reduction in WRS initial applications from Poland has been the key feature driving the reduction in WRS applications outlined in section 4.1.

Figure 4.4:   **WRS approved applications by nationality in the East Midlands, 2006Q3 to 2009Q3**
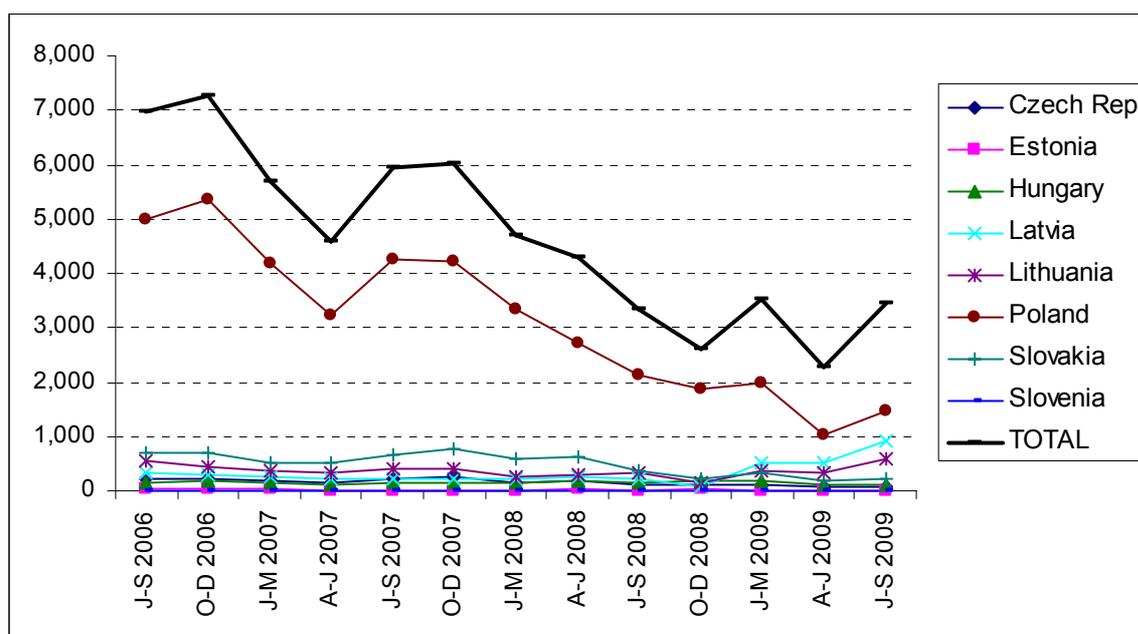
Source: Worker Registration Scheme

Greater insight into different national trends is provided by Figure 4.5 which shows relative trends in applications for each national group; (in order to make comparisons between countries when the absolute numbers involved are quite different [as shown in Figure 4.4], the level of applications from each national group is indexed to 100 in 2006Q3). Whereas by 2009Q3 the number of applications from Poland and Slovakia were only about 30 per cent of the level recorded in 2006Q3,[46] there was a marked increase over the period in the number of applications from Latvia (a Member State highlighted in section 2 as having been hit especially severely by the economic crisis) and there was also an increase in applications from Lithuania. In 2006Q3 just over 70 per cent of WRS initial applications in the East

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[46]   Given the shortcomings of WRS registration data outlined in Annex 1, the precise numbers here should be interpreted with caution, but the general trends are indicative of important changes occurring.

Midlands were from Poland, but by 2009Q3 Poles accounted for only 43 per cent of the regional total. Conversely, the proportion of the regional total of initial applications accounted for by Latvians and Lithuanians increased from 5 per cent and 8 per cent, respectively, in 2006Q3 to 27 per cent and 17 per cent, respectively, in 2009Q3.

Figure 4.5: **WRS approved applications by nationality in the East Midlands, 2006Q3 to 2009Q3 (relative to June-September 2006 = 100)**
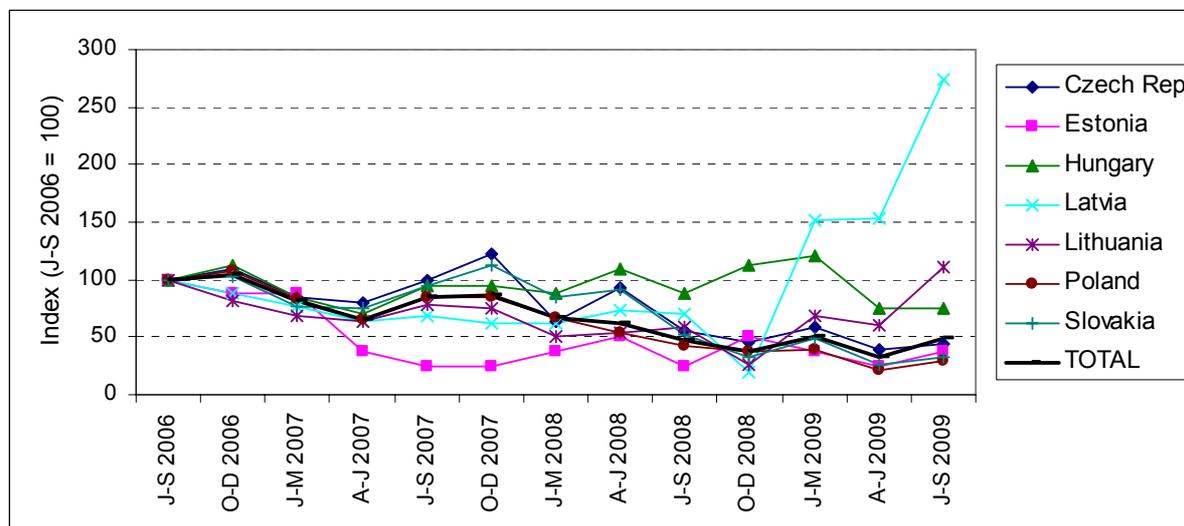
Source: Worker Registration Scheme

These absolute and relative changes in the national profile of A8 migrants are also evident in Figures 4.6 and 4.7 which show the volume and local distribution of WRS registrations in 2006Q3 and 2009Q3; (the same scale is used on each of these maps to facilitate comparison). These maps highlight particular local concentrations of Latvians and Lithuanians in Boston, South Holland and Northampton (see also Annex 7).

Analyses of data on *work permit approvals* reveals that India is consistently the single most important origin country. In the period from 2006 to 2008 (i.e. the years which were not covered in the previous report), the nationalities accounting for the largest shares of total work permit approvals in the region were India (30 per cent), Philippines (11 per cent), China (10 per cent), USA (10 per cent), Pakistan (4 per cent), Zimbabwe (3 per cent) and South Africa (3 per cent). Figure 4.8 shows the volume and local distribution of the largest national groups in the period 2006-08. Whereas Indians form a substantial share of work permit approvals in most local areas, there are other some marked local variations in the nationality profile of migrant workers on work permits.

Figure 4.6: **WRS approved applications in the East Midlands by local authority area and nationality, 2006Q3**
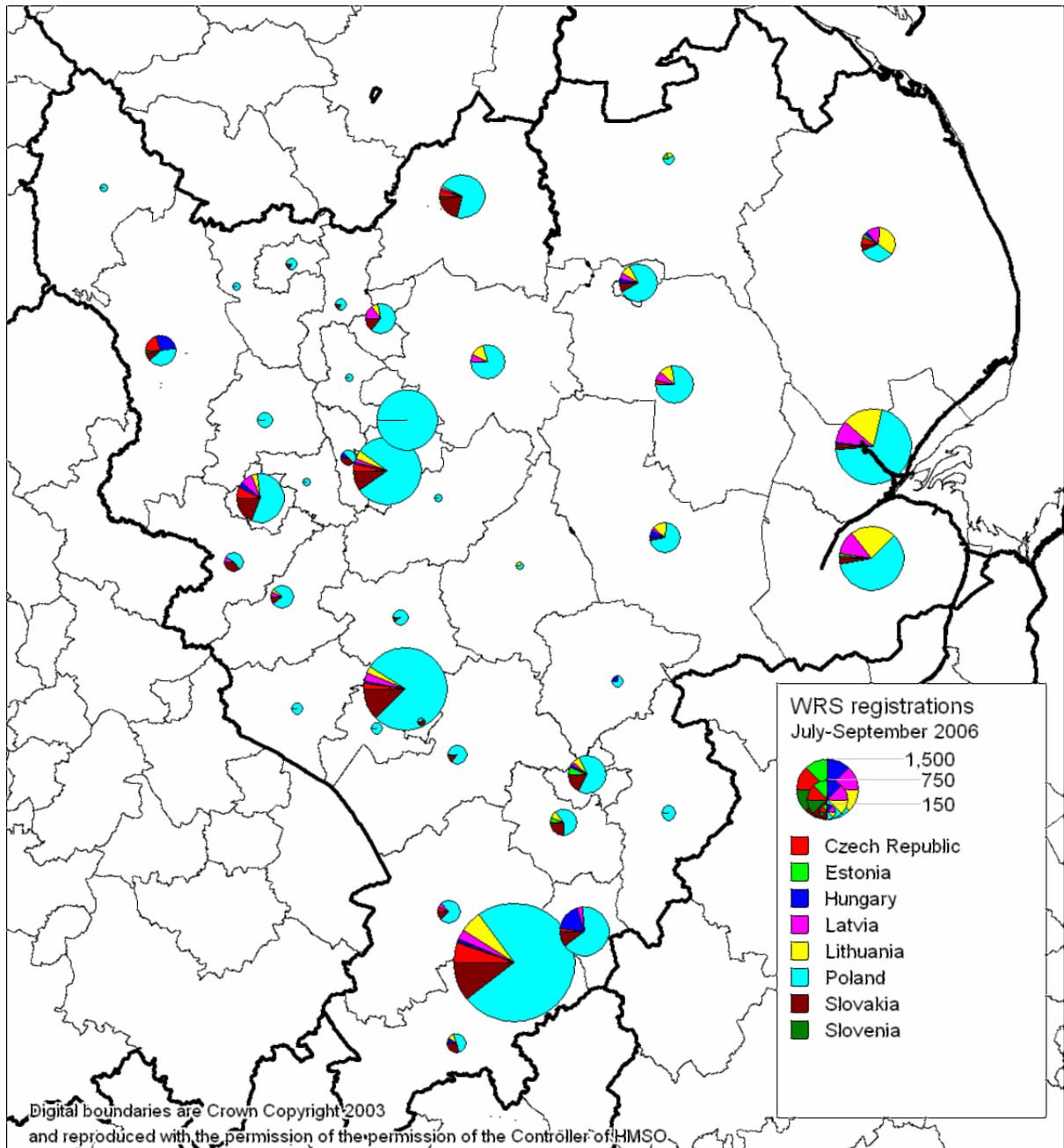
Source: Worker Registration Scheme

Figure 4.7:   WRS approved applications in the East Midlands by local authority area and nationality, 2009Q3
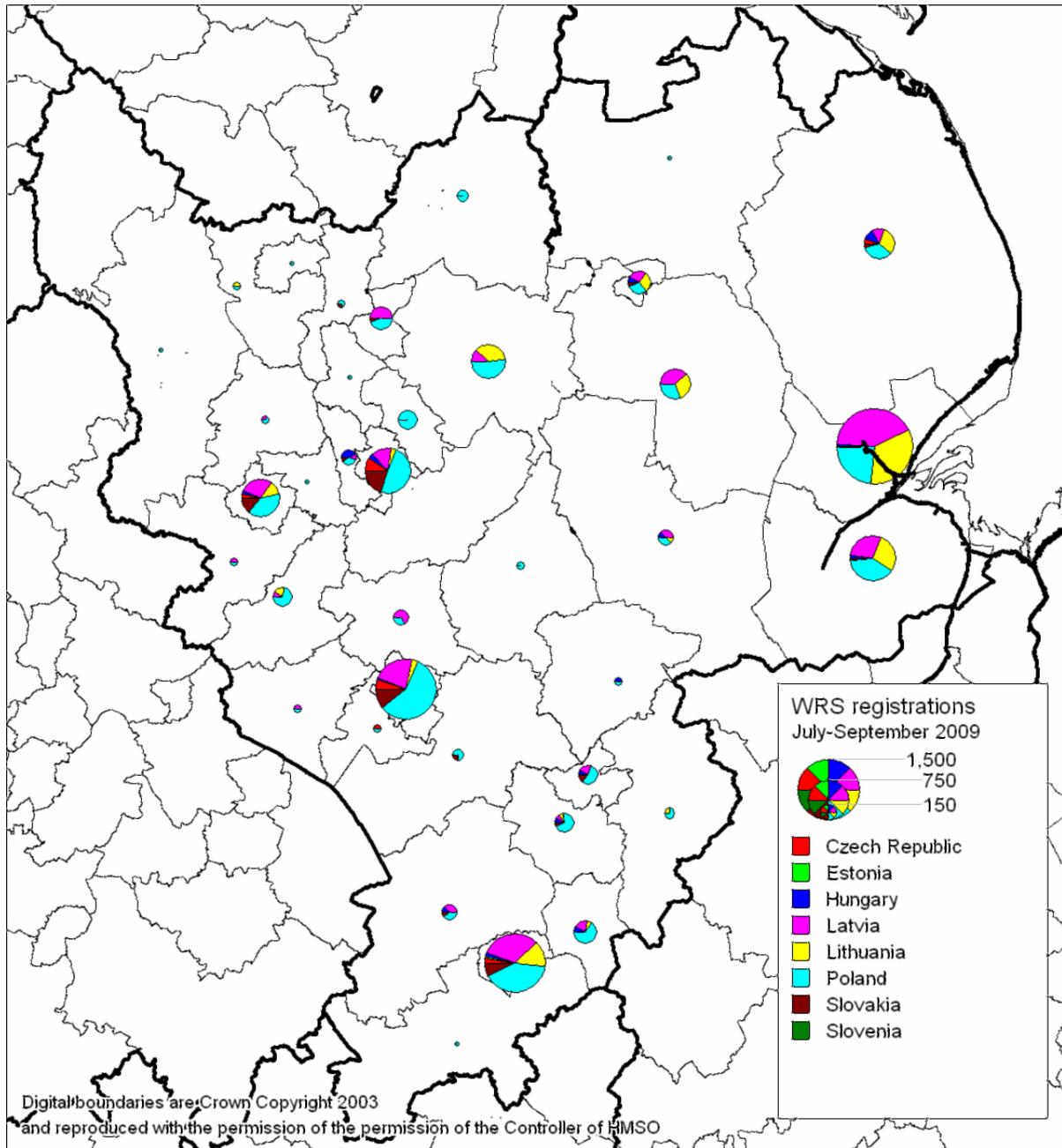
Source: Worker Registration Scheme.

Figure 4.8:   Work permit approvals in the East Midlands by local authority area and nationality, 2006-2008
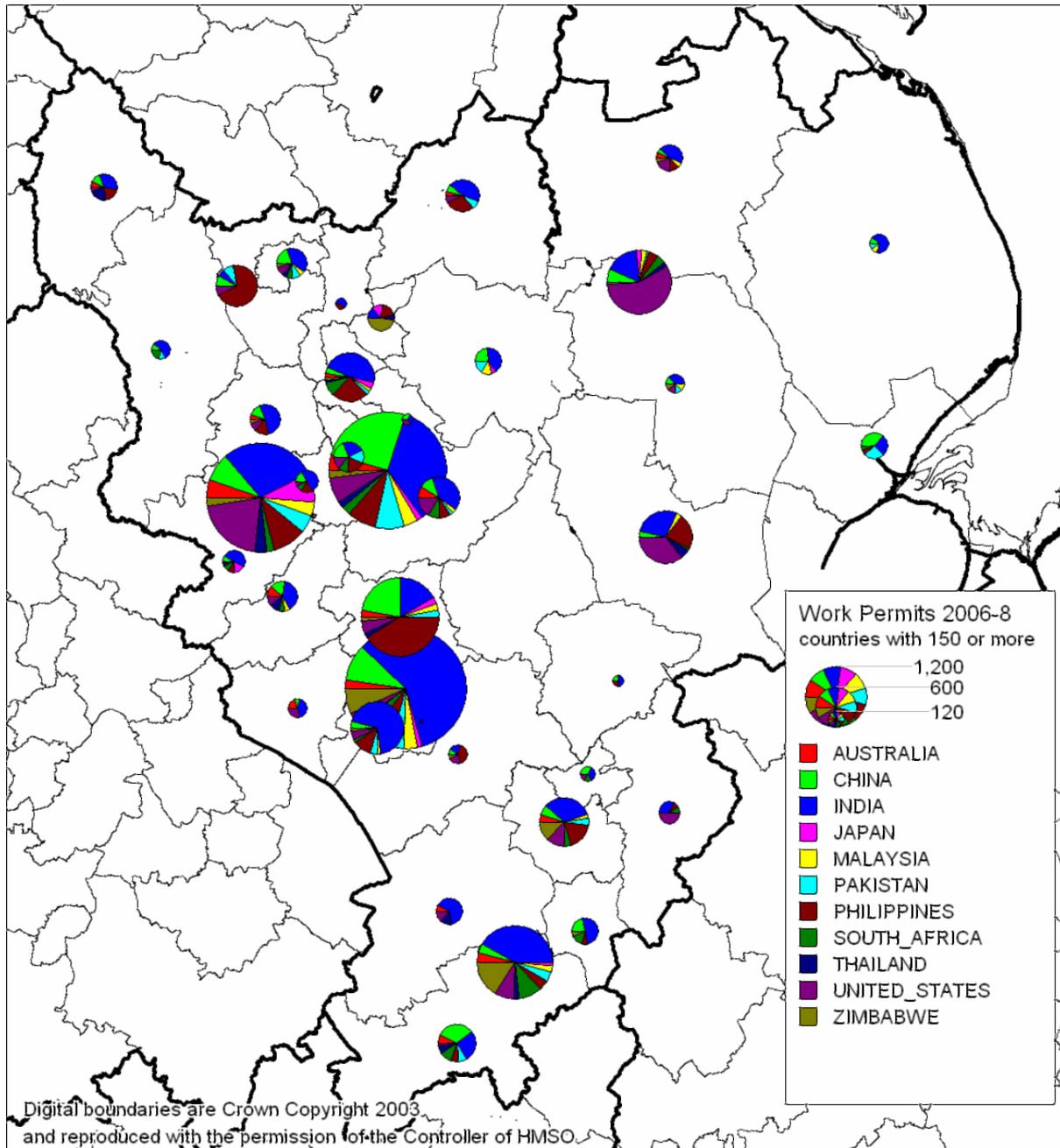
Source: Work permits (from UKBA via FOI request)

4.3   Gender, age and dependants

Gender

According to data on NINo allocations to overseas nationals in the East Midlands, males outnumbered females throughout the period from 2002 to 2009. Initially, 46 per cent of allocations were to women, but this percentage fell as the number of NINos allocated increased up to 2005, reaching a minimum of just fewer than 43 per cent. This percentage afterwards increased, reaching 47 per cent in 2008 and the first half of 2009.

Likewise, males outnumber females amongst approved WRS applications. Over the period from May 2004 to September 2009 61 per cent of applications were from males and 39 per cent from females. There has been a trend for the share of WRS applications accounted for by females to increase slightly over time, such that over the year to September 2009 45 per cent of applications were accounted for by females.

Similarly, males outnumber females in terms of work permit approvals. The general trend has been for a reduction in the total share of work permit approvals accounted for by females. In 2004 females accounted for 44 per cent of the regional total of work permit approvals. This share rose to 48 per cent in 2005 before falling back to 43 per cent in 2006. In 2007 and 2008 the female share of the total was around 35-36 per cent. The reduction in the number of work permit approvals for nurses (i.e. a female-dominated occupation [see section 4.5]) is likely to be an important factor in this reduction.

Age

The age breakdown of people from overseas allocated NINos in the East Midlands by calendar year is presented in Table 4.5.[47] Two age groups dominate: 18-24 year olds and 25-34 year olds. In 2002, nearly half of all NINos were allocated to people aged 25 to 34, but this percentage fell sharply in 2005 and has since continued to decline more slowly. Initially just under a third of allocations were to people aged 18 to 24, but from 2005 onwards, this age group has accounted for two-fifths of all allocations. Throughout this period, about a sixth of NINo allocations were to 35 to 44 year olds, and the percentage allocated to older workers declines rapidly with increasing age. In 2008-9 there appears to have been a shift in the age balance of allocations away from the younger age groups and towards people aged 45 and over.

Table 4.5:   Age breakdown of NINo allocations to the East Midlands, 2002-9

Year	Total (000s)	Percentages						
		Less than 18	18-24	25-34	35-44	45-54	55-59	60 and over
2002	11.2	1.7	29.8	45.1	16.0	5.7	1.2	0.5
2003	14.2	2.0	29.6	44.6	16.2	6.0	1.1	0.4
2004	19.9	1.4	33.3	42.1	15.3	6.4	1.1	0.5
2005	37.7	1.0	38.8	39.4	13.2	6.3	0.9	0.3
2006	37.5	0.9	40.0	39.6	12.1	6.2	0.9	0.3
2007	42.3	1.3	40.3	38.1	12.5	6.5	1.0	0.4
2008	33.1	1.5	39.1	37.7	13.0	6.9	1.3	0.6
2009	15.7	1.4	36.6	37.4	14.3	7.6	1.8	0.9

Source: Department for Work and Pensions. Note: 2009 data refers to January to June only.

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[47]   Note that this breakdown is not available for individual countries of birth.

There has been very little change over time in the age profile of A8 migrants according to the WRS. Figure 4.9 shows the age profile of WRS registrants over the entire period from May 2004 to September 2009, with nearly four-fifths aged between 18 and 34 years. Those aged 18-24 years make up the largest share of any of the age groups identified, with 43 per cent of the total. The share of the total in this age group tends to be greatest in the July-September quarter each year – perhaps indicating that students (during their summer vacations) are seeking work.

Figure 4.9: **WRS approved applications by age – East Midlands, May 2004 to September 2009**
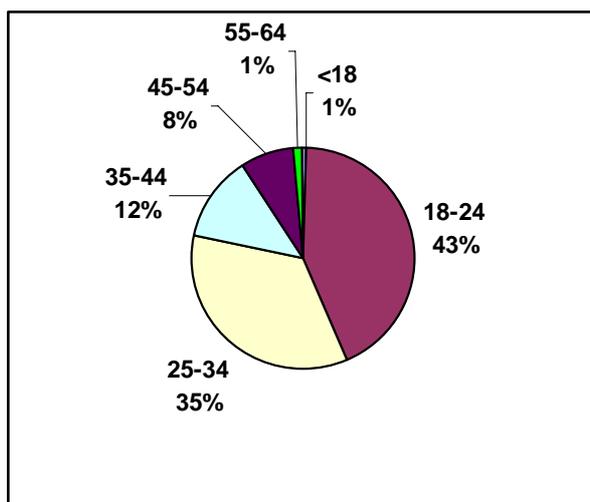
Source: Worker Registration Scheme.

Dependants

The proportion of registered workers with dependants has increased over time from less than 10 per cent in the first two years after Accession to just over 20 per cent in the first three quarters of 2009. There has also been a shift in the broad age profile of dependants: with more than half being aged over 17 years in the latter period, compared with less than half in the earlier period.

4.4   Intended length of stay

As noted in Annex 1, the WRS asks a question on intended length of stay. It should be borne in mind that intended length of stay may be different from actual length of stay; as outlined in section 2, survey research has revealed considerable flux regarding migration intentions, with a general tendency for actual stays to be longer than intended stays. Analyses of WRS data on initial applications in the East Midlands reveals that responses to the 'intended length of stay' question fall into two main categories: first, 'less than 3 months', and secondly, 'do not know'. Across the whole period from May 2004 to September 2009, 59 per cent of WRS approved applicants indicated that they would stay for 'less than 3 months' and 27 per cent 'did not know'; (together accounting for nearly nine out of ten applicants).

However, over time there has been a general tendency for the proportion intending to stay for 'less than 3 months' to increase, while the share 'not knowing' how long they would stay diminished: over the year from the last quarter of 2008 to the third quarter of 2009 the proportion of approved WRS applicants stating an intention to stay for 'less than 3 months' was 68 per cent and the share indicating that they did not know was 19 per cent; (the respective shares in the period from May 2004 to March 2006 were 46 per cent and 43 per

31

cent) (see Figure 4.10). At face value this suggests a greater shift towards intended short-term moves.

Figure 4.10: WRS approved applications by intended duration of stay – East Midlands, May 2004 to September 2009
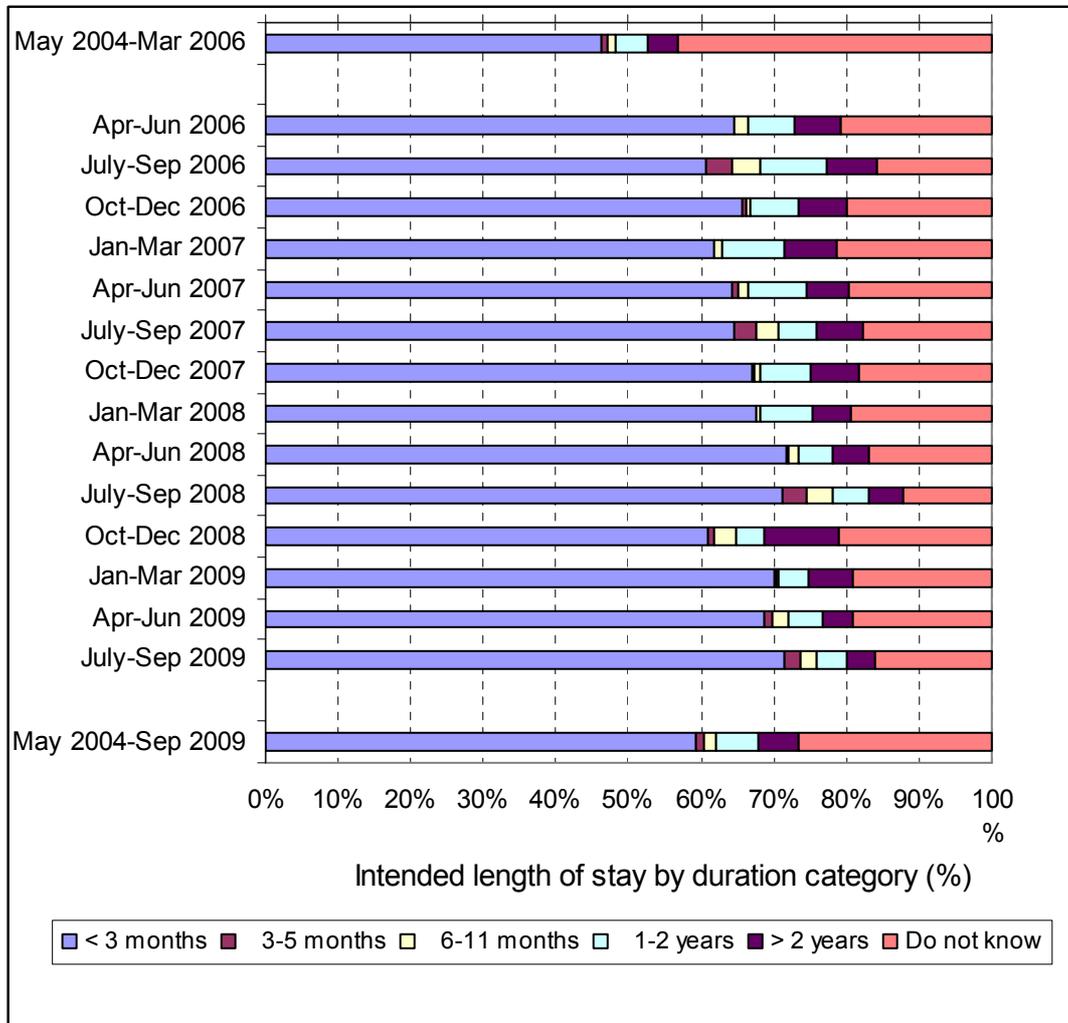
4.5   Features of employment: industry, occupation, hours of work and pay

As noted in Annex 1, the *industry* categories recorded in the WRS do not accord with the Standard Industrial Classification (SIC). Over the period from May 2004 to September 2009 63 per cent of initial applications are recorded as Administration, Business and Managerial services. This is a 'catch all' group that includes agency workers working in a range of industries. Moreover, there is a tendency over time for the share of workers categorised in this industry to increase. At regional level the second largest industry category is Agricultural Activities. Across the period as a whole this category accounted for 11 per cent of applications. Some seasonal patterns are evident in this industry: it accounts for a higher share of total initial applications in the Spring/Summer quarters. There is also an indicative trend that the proportion of applications in this category was higher in 2009 than in 2008 and 2007; this accords with intelligence from two large labour suppliers in agriculture[48] that more A8 workers turned to employment in agriculture in 2009 – perhaps having lost jobs in construction and hospitality & catering as a consequence of recession. The industry categories accounting for the next highest share of applications were Manufacturing and Hospitality & Catering (accounting for 6 per cent and 5 per cent, respectively, of applications in the East Midlands over the entire period).

Information on the industrial disaggregation of work permit approvals shows a rather different picture (see Figure 4.11). Work permit approvals in the East Midlands are concentrated in Health & Medical services, Hospitality & Catering; Education & Cultural Activities; Manufacturing and Administrative, Managerial & Business activities. The key feature of change over the period has been the marked reduction in the number of work permit approvals in Health & Medical services, which accounted for nearly half of all work permit approvals in 2004 and 2005, but only just over a quarter in 2007 and 2008. By contrast, in Manufacturing the number of work permit approvals has increased slightly and numbers of approvals have also held up in the context of an overall reduction in the number of approvals in Education & Cultural Activities.

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[48]   Two main SAWS operators were interviewed during the course of the project about labour supply and demand trends in agriculture and associated policy issues.

Figure 4.11: Work permit approvals by industry - East Midlands
a) absolute numbers
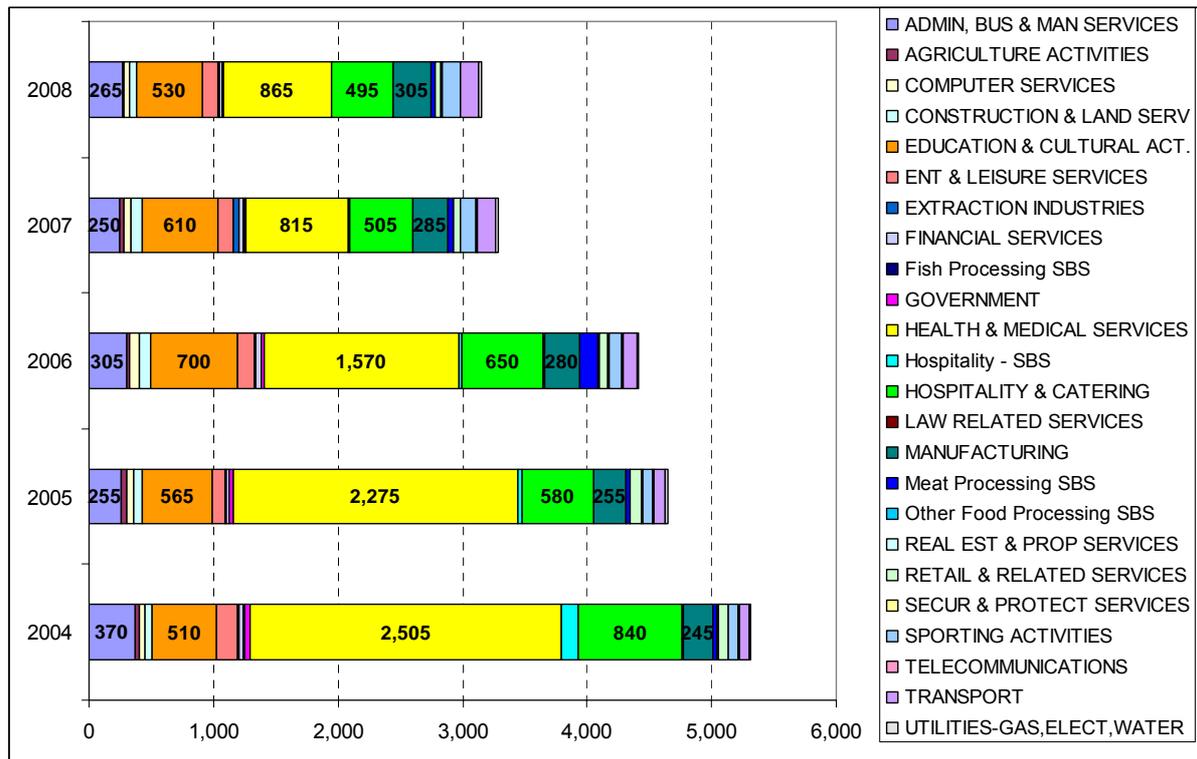
b) percentage shares
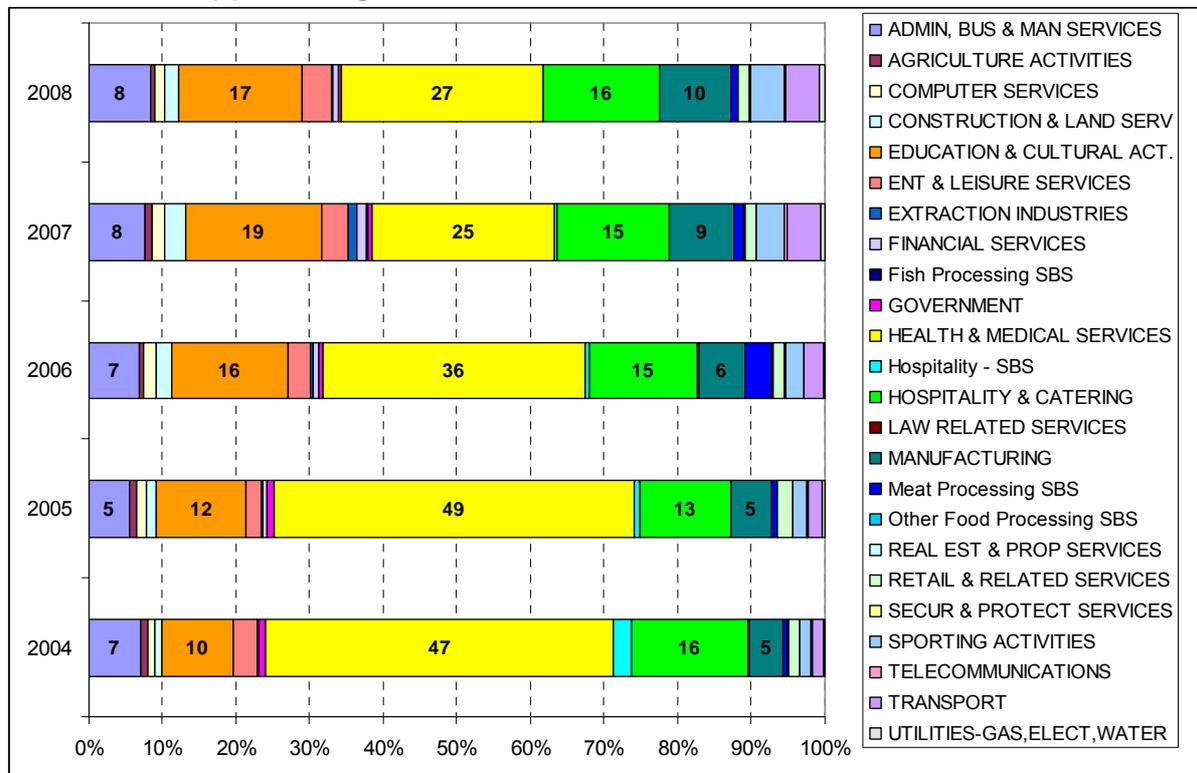
Source: Work permits (from UKBA via FOI request)

The WRS provides information on the 'top 10' *occupations*[49] for initial applications in each local authority area. These 'top 10' occupations vary between local authorities and so it is not possible to derive a complete picture. Across most local authorities, occupations appearing prominently in the 'top 10' and accounting for the largest volumes of applications are: Process Operative (other Factory Worker), Warehouse Operative, Packer, Food Processing Operative and (especially in rural areas) Farm Worker / Farm Hand. These same occupations appear dominant throughout the time period.

Likewise occupational disaggregation of data on work permit approvals is confined to the 'top 10' occupations. Given the detailed nature of the non-standard occupational titles used, numbers of work permit approvals for specific occupations are often small.[50] Over the period from 2004 to 2008, a marked reduction in the number of Nurses is apparent, alongside reductions in some other health-related occupations. The number of work permit approvals for Researchers, Lecturers, Teachers and Other Engineering Occupations tended to hold up over the period. In the period from 2006 to 2008 (i.e. the years which were not covered in the previous report), the occupations accounting for the largest shares of total work permit approvals in the region were Nurse (16 per cent), Other Engineer Occupation (11 per cent), Other Managerial Related Occupation (8 per cent), Senior Carer (8 per cent), Chef (8 per cent), Researcher (8 per cent), Other Health/Medical Occupation (5 per cent) and Teacher at School/College (4 per cent).

Analyses of *hourly wage* data from the WRS reveals that around three in four applications are for the most poorly paid jobs, with the majority of the remainder at wage levels only slightly above this. Nearly all of the applications are for jobs in which individuals work 35 hours or more per week (i.e. are for full-time work). Over the year from the final quarter of 2008 to the third quarter of 2009 81 per cent worked between 35 and 40 hours and 10 per cent over 40 hours. The share in the former category is slightly higher and the share in the latter category is slightly lower than in the earlier period from 2004 to 2007 and may be indicative of fewer opportunities for overtime work during recession.

4.6   Conclusions

This section has focused on patterns and trends in migrant workers as revealed by the DWP data on NINos allocated to people of non-UK nationality and UKBA registration data from the WRS and from work permit approvals. The WRS provides detailed time-series data on the characteristics of workers from the A8 countries, the work permit approval data relates to migrant workers from the EEA, while the NINo data places A8 migration and work permit approvals within the context of migration from all countries of the world.

Both the NINo and WRS data reveal the steady increase in international immigration of people for work from 2002 to 2007, and the great surge of immigration following EU expansion in 2004. They also show how the number of immigrants has declined in response to the recession from 2008. The decline in the number of work permit approvals is evident earlier, but was particularly marked between 2006 and 2007. While the WRS reveals that the majority of A8 migrants planned to stay for only a short period, none of the sources provides information on out-migration and whether the recession has led to migrants leaving the East Midlands. While EU expansion attracted a large number of A8 migrant workers, immigration from all parts of the world has increased over time. South Asia was the main source of migrants at the start of the period and flows of migrants from India and Pakistan have been

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[49]   As noted in Annex 1, 'occupation groups' which do not accord with the Standard Occupational Classification (SOC) are used.

[50]   Figures are rounded to the nearest five and data for occupations have been provided at local authority district level only. The occupational disaggregation relates to specific occupational job titles, which are not analogous to the Standard Occupational Classification.

maintained, with India being the second largest source of migrants after Poland in most local authority districts in the region. As well as these countries, the region has attracted migrants from South Africa and the Philippines (responding to the demand of the NHS and social care sectors) and China (which, along with India, provides many migrants who work in the IT sector). Migrants from the A8 countries tended to work in Agriculture, Food Processing and Distribution-related industries, with many being agency workers. In general, A8 migrant workers may be typified as working long hours for low wages.

Migrant workers tend to be found in the more urbanised west of the region, predominantly in the major cities, and in south-east Lincolnshire. Leicester was the largest single destination. While the number of migrants increased in most parts of the region over time, some areas (notably in the north and the more prosperous and less remote rural areas) had few migrant workers throughout the period. International labour migration to the region reduces the age profile of the workforce, since migrants are mainly aged between 18 and 34 years. However, an increasing percentage of migrant workers bring dependents with them.

5. Focus on selected migrant sending countries

- The case studies in this section – focusing on Poland, India, the Philippines and Lithuania - show that how different groups of migrants respond to conditions of recession is influenced by both conditions in the UK and in the migrants' countries of origin.

- The precise timing and severity of the recession in different sending countries has resulted in fluctuations in the migrant flows from all four of the case study countries considered.

- As the recession has hit, different migrant sending countries have enacted various, contrasting, policies towards their overseas citizens. Poland and Lithuania have begun to encourage their citizens to return, while the Philippines, conversely, has attempted to increase migration, with the hope that remittances will enable their economy to weather the recession.

- The case studies of Poland and Lithuania show that these migrants appear to respond rapidly to changing conditions in their countries of origin. Relative improvements to the economies of Poland and Lithuania since Accession (and particularly prior to the economic crisis) have acted as pull factors to encourage migrants to return, although the scale of this return is somewhat debated.

- Migrants from the two A8 countries are viewed as the most responsive to short-term fluctuations in conditions in the UK and their country of origin. Many of these migrants view their migration as temporary, and there is evidence of circular migration, where migrants return temporarily to their country of origin as conditions there improve relative to the UK, with the expectation that they will emigrate again in response to subsequent changes in the economy of either their home country or the UK (or elsewhere).

- The cases of Indian and Filipino migrants in the UK represent contrasting cases. In each case, migrants from these countries have become the dominant immigrant group in a particular sector – IT in the case of Indians and health and social care, particularly nursing, in the case of Filipino migrants. However, while concentration in the expanding IT industry has allowed Indian migrants in the UK to remain relatively unaffected by the recession, the Filipinos in the UK have been hit not only by the recession, but by UK policies to cut the recruitment of nurses from abroad.

5.1 Introduction

It is important to consider information and intelligence on migration from 'key' sending countries in order to fill gaps in the UK information base and also because economic (and non-economic) conditions in such countries impact on decisions to 'stay' / 'leave' / 'return'. This section reviews information on migration trends in selected sending countries (drawing on OECD and European Commission reports, data available from national statistical offices, journal articles, news items, etc). It should be noted that while the most up to date information has been sought, in some instances the information relates to a time before the severity of the economic crisis was apparent.

The selection of countries to focus on in this section was informed by changing national profiles of migrants as revealed in the LFS, NINo and WRS in order to identify candidate sending countries to look at in more detail. Poland and India were selected as the most important sending countries in terms of volumes of migrants. Two further countries were also selected: first, the Philippines which has been particularly important as a source of health and social care labour for the UK; and secondly, Lithuania, as a second 'free movement' country (in addition to Poland) and one of the A8 Member States which has been hit

particularly severely by the economic crisis and where the trend profile of WRS registrations in the East Midlands has been upward recently.

5.2   Poland

5.2.1   Background

There are various problems in collecting data on migration between Poland and the UK. First, much of the official Polish data concerns only 'permanent' migrants, and estimates from Poland's Central Statistical Office show that flows of temporary migrants by far outnumber official migration from Poland. Additionally, data on Polish residents is based on 'permanent' residents, but it is known that many 'permanent residents' have actually emigrated, but have not removed themselves from the register of permanent residents.[51]

In the UK data, while A8 nationals working as employees are supposed to register with the WRS, some estimates suggest that up to 40 per cent do not do so.[52] The self-employed are exempt from registration, and prior to EU Accession, there were a large number of Polish migrants who came to the UK as self-employed people.

Migration from Poland to the UK began to be a significant phenomenon after World War II[53] and networks formed with migrants since then have played a role in sustaining migration flows.[54] However, as Figures 5.1 and 5.2 show, it is the migration of Poles since Accession to the EU and the start of free movement of labour between Poland and the UK that saw Poles becoming a significant community in the UK. From being the fifth most popular destination country in 2004, the UK has now become the most popular destination for migrants from Poland. The Polish Central Statistical Office estimated in 2006 that approximately 30 per cent of Polish migrants in the EU were living in the UK.[55]

In the UK, immigrants from Poland are by far the dominant group amongst the A8 migrants, although their share is declining (as outlined in section 5). This reflects both a decline in the number of migrants coming from Poland and an increase in the number of migrants coming from other A8 countries.[56] Remittances also fell steeply between 2008 and 2009, with a fall of 27 per cent.[57]

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[51] Kaczmarczyk, P. and Okólski, M. (2008) 'Demographic and labour-market impacts of migration on Poland', *Oxford Review of Economic Policy* 24 (3), 599–624.

[52] Pollard *et al.* (2008) *op cit.*

[53] Vershinina, N., Barrett, R. and M. Meyer (2009) *Polish Immigrants in Leicester: Forms of Capital Underpinning Entrepreneurial Activity.* Leicester Business School Occasional Paper 86. Leicester: Leicester Business School and De Montfort University.

[54] Okólski, M. (2007) *Europe in movement: migration from/to Central and Eastern Europe.* Centre of Migration Research Working Paper No 22/80. Warsaw: Centre of Migration Research, University of Warsaw.

[55] Central Statistical Office (various dates) Data on Poland. http://www.stat.gov.pl/gus/5840_5866_ENG_HTML.htm

[56] UK Border Agency, DWP, HMRC and Customs and Communities and Local Government (2009) *Accession Monitoring Report May 2004 – March 2009. A8 Countries* http://www.bia.homeoffice.gov.uk/sitecontent/documents/aboutus/reports/accession_monitoring_report/report-19/may04-mar09?view=Binary

[57] Ratha, D., Mohapatra, S. and A. Silwal (2009) *Migration and Remittance Trends 2009: A better-than-expected outcome so far, but significant risks ahead.* Migration and Development Brief 11. Migration and Remittances Team, Development Prospects Group, World Bank.

Figure 5.1: **The stock of temporary migrants from Poland, by major destination countries (thousands)**
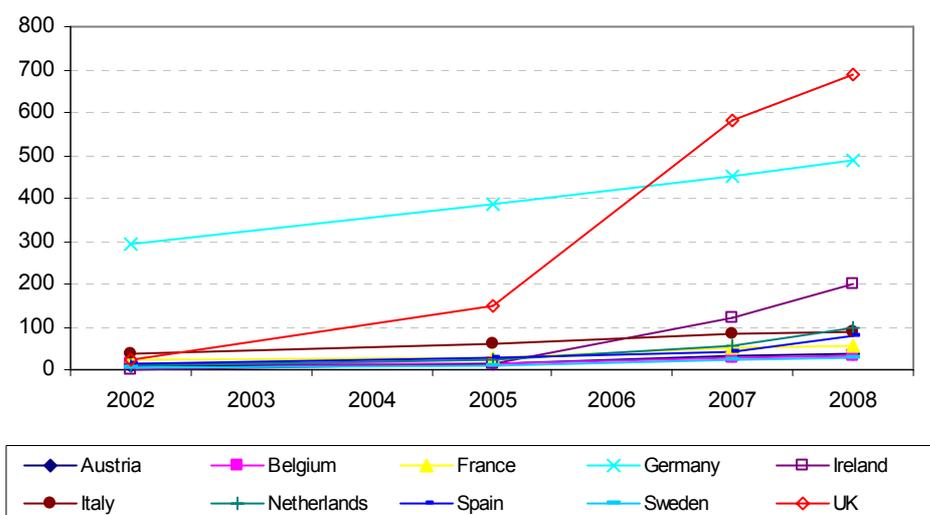
Source: Data from Kaczmarczyk and Okólski, 2008, pp 603, Table 1

Figure 5.2: **Immigration to and emigration from Poland**
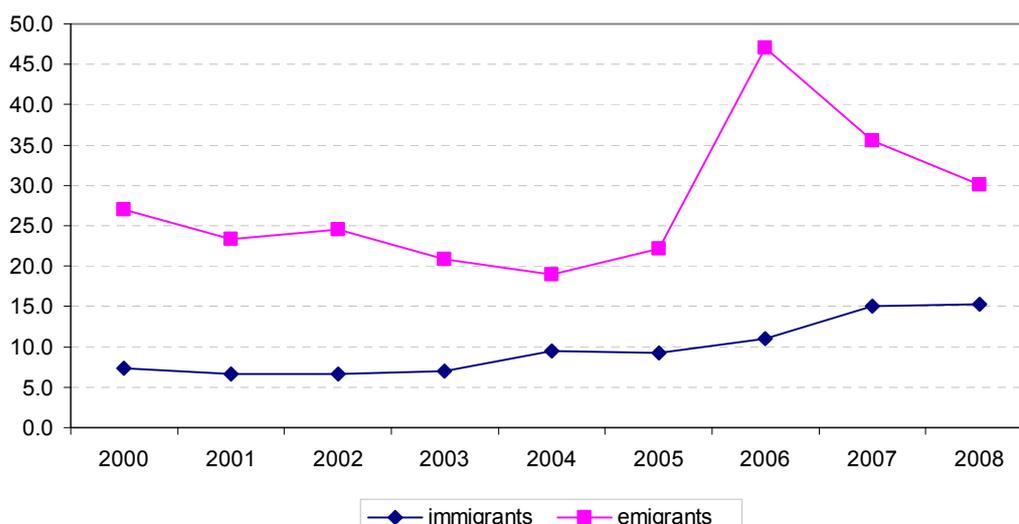
Source: Central Statistical Office, Poland (2009) Part 4: Annual economic indicators

There are relatively few barriers to mobility between the UK and Poland, either in terms of regulation or cost. Additionally, many Poles have come to the UK to work in specific, temporary jobs[58] and in 2006 the University of Surrey[59] found that 22 per cent were seasonal migrants. Consequently, a large proportion of Poles either see their migration as temporary or of no fixed duration (as highlighted in section 5). Migration flows are also dominated by young people (again as highlighted in section 5). They tend to be the most mobile group and in Poland have also been the group that has been worst affected by unemployment, with

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[58] Blanchflower, D. and Lawton, H. (2008) *The Impact of the Recent Expansion of the EU on the UK Labour Market. IZA Discussion Paper* No. 3695. Bonn: IZA

[59] University of Surrey (2006) *Polish Migrants' Survey Results*, Commissioned by BBC Newsnight. Guildford: University of Surrey.
http://www.surrey.ac.uk/Arts/CRONEM/CRONEM_BBC_Polish_survey%20results.pdf

youth unemployment levels reaching 50 per cent.[60] This means that Polish migrants in the UK are one of the groups that are most sensitive to changes in the economies of both the UK and Poland.

Kaczmarczyk and Okólski (2008)[61] note that the range of destination countries for Polish migrants is widening, although it does not appear that increased migration to other European countries has completely compensated for the decline in migration to the UK. This may change as more of the EU countries reduce their restrictions on free movement of Polish workers. Writing before the onset of economic crisis, they considered it likely that improvements in labour market conditions in Poland and declining birth rates combined with migration flows leveling off after an initial flurry of activity when free movement first became possible, meant that Poland would see less emigration in the future.

Financial reasons and unemployment in Poland were identified by the University of Surrey as being the main push factors for migration from Poland, although they also found that young, highly educated people were more likely to give non-financial motivations for migration, including personal and professional development and an easier life.

The UK has tended to attract more educated migrants compared to countries such as Germany. Highly educated migrants are the most likely to speak English and so to consider working in an English-speaking country. This trend became even more pronounced after Accession in 2004.[62] Kaczmarczyk and Okólski (2008)[63] also found that it was not necessarily the unemployed who were migrating. Their figures show that nearly half of those who left Poland to work abroad were in stable employment in Poland before their departure; while over a quarter were unemployed and 14 per cent were not economically active. There has also been an increase in the number of Poles who have come to the UK as students.

Despite their high levels of education (which in part reflect the expansion of tertiary education in Poland) and employment experience, various surveys[64] have shown that Polish workers are unlikely to be working in highly skilled jobs, and consequently, Polish migrants get amongst the lowest return on their education of all migrant groups. Iglicka (2008)[65] found that when Polish immigrants were working in jobs relevant to their qualifications, they were often working in specifically Polish organisations. Until recently, many high-skilled young people were prepared to work in low-skilled jobs for a short time, as they were able to earn more than they would working in high-skilled professions in Poland. However, there is evidence that this is changing: Blanchflower and Lawton (2008)[66] found that Polish workers

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[60] Fihel, A., Kaczmarczyk, P., Mackiewicz-Lyziak, J. and M. Okólski (2007). *Labour mobility within the EU in the context of enlargement and the functioning of transitional arrangements. Country Report: Poland.* European Integration Consortium Paper VC/2007/0293

[61] Kaczmarczyk, P. and Okólski, M. (2008) *op cit.*

[62] Kaczmarczyk and Okólski, 2008 *op cit*, page 610.

[63] Kaczmarczyk, P. and Okólski, M. (2008) *op cit.*

[64] For example, see Clarke, K. and Drinkwater, S. (2008) 'The labour-market performance of recent immigrants' in *Oxford Review of Economic Policy* 24, 495–516; Eade, J., Drinkwater, S. and Garapich, M. (2006) *Poles Apart? EU Enlargement and the Labour Market Outcomes of Immigrants in the UK.* IZA Discussion Paper No. 2410. Bonn: IZA; Kloc-Nowak, W. (2007) 'Chapter 3: Migration and employment of migrants' in Kupiszewski, M. (ed.) with Bijak, J., Kaczmarczyk, P., Kicinger, A., Kloc-Nowak, W., and J. Napierała. *Demographic development, labour markets and international migration in Poland – Policy challenges.* CEFMR Working Paper 3/2007. Warsaw: Central European Forum For Migration and Population Research and IOM, 34-47.

[65] Iglika K (2008) *Survey Research on Legal Job Migrations from Poland to Great Britain after 1st May 2004.* Warsaw: Centre for International Relations. http://www.csm.org.pl/images/rte/File/Program%20Migracje/Raport1_08.pdf

[66] Blanchflower, D. and Lawton, H. (2008) *op cit.*

are becoming less prepared to do unskilled work for relatively low wages, and that employment agencies were focusing on other countries rather than recruiting Polish migrants with lower skills and qualifications.

5.2.2 Impact of the recession

Poland has been hit less badly by the recession than some other A8 economies (as discussed in section 2). Prior to Accession in May 2004, unemployment in Poland was high, reaching around 20 per cent in 2002. At the time of Accession in 2004, Poland had the highest unemployment rate of the A8 countries, and a per capita GDP of only 49 per cent of the EU25.[67] After Accession unemployment fell, as Figure 5.3 indicates. Large-scale migration from Poland has been one of the causes of this fall, as Poland has exported its surplus labour. In the past few years, this has caused shortages in a number of sectors, including construction and manufacturing, and labour shortages have been declared by companies as one of the most important barriers to growth.[68] In 2007, the Polish Government began to try to attract emigrants back to Poland, establishing a website to inform emigrants about changing economic conditions, available jobs and educational opportunities. Of particular concern is the proportion of young people who have left Poland.

Figure 5.3:   Total harmonised unemployment rate (%)
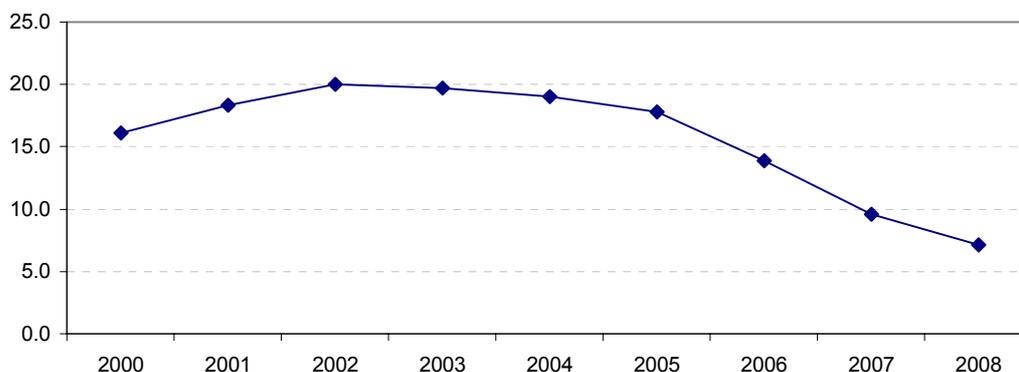
Source: Central Statistical Office, Poland (2009), Part IV Annual Economic Indicators, using November 2009 data from Eurostat.

There are still issues concerning the low participation rate, regional disparities and relatively high levels of unemployment amongst young people. Additionally, there is evidence of an increase in unemployment since early 2009, but by 2008, unemployment rates in Poland and the UK were roughly the same, which is thought to be a motivating factor in the slow down of migration from Poland, as well as the return of some Polish migrants from the UK.

There has been a great deal of debate recently about whether a significant proportion of Poles are returning to Poland, and if so, who and why? Pollard et al (2008)[69] found that the pace of return migration accelerated during 2007 and 2008, to the extent that an estimated half of those who have come to the UK since 2004 have returned to Poland. This has been disputed by sources in Poland, who say that the numbers returning have been much smaller[70] and there is no evidence from the latest Polish Labour Force Survey (LFS) to back up claims of high levels of return.

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[67] Fix M., Papademetriou D.G., Batalova J., Terrazas A., Lin S. Y-Y. and Mittelstadt M. (2009) *Migration and the Global Recession.* Migration Policy Institute and BBC World Service. http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/08_09_09_migration.pdf

[68] Kaczmarczyk, P. and Okólski, M. (2008) *op cit.*

[69] Pollard N. *et al.* (2009) *op cit.*

[70] Berg, S. (2010) 'Are Poles Returning Home?' BBC News, 22nd January 2010. http://news.bbc.co.uk/today/hi/today/newsid_8472000/8472980.stm

Eade, Drinkwater and Garapich (2006)[71] suggest that younger and less qualified individuals are the most likely to be short-term migrants, while the highly qualified are more likely to become permanent migrants. Similarly, Papademetriou et al. (2009)[72] find that low skilled workers are the most likely to lose their jobs in a recession. Pollard et al (2008) suggest that there is some evidence of those who stay in the UK long-term moving into jobs that make better use of their skills, especially once their English language skills have improved, which may also encourage the more highly-skilled to remain in the UK. However, Papademetriou, Sumption and Somerville (2009)[73] note that highly skilled migrants may return because they are likely to have more opportunities in Poland and it is not prohibitively expensive for them to travel home, wait, and return, while low-skilled migrants may be less likely to return because they perceive themselves to have fewer opportunities in Poland.

Kisiel, Szczebiot-Knoblauch and Stelmaszewska (2009)[74] found that increases in wages in Poland were the most important factor in determining return to Poland, followed by the number of jobs available in Poland. However, Pollard et al's survey (2008) showed that although economic reasons were a primary motivation for coming to the UK, those migrants who left did so for personal reasons, primarily missing home or wanting to be with their friends and family in Poland. They did, however, also find that four in ten of the returned migrants they surveyed thought that better employment prospects in Poland would encourage Poles in the UK to return to Poland permanently; (however, the economic crisis might have changed matters).

Questions have also been asked about the attachment of Poles to the UK, particularly when they conceive of their stay as being temporary. Vershinina et al. (2009)[75] and Sumption and Somerville (2010)[76] found that social networks were critical in helping people find employment after their initial job, but Papademetriou et al. (2009)[77] found that declining numbers make these networks less useful. The latter also find that Poles in the UK have maintained a sustained attachment to Poland, with 80 per cent making frequent visits to Poland and 26 per cent having bought or planning to buy property there with money they earned in the UK.

Despite this, as highlighted in section 4, family-related migration is becoming more common with a greater share of WRS registrants arriving with dependants in 2009, although this can be attributed in part to a disproportionate fall in the number of single workers migrating for purely economic reasons (Sumption and Somerville, 2010).[78] Kaczmarczyk and Okolski (2008)[79] also find that migrants are increasingly perceiving their migration to be long-term, and the proportion of migrants who stay abroad for less than 12 months has been declining. 15 per cent of respondents in the survey by Eade *et al.* (2006)[80] said they wanted to stay in the UK permanently.

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[71] Eade J. *et al.* (2006) *op cit.*
[72] Papademetriou, D.G., Sumption, M. and W. Somerville (2009) *Migration and the Economic Downturn: What to Expect in the European Union.* Migration Policy Institute, Washington DC.
[73] Papademetriou, D.G. *et al.* (2009) *op cit.*
[74] Kisiel R., Szczebiot-Knoblauch L. and Stelmaszewska A. (2009) 'Emigration and factors determining return to Poland of the graduates of the Faculty of Social Sciences and Arts of the University of Warmia and Mazury in Olsztyn' in *Olsztyn Economic Journal* 4 (1), 138-51.
[75] Vershinina N. *et al.* (2009) *op cit.*
[76] Sumption, M. and Somerville, W. (2010) *The UK's new Europeans: Progress and challenges five years after Accession.* Equality and Human Rights Commission and Migration Policy Institute, Manchester and Washington DC
[77] Papademetriou, D.G., Sumption, M. and W. Somerville (2009) *op cit.*
[78] Sumption, M. and Somerville, W. (2010) *op cit.*
[79] Kaczmarczyk, P. and Okólski, M. (2008) *op cit.*
[80] Eade J. *et al.* (2006) *op cit.*

5.3 India

5.3.1 Background

There are two distinct groups of labour migrants from India. The first group consists of highly skilled people who have mainly migrated to the industrialised countries of the West. Their numbers have increased rapidly since the 1990s. It is the growth of the highly-skilled category that characterises Indian emigration from the 1990s onwards, with particular growth seen in migration of groups like IT professionals, primarily to the USA, but also to Western Europe and the Gulf States. Although the largest group is still lower-skilled migrants to the Gulf States (which characterised labour migration from India in the 1970s and 1980s), the highly skilled are a significant group due to their earning power and the remittances they send back to India and investments they make there, as well as the impact on the structure of the labour force of exporting a relatively high proportion of the highly skilled population.

The second, and larger, group of migrants are the primarily unskilled or low-skilled migrants. 96 per cent of low-skilled workers who left India in 2008 went to one of the Gulf Countries. More than 848,000 visas were issued to low-skilled Indians in 2008, an increase of 78 per cent from 2004.[81] The number of unskilled migrants to the Gulf States doubled between 2004 and 2008, but this has slowed since then. There is some evidence of a return of low-skilled migrants from the Gulf States, but this has been quite limited, in part because of the concentration of Indians in Saudi Arabia which remained sheltered from the recession for longer.[82]

Outside these two groups, there is also a group of migrants who have come to the UK as intra-company transfers, and whose stay is for very short periods, and this group is not always counted as migrants in statistics. Finally, there are students, and it is possible that their numbers will decline as a result of the recession hitting India, due to the costs of studying abroad.

In their study of people intending to emigrate from India, Irudaya Rajan *et al.* (2009)[83] found that the most common reason for emigrating was having an inadequate income, as Table 5.1 shows.

Table 5.1:   Reasons for emigration as stated by intending emigrants

Reasons	Male	Female	Total	Male	Female	Total
Inadequate income	311	99	410	69.89	47.37	62.69
Under-employment	53	52	105	11.91	24.88	16.06
Unemployment	18	34	52	4.04	16.27	7.95
Repayment of debts	25	20	45	5.62	9.57	6.88
Getting higher job	38	4	42	8.54	1.91	6.42
Total	445	209	654	100.0	100.0	100.0

Source: Irudaya Rajan et al. (2009), p. 26, Table 3.1.

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[81]   Fix, M., Papademetriou, D.G., Batalova, J., Terrazas, A., Lin, S. Y-Y. and M. Mittelstadt (2009) *Migration and the Global Recession.* Migration Policy Institute and BBC World Service. http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/08_09_09_migration.pdf

[82]   Fix et al. (2009) *op cit.*, 7.

[83]   Irudaya Rajan, S., Varghese, V.J, and M.S. Jayakumar, (2009) *Beyond the Existing Structures: Revamping Overseas Recruitment System in India.* Kerala: Centre for Development Studies http://www.cds.edu/download_files/MOIA-CDS%20Final%20Report%20June%202009.pdf

In the UK, work permit data show that a large proportion of Indians awarded work permits in 2007 and 2009 have been IT professionals, and Indians now dominate the awarding of work permits in this field.[84] Of the 31,879 work permits and first permissions awarded to Indian citizens by the UK Government in 2008, 24,008 were for workers in Professional Occupations, including 22,266 for Science and Technology Professionals.

5.3.2   Impact of the recession

There is some debate about the impact of the recession on migration from India more generally. The economic recession spread quickly to India,[85] but some authors have suggested that there has been little impact from this. In 2008, the Minister of Overseas Indian Affairs, Vayalar Ravi, stated that the Indian Missions in the Gulf States were not reporting any large-scale adverse impact of the recession, although there had been some job losses, and that there were no reports of large-scale returns from Germany, Canada, United Kingdom, New Zealand and Australia.[86] The Department for Communities and Local Government[87] note that migrants from India are expected to be amongst the quickest to adapt to changing economic conditions in their home countries compared to the UK, and there is anecdotal evidence to suggest that Indians who wish to migrate are moving into professions that have been more resistant to the recession.

As mentioned above, recent arrivals (excluding those coming as family reunions) have been dominated by IT Professionals. This sector has been less hit by the recession than many other sectors, which has meant that the flow of migrants from India has been relatively unaffected, and it has been hypothesised[88] that one impact of the recession may be to encourage more migration of highly skilled people in industries like IT.

This adaptation of migrants to prevailing economic conditions has allowed remittances to India to remain high. The growing share of highly-skilled professionals amongst Indian migrants has resulted in the flow of remittances to India more than doubling between 2000 and 2007, and remittances represented almost 3 per cent of India's GDP in 2008.[89]

It is thought that Indians are less likely to return home than Eastern Europeans, for example, not only due to the industrial sectors in which they are employed, but also due to the established Indian community in the UK and the speed with which migrants forge links with this community.

Irudaya Rajan *et al.* (2009)[90] surveyed migrants who had returned to India and found that the reasons for return were quite diverse, as Table 5.2 shows, with a large proportion returning to India for reasons that are not especially related to the recession, for example because of ill-health or problems at home.

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[84]   Salt, J. (2009) *International Migration and the United Kingdom: Report of the United Kingdom SOPEMI Correspondent to the OECD.* London: MRU http://www.geog.ucl.ac.uk/research/mobility-identity-and-security/migration-research-unit/pdfs/Sop09_fin.pdf

[85]   Somerville, W. and Sumption, M. (2009) *Immigration in the United Kingdom: The Recession and Beyond.* Washington, DC: Migration Policy Institute.
http://www.migrationpolicy.org/pubs/Immigration-in-the-UK-The-Recession-and-Beyond.pdf

[86]   ANI (2008) "No large-scale impact of recession on Indian workers abroad," Reported in http://blog.taragana.com/n/no-large-scale-impact-of-recession-on-indian-workers-abroad-103067/

[87]   Department for Communities and Local Government (2009) *Projections of migration inflows under alternative scenarios for the UK and world economies. Economics paper 3.* http://www.communities.gov.uk/documents/communities/pdf/1204238.pdf

[88]   Somerville and Sumption (2009) *op cit.*

[89]   Irudaya Rajan *et al.* (2009) *op cit.,* 5-6

[90]   Irudaya Rajan *et al.* (2009) *op cit.*

Table 5.2:   Reasons for return as stated by return migrants, 2007

Reasons for return	Number			Percent		
	Male	Female	Total	Male	Female	Total
Expiry of contract	74	5	79	24.3	22.7	24.2
Compulsory repartition by the employer	25	0	25	8.2	0.0	7.6
Due to low remuneration	60	0	60	19.7	0.0	18.3
Ill-health	61	4	65	20.0	18.2	19.9
Problems at home	39	9	48	12.8	40.9	14.7
Miserable working and living conditions	26	3	29	8.5	13.6	8.9
Harsh behaviour of the employer	15	1	16	4.9	4.5	4.9
Hostile climate conditions	5	0	5	1.6	0.0	1.5
Total	**305**	**22**	**327**	**100.0**	**100.0**	**100.0**

Source: Irudaya Rajan et al (2009), p. 50, Table 3.10.

5.4   The Philippines

5.4.1   Background

Migration has been a central element of the development policy of the Philippines since the 1970s. In 2008, 1.2 million Filipinos took up a job overseas, and it is estimated that nine million Filipinos (a quarter of the Filipino workforce) are working overseas.[91] Permanent migration was highest in the earlier days of migration, with the highest annual growth rates being between 1975 and 1985. Growth has slowed since then, but the number of temporary migrants has increased, which has more than compensated. The proportion of workers who have been re-hired has also increased, and currently around 25 per cent of contracts go to people who already have experience of working abroad.[92]

Generally, the Filipinos who migrate are amongst the most skilled and educated. 63 per cent of temporary workers in 2006 had at least some tertiary education, compared to 27 per cent of the Philippine labour force as a whole.[93] As Figure 5.4 shows, the professional, technical and related occupations group has consistently accounted for the largest proportion of prior occupations of Filipino migrants. Figure 5.4 does not include those migrants who were economically inactive before departure. Housewives accounted for 21 per cent of the total migration flow between 2000 and 2008, and over 24 per cent of migrants were students. Overall, of the total migration flow, 11 per cent of all Filipino migrants were previously employed in Professional, Technical and Related Occupations.

Due to the large proportion of Filipino migrants who are seafarers (approximately 20 per cent of all Filipino temporary labour migrants each year are seafarers, accounting for around a quarter of the world's seafarers), it is common for data on Filipino migration to take them as a separate category.

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[91]   Fix *et al.* (2009) *op cit.*; Asis, M.M.B. (2008) 'The Philippines' Culture of Migration' Migration Information Source http://www.migrationinformation.org/USFocus/display.cfm?ID=364; Ruiz, N.G. (2008) 'Managing Migration: Lessons from the Philippines' Migration and Development Brief. Migration and Remittances Team, Development Prospects Group, The World Bank. Aug 11 2008 http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1110315015165/MD_Brief6.pdf

[92]   Orbeta Jr, A. and Abrigo, M. (2009) *Philippine International Labor Migration in the Past 30 years: Trends and Prospects*. Philippine Institute for Development Studies Discussion Paper Series No. 2009-33. Makati City: PIDS http://dirp4.pids.gov.ph/ris/dps/pidsdps0933.pdf

[93]   Orbeta jnr and Abrigo (2009) *op cit*, using data from the Labor Force Survey, p. 6.

Figure 5.4: **Number of registered Filipino emigrants by major occupational group prior to migration 1981-2008**
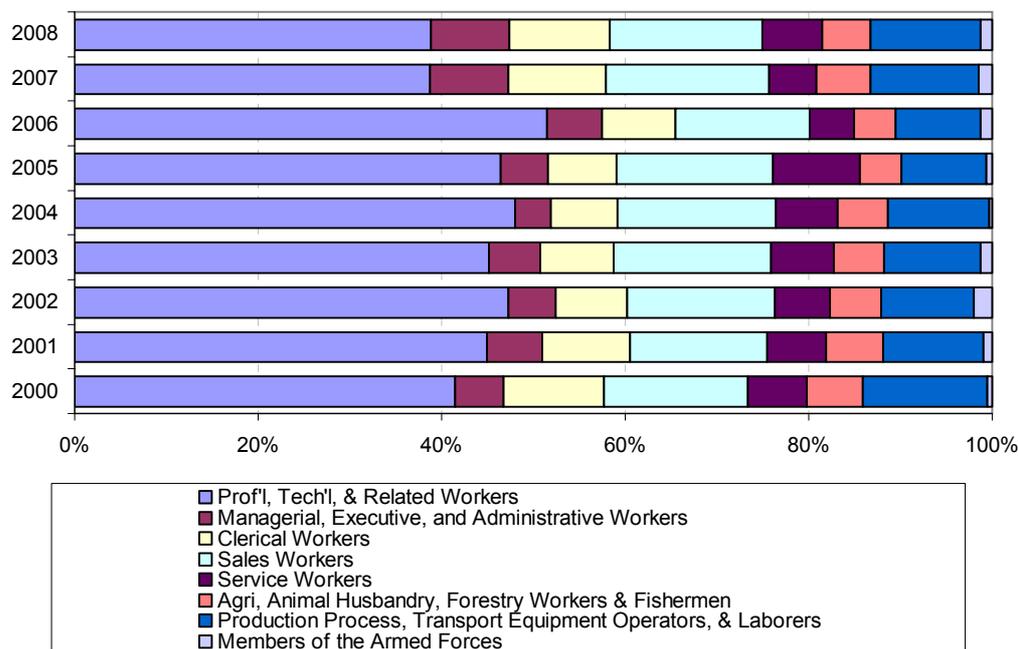
Source: POEA, 2008

Around half of the temporary new or renewed contracts taken up by Filipinos were for employment in the Middle East. The UK is the most common destination for Filipinos in Europe, but Europe has become increasingly less important as a destination area as migration to the Middle East has taken off as a result of the construction boom there. A quarter of all temporary migrants went to Europe in 1975, but by 2007, only 6 per cent of temporary workers went to European countries, although the proportion of permanent migrants to European countries has increased slightly since the middle of the decade.[94] It is estimated that the stock of Filipinos in the UK at the end of 2008 was 203,497, of whom 91,206 were permanent immigrants whose stay did not depend on a work contract, 102,291 were temporary migrants who were expected to leave at the end of their work contracts, and around 10,000 were irregular migrants. Figure 5.5 shows changes in the estimated stock of Filipinos in the UK between 2000 and 2008.

The number of contracts issued to Filipinos fell after 2006,[95] although overall since 2001, the growth rate in new and rehires has fallen by only 2.3 per cent, as is shown in Figure 5.6.

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[94] Orbeta jnr and Abrigo (2009) *op cit.*
[95] Recruitment policies amongst major employers (e.g. the NHS) may be a factor here – see further discussion below.

Figure 5.5:   Stock Estimate of Filipinos in the UK

☐ Permanent ☐ Temporary ☐ Irregular
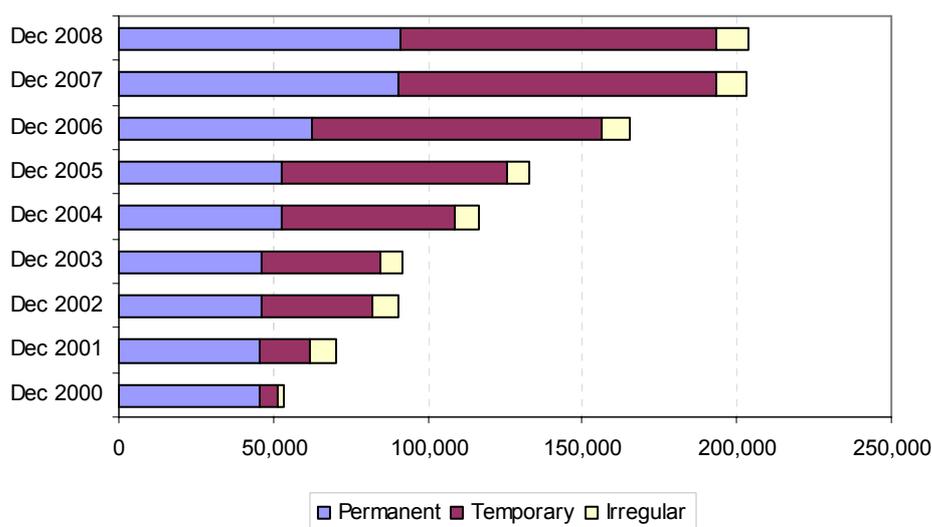
Source: Commission on Filipinos Overseas, 2000-2008[96]

Figure 5.6:   Deployed Land-based Overseas Filipino Workers in the UK (New Hires and Rehires)
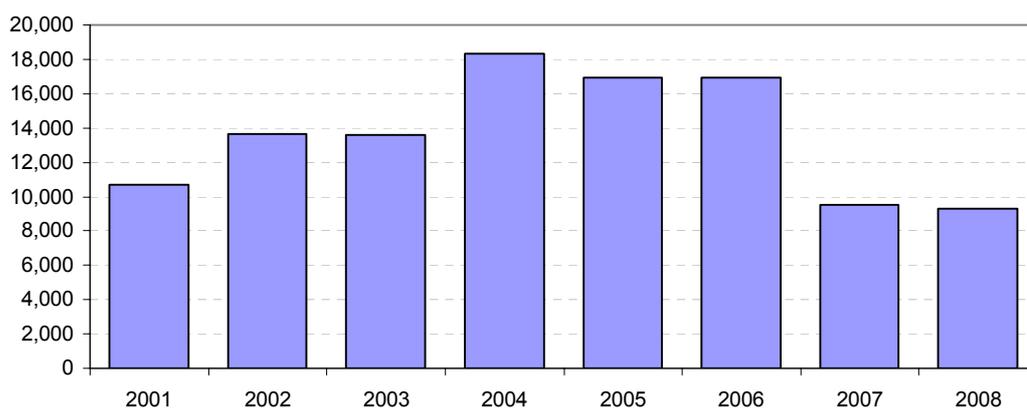
Source: POEA, 2008[97]

5.4.2   Impact of the recession

Despite a history of 'boom and bust' economic growth, until 2007 the Philippine economy continued to grow. Growth began to slow in 2008, and the unemployment rate in the Philippines has increased to 8 per cent. Exports have fallen, but the main concern is the possibility of a slowdown of remittances from Filipinos working overseas. These remittances account for around 11 per cent of the GDP of the Philippines, and overseas workers are important investors in the real estate sector.[98]

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[96] Commission on Filipinos Overseas (various dates) Stock estimates of overseas Filipinos. http://www.cfo.gov.ph/index.php?option=com_content&view=article&id=282&Itemid=85

[97] Phillipine Overseas Employment Administration (various dates) http://www.poea.gov.ph/html/statistics.html

[98] Foreign and Commonwealth Office (2009) Country Profile: Philippines http://www.fco.gov.uk/en/travel-and-living-abroad/travel-advice-by-country/country-profile/asia-oceania/philippines?profile=all

As the recession has hit, the Philippine Government has increased their efforts to sustain emigration and limit return migration. President Gloria Macapagal Arroyo directed the Philippine Overseas Employment Administration (POEA) to "*execute a paradigm shift by refocusing its functions from regulation to full-blast market development efforts, the exploration of frontier, fertile job markets for Filipino expatriate workers*" (quoted in Fix *et al.* [2009] op cit, p. 46). Whilst the total number of Filipino workers overseas has increased since 2007, the actual numbers who left the Philippines for employment overseas was slightly lower at the end of 2008 than it was at the end of 2007.

The Philippines has been able to sustain their levels of emigration partly due to the wide range of countries Filipinos migrate to. Filipino migrants can be found in 190 countries.[99] Additionally, a large proportion of Filipinos migrate to Gulf State countries, in particular Saudi Arabia, which were not hit by the recession until relatively late, and work in sectors that have generally been less hit by the recession, such as health and social care.

As a result, although growth of remittances has slowed, overall, remittances have risen despite the recession. Between 2008 and 2009 the Philippines saw their remittance flow grow, with an increase of about 3 per cent each month compared to the previous year.[100] The UK is the fourth most important sending country for remittances and between 2007 and 2008, remittances from the UK increased by 13.5 per cent.[101] Figure 5.7 shows the growth of remittances from the UK between 2003 and 2008.

Figure 5.7:   Remittances from the UK
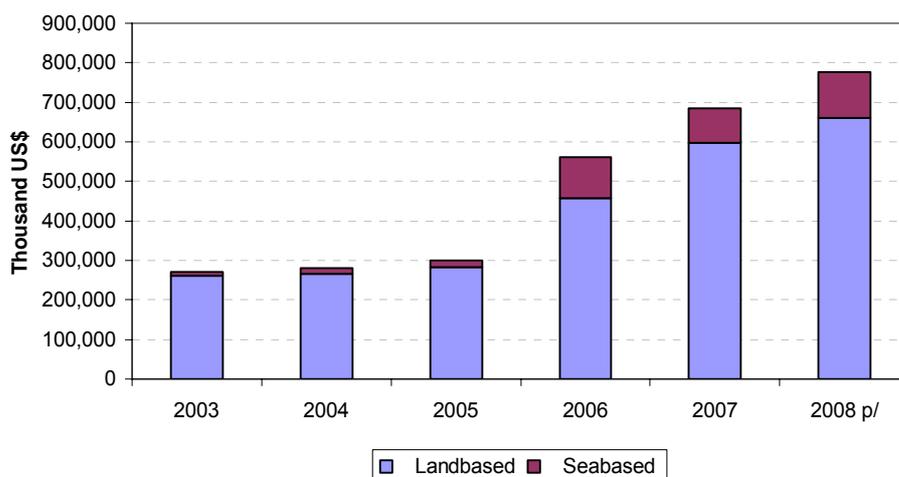
Source: Central Bank of the Philippines (2008) based on reports of commercial banks, thrift banks, OBUs and FOREX Corporations

There is some vulnerability to recession, particularly because a relatively high proportion (39 per cent) of people working abroad are new hires, and these are the workers who are most likely to be laid off first if economic conditions decline.[102] Return migration is most likely amongst this group.

Like the Indian migrants in the UK, the Filipinos have tended to cluster in a small number of industrial sectors and occupations, primarily health and social care, with nurses being by far the largest occupational group for much of the early part of the decade. However, unlike the

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[99]   Asis M.M.B. (2008) *op cit.*
[100] Fix *et al.* (2009) *op cit.*
[101] Phillipine Overseas Employment Administration (2008) http://www.poea.gov.ph/html/statistics.html
[102] Fix *et al.* (2009) *op cit.*

Indian case, where new labour migrants have been concentrated in an expanding industry (IT) that has not been as severely hit by recession as many other industrial sectors, the recession and associated policy changes have severely hit the migration of nurses from the Philippines. While the Health Care sector in general is not a sector that is particularly at risk from the recession itself, reforms by the UK government since 2003 aimed at training more UK nurses and making the NHS self-sufficient have reduced the number of new contracts given to nurses from the Philippines.[103] Nursing posts were removed from the Home Office list of shortage occupations in 2006, and there has been little active recruitment of nurses from overseas since then. However, unions have claimed that problems negotiating pay deals as a result of the recession may lead to a recruitment and retention crisis, and it may become necessary to recruit from overseas in the future.[104] As shown in Figure 5.8, some of the loss of nursing contracts in the UK has been off-set by an increase in the numbers employed as care-givers.

Figure 5.8:   Deployment of Filipino nurses and care-givers in the UK (new hires)
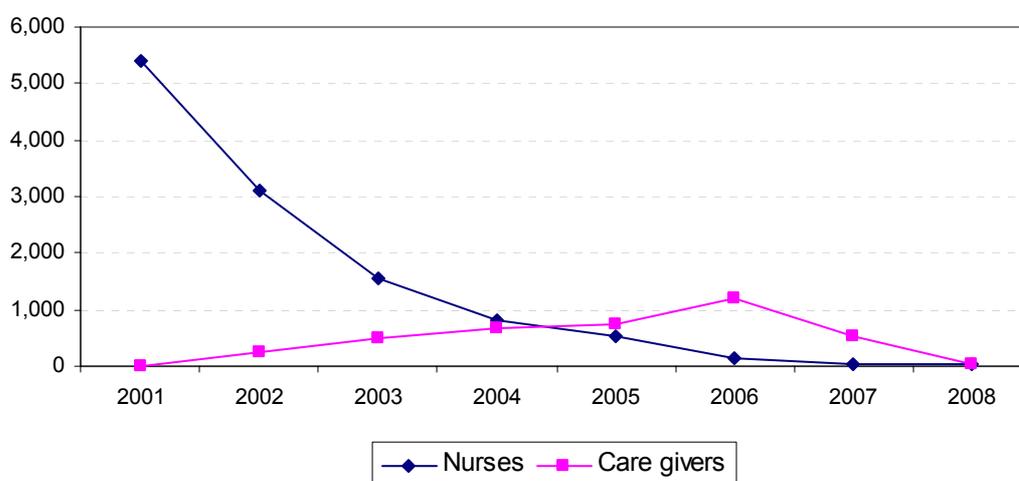
Source: POEA, 2008

Additionally, there has been an increase in the number of nurses going to work in Saudi Arabia, and a general diversification in the countries recruiting Filipino nurses.

5.5   Lithuania

5.5.1   Background

Lithuania has one of the highest rates of migration in the EU, mainly to the UK and the Republic of Ireland. Recorded emigration in 2007 was around 13,850, but this number reflects only those emigrants who leave the country for a period longer than six months, and notify their departure to the territorial migration office. A special survey in the 2008 Labour Force Survey found that undeclared emigration comprises about half of the total outflow from Lithuania[105] - as illustrated in Figure 5.9. Consequently, there is some disparity between different data sources.

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[103]   Local Government Association (2009) *The impact of the recession on migrant labour*, LGA, London. http://www.lga.gov.uk/lga/aio/1493777

[104]   Mooney, H. (2008) Unions present evidence to Pay Review Body for reopening three-year pay deal talks in light of the UK recession in *Nursing Times*, 28th October 2008. http://www.nursingtimes.net/whats-new-in-nursing/unions-present-evidence-to-pay-review-body-for-reopening-three-year-pay-deal-talks-in-light-of-the-uk-recession/1907885.article

[105]   SOPEMI (2009) SOPEMI Country Notes 2009: Lithuania. OECD. http://www.oecd.org/dataoecd/42/49/44067898.pdf

Figure 5.9:   Proportions of emigrants from Lithuania who have and have not declared their departure
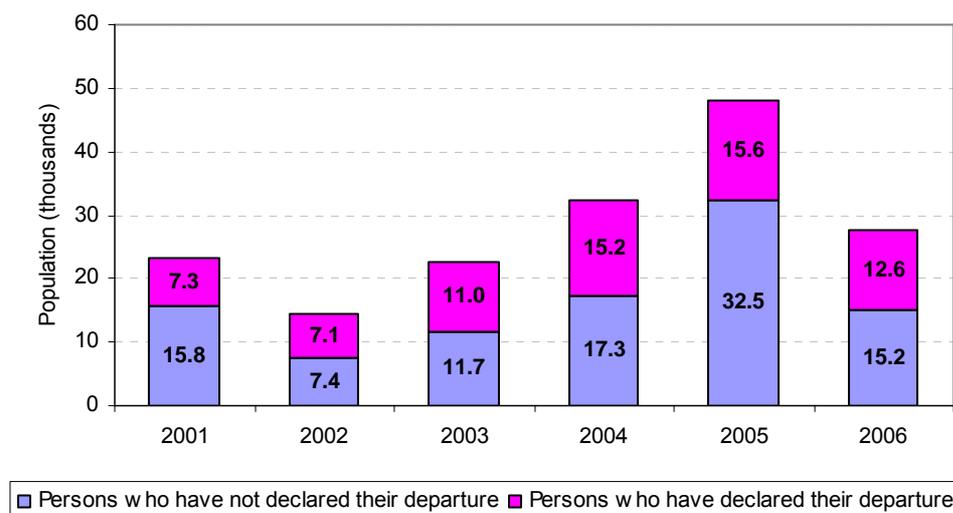
Source: taken from Amrozaitiene D. (2008)[106]

Population losses due to net emigration since 1990 amount to an estimated 10 per cent of the population.[107] As Figure 5.10 shows, from 2004 onwards, Great Britain has been the most important destination for Lithuanian migrants, and the overall flow of migrants reflects trends in the flow to the UK.

Figure 5.10:   Number of Lithuanian citizens who left Lithuania for selected countries between 2003 and 2008
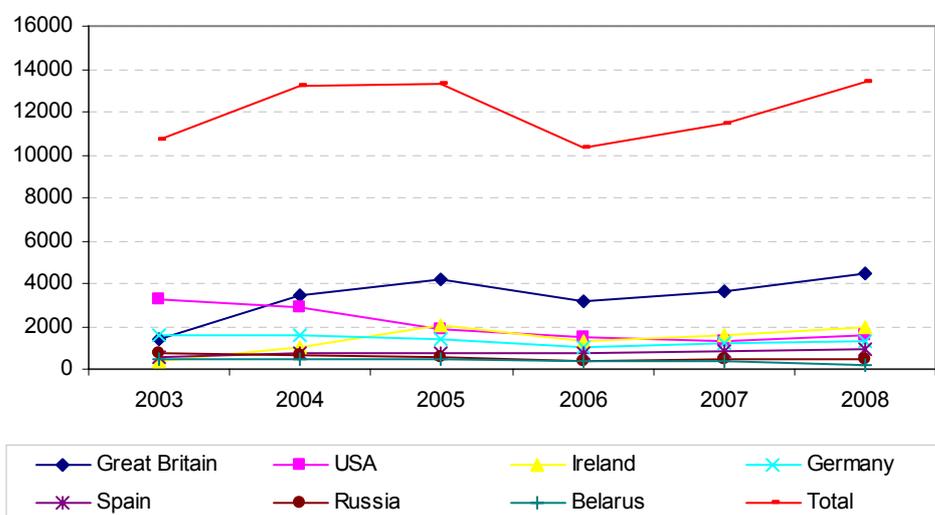
Source: Lithuania Migration Yearbooks 2005-2008

As noted in section 2 and 4, characteristics of the migration flow from the A8 countries that make it different to those from other areas include uncertainty over the duration of the

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[106] Amrozaitiene, D. (2008) Statistics Lithuania Measuring Undeclared Migration and Improvement of the International Migration Statistics by Statistics Lithuania. Paper presented at Joint UNECE/Eurostat Work Session on Migration Statistics, Geneva, Switzerland, 3-5 March 2008. United Nations Statistical Commission and Economic Commission for Europe and Eurostat. http://www.unece.org/stats/documents/ece/ces/ge.10/2008/wp.2.e.pdf

[107] SOPEMI (2009) *op cit.*, p. 258.

migrants' stay in the UK and the circularity of the migration (i.e. it often involves several trips, sometimes on a seasonal basis). As noted in section 4 and discussed in greater detail in section 6, the majority of migrant workers from A8 countries are in low-skilled occupations and sectors likely to have been hard hit by recession. This is despite their occupations before departure and the levels of education of these migrants, which, as Figure 5.11 shows, tend to be relatively high.

Figure 5.11: Emigrants (16 and older) who have not declared their departure by education, statistical indicator and year
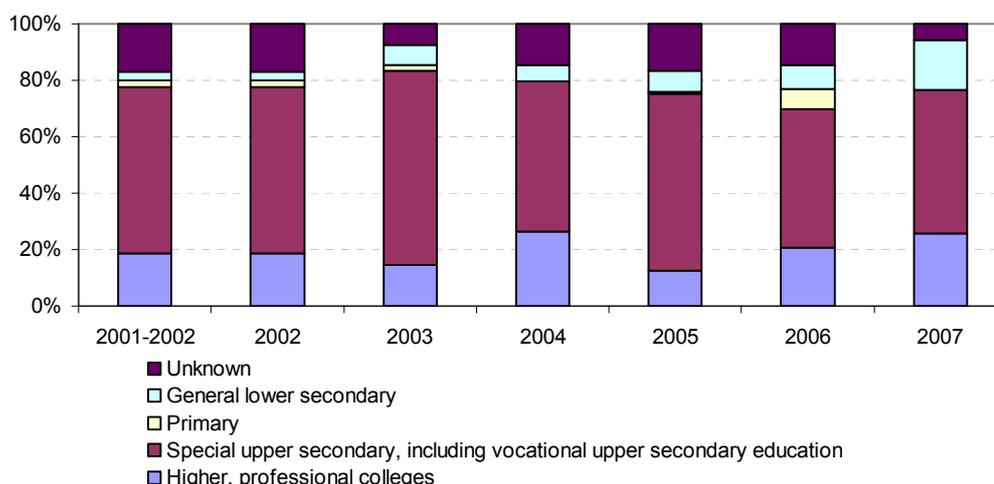
Source: Statistics Lithuania (2008 data)

Figure 5.12: Sectoral profile of employment of A8 workers by nationality, UK cumulative total May 2004-March 2009
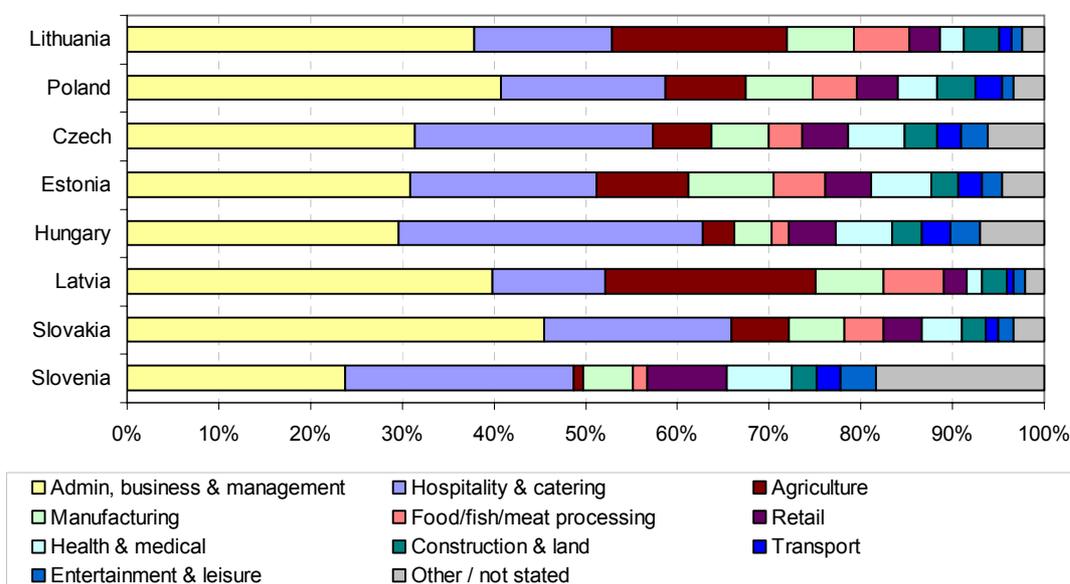
Source: UK Borders Agency data from the Worker Registration Scheme.[108]

The sectoral distribution of Lithuanians in the UK follows a broadly similar pattern to the Poles and other groups of A8 migrants. Figure 5.12 shows the sectoral profile of

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[108] UK Border Agency, Department for Work and Pensions, HM Revenue & Customs and Communities and Local Government (2010) Accession Monitoring Report May 2004-March 2009: A8 countries. Table 11, p. 22.

employment of the cumulative total of A8 migrant WRS registrations, by nationality. The proportion of Lithuanian workers employed in Agriculture is higher than amongst the other A8 countries, with the exception of Latvia. A slightly smaller proportion than average are employed in Hospitality and Catering, although this, along with Manufacturing and Food, Fish and Meat Processing, is an important sector for the employment of Lithuanians in the UK. Figure 5.12 suggests that a very high proportion of registrations were in Administration, Business and Management, but it must be noted, as highlighted in section 4.5, that it is common for workers recruited through agencies to be listed under the 'Administration, Business and Management' heading, regardless of the sector they ultimately work in.

5.5.2 Impact of the recession

Lithuania's GDP per capita is only 45 per cent of the EU average, and only slightly more than one-fifth of the UK's GDP per capita. However, until recently, Lithuania had one of the highest GDP growth rates in the EU, combined with relatively low inflation,[109] and migration had also helped to keep unemployment low. Between 2004 and 2008, unemployment fell (from around 13 per cent in the first half of 2004 to around 4 per cent at the end of 2007 - according to Eurostat European Labour Force Survey data). The labour shortages and rise in wage levels this caused may have acted as a pull factor in encouraging Lithuanian migrants to return (although the return of migrants may result in a further increase in unemployment rates). However, the economic recession hit Lithuania towards the end of 2008 and unemployment increased sharply in the third quarter of 2008, and is currently near to the level seen in 2004.

Migrants from Eastern Europe, including Lithuania, are thought to be less likely to settle in the UK than groups like the Indian migrants. Return migration has been increasing since 2003 and accounts for approximately 70 per cent of inward migration. Figure 5.13 shows the trend in migration to and from Lithuania between 2001 and 2008.

Figure 5.13:   Migration to and from Lithuania 2001-2008
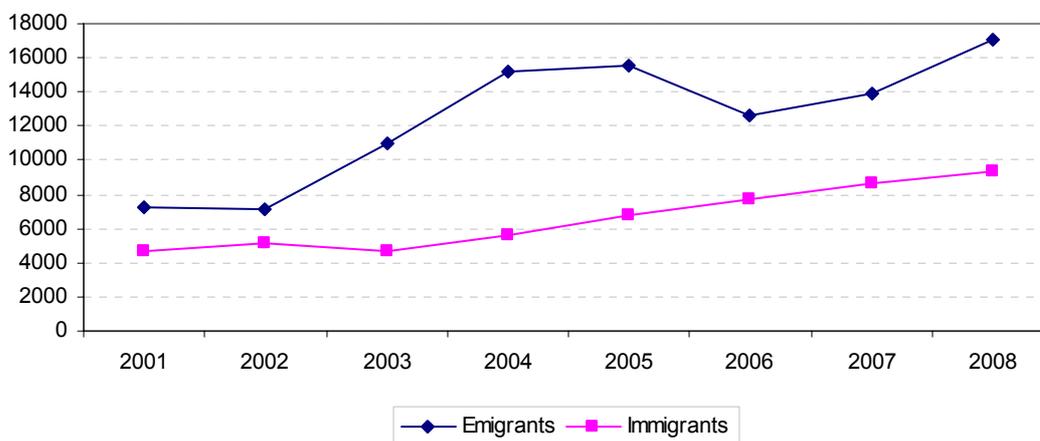
Source: Statistics Lithuania (2008 data)

In 2006, almost 5,000 Lithuanians returned, which is almost three times the number who returned in 2003. Of the 8,600 immigrants to Lithuania in 2007, around 6,140 are thought to be Lithuanian nationals returning from abroad, mostly from the UK and Ireland, and in 2008,

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[109]   Foreign and Commonwealth Office (2009) Country Profile: Lithuania.
    http://www.fco.gov.uk/en/travel-and-living-abroad/travel-advice-by-country/country-profile/europe/lithuania/?profile=all

6,337 out of 9,297 immigrants were Lithuanian citizens. The majority of those who return do so from the UK and Ireland.[110]

Concerns about a 'brain drain' of highly qualified workers have led to the introduction of policies aimed at encouraging return migration to Lithuania. There is a shortage of unqualified labour in the Construction, Transport and Garment industries, and a shortage of Scientists, Engineers, Medical professionals and IT specialists has been identified, in part because of migration. It is estimated that approximately 40 per cent of the emigration outflow is composed of skilled non-manual workers,[111] although the data from Statistics Lithuania suggests that the proportion is lower, as Figure 5.14 shows. This discrepancy between data from different sources reflects the different populations included. As has been mentioned, the share of respondents who have not declared their departure represent only around half of the total number of emigrants.

Figure 5.14: Emigrants (15 and older) who have not declared their departure by former occupation and year

☐ Unknown
☐ Elementary occupations (Group 9 according to the Lithuanian Classification of Occupations)
☐ Skilled manual (Groups 6–8 according to the Lithuanian Classification of Occupations)
☐ Low skilled non-manual (Groups 4–5 according to the Lithuanian Classification of Occupations)
☐ Highly skilled non-manual (Groups 1–3 according to the Lithuanian Classification of Occupations)
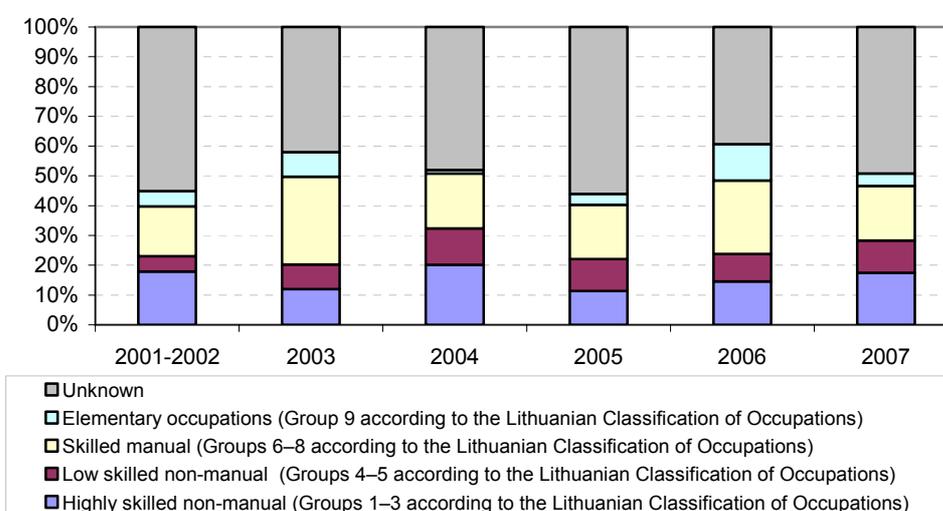
Source: Statistics Lithuania (2008 data)

To try to combat this outflow of skilled workers, the Lithuanian Government introduced an Economic Migration Regulation Strategy in April 2007, with the aim of reducing net migration to zero by 2012. Policies associated with this need to encourage return migration include maintaining contacts with and providing information about employment, study and business opportunities to Lithuanians and Lithuanian organisations abroad and to preparing a programme for Lithuanians abroad looking for jobs in Lithuania.[112]

Migrants from Lithuania are generally young, are more likely to view their migration as temporary and are less likely to be migrating to join existing family members (see Figure 5.15). This makes migration between the UK and Lithuania more responsive to changing economic conditions in both the UK and in the migrants' country of origin than migration from India and the Philippines. As the UK was hit by the recession some migrants returned to Lithuania, with the expectation that they would be able to return to the UK when conditions improve. However, as the WRS statistics on initial applications presented in section 5

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[110] SOPEMI (2008) International Migration Outlook Annual Report 2008. Lithuania, page 258-9.
http://www.oecd.org/dataoecd/57/11/41255896.pdf
[111] SOPEMI (2009) SOPEMI Country Notes 2009: Lithuania. OECD.
http://www.oecd.org/dataoecd/42/49/44067898.pdf
[112] SOPEMI (2009) SOPEMI Country Notes 2009: Lithuania. OECD.

illustrated, the later and severe impact of recession in Lithuania appears to have stimulated a further migrant out-flow to the UK (and the East Midlands).

Figure 5.15: Emigrants who have not declared their departure by reason of departure, statistical indicator and year
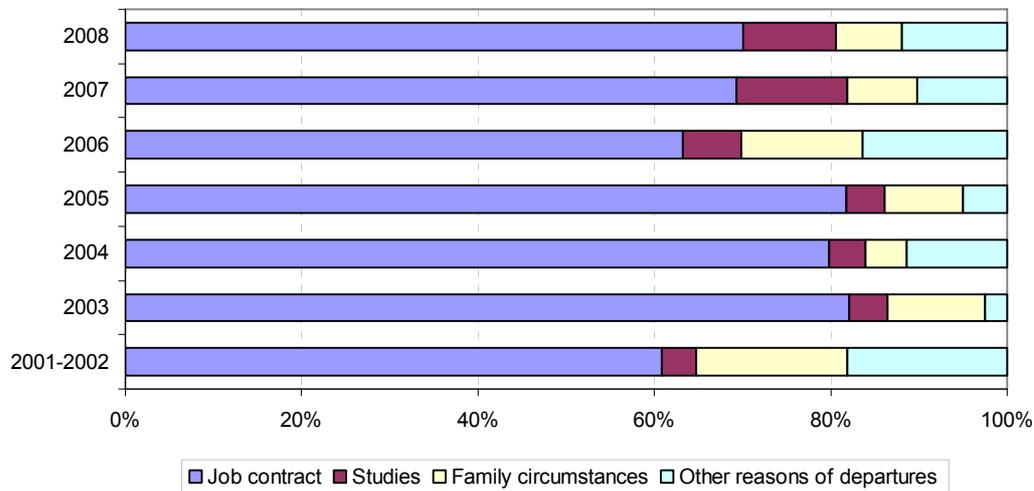
Source: Statistics Lithuania (2008 data)

5.6   Overview

This section has highlighted both commonalities and differences in trajectories of migration when focusing on a 'sending country' perspective. Poland and Lithuania share similarities in terms of location in Eastern Europe and Accession to the EU in 2004, but differences in the precise timing and relative impact of recession have implications for migration trends, with the latter being hit particularly badly by the economic crisis and this being reflected in migration flows. In the case of Poland it is interesting to note that claims of relatively large numbers of return migrants are not picked up in Polish data sources to the extent that those claims might lead us to expect. In part this reflects the difficulties of capturing short-term flows, but it also reflects considerable ambiguity about current trends. Indeed, much of the evidence drawn upon in this section necessarily relates to a period prior to the economic crisis.

The cases of India and the Philippines are rather different from those of Poland and Lithuania. Here historical migration patterns, coupled with managed migration policies and recruitment patterns in key sectors, serve to shape changing patterns of migration flows.

In all cases, however, it is clear that not only are economic and policy conditions in sending and receiving countries important in understanding migration flows, but so are conditions in alternative destination countries.

6. ASPECTS OF EMPLOYMENT AND UNEMPLOYMENT OF MIGRANT WORKERS IN THE EAST MIDLANDS

- This section draws upon data from the Labour Force Survey (LFS) to explore patterns of migrant employment during the period 2007 to 2009. The analysis is for migrant cohorts arriving before 1992, between 1992 and 2003 and from 2003 onwards.

- Total employment has continued to grow slowly. However, the number of migrants in employment has fallen since the start of 2008 (though this finding is based on small samples for which sampling variation is therefore larger, and so should be treated with caution).

- 'Migrant dense' (MD) industries or occupations are defined as being those in which the share of employment for migrant workers arriving in the UK since 1992 exceeds the share of employment for the UK-born workforce.

- Migrant dense industries include a number of Manufacturing industries (including Food Processing and Clothing); Hotels & Restaurants; and Transport, Storage and Communication.

- In general, migrant dense industries have lost employment between 2007 and 2009 (albeit they are not the only industries to have done so), with the impact particularly intense for Manufacturing and Transport & Storage. The impact was broadly equal for migrants and non-migrants.

- Some other industries have continued to see an increase in jobs, but employment has grown faster for migrants than for non-migrants, suggesting that migrants are being displaced from the migrant dense industries most badly affected by the economic downturn and are moving into other industries. These findings are not consistent with the 'crowding out' of the UK-born by migrant workers.

- Only two Standard Occupational Classification (SOC) Major Groups are classified as migrant dense: Process, Plant and Machine Operatives and Elementary Occupations (i.e. the two least skilled SOC major groups). Post-2003 migrants are much more likely than earlier migrants to work in such occupations, and are less likely than earlier migrants to work in higher skilled employment. The bi-polar distribution of migrant employment in highest and lowest skilled jobs, which is apparent for earlier migrant cohorts, is not evident for the latest cohort. At a more detailed level of analysis, a number of occupations in Science, Information & Communication Technology and Health are classified as being migrant dense.

- In Process, Plant and Machine Operatives, migrant employment has declined while employment of UK-born workers has increased. In contrast, within the small employment decline in Elementary Occupations, there has been a shift in employment from UK-born to migrant workers.

- The impact of increasing unemployment from 2007 to 2009 has been greater on UK-born than migrant workers. For UK-born workers, the Construction, Wholesale, Retail and Vehicle Repair, Real Estate and Public Administration sectors are increasingly a source of unemployment. Workers in migrant-dense industries were less likely to become unemployed during this period. Larger proportions of unemployed people previously worked in higher skilled than lower skilled occupations in 2009.

- At the local scale, there is no strong relationship between changes in new migrant registrations and unemployment change. Changes in the geographical distribution of new migrants do not seem to be related to the geographical pattern of unemployment change.

6.1   Introduction

The aim of this section is to examine patterns of employment of migrant workers in the period 2007-2009, updating findings of the previous report. The following aspects of migrant employment are examined:

(a) Total employment of UK-born and migrant workers during 2007–2009;
(b) Industry and occupational concentration of migrant employment;
(c) Changes in employment by industry and occupation 2007–2009;
(d) Unemployment of UK-born and migrant workers during 2007–2009.

The first aspect sets the context and quantifies recent changes in total migrant employment within the region. The second aspect updates the analysis of the previous report in identifying areas of work which are 'migrant dense'. In simplest terms, a 'migrant dense' (MD) area of work is an industry and occupation where the relative concentration of migrant employment is greater than that of UK-born counterparts. The implementation of this concept is explained fully later in the section. The concept of 'migrant dense' areas of work helps to simplify the picture in terms of presenting a list of jobs in which migrant employment is most prominent and therefore where the effects of migrant employment on UK-born workers, should they exist, are most pronounced. Moreover, the analysis of MD areas of work sets the foundation for the statistical analysis, facilitating the analysis of differential trends in employment, unemployment and earnings of migrant workers.

The third aspect of the analysis looks at the change in regional employment within the context of migrant dense industries and occupations. This analysis is important in terms of examining the extent to which increasing migrant employment has resulted in employment displacement of UK-born workers. Also important, with respect to recent trends in the labour market, is the extent to which the economic downturn has affected demand for migrant workers by industry and occupation. Finally, the analysis of unemployment continues this theme. Unemployment has increased in the region during the economic downturn. An examination of differential trends in unemployment and which areas of employment have been adversely affected is useful in identifying to what extent the fortunes of UK-born and migrant workers have differed. In relation to unemployment, analyses of claimant count data at local level are also presented.

The analyses of employment use data from the LFS for the East Midlands for the period from 2007-09 (inclusive). As previously, non-overlapping LFS quarterly surveys are appended to form a merged dataset for analysis. In this report the dataset includes the following surveys: 2007Q1; 2008Q2 and 2009Q3 (see Annex 8). The merged dataset maximises migrant sample sizes and is best suited for detailed cross sectional analysis of migrant employment. Where appropriate we also utilise the intervening quarterly surveys. This is useful in terms of analysing emerging trends over time in employment and unemployment.

Analysis is undertaken, as previously, by migrant cohort (i.e. based on country of birth and the year of arrival into the UK).

6.2   Total employment of UK-born and migrant workers during 2007–2009

Figure 6.1 presents the change in total employment in the East Midlands region based on regressed (weighted) estimates of employment from the LFS, distinguishing workers by migrant status. This is based on the number of jobs by place of work. The figures reveal that the total number of jobs has continued to increase, although at a very modest pace, throughout the period. This is despite the downturn in the labour market, the primary impact of which has been seen in terms of increased unemployment, as will be discussed in section 6.5. It is noted that the increase in the number of jobs continues a secular trend which has continued for many years.[113] Figures for total employment reflect increased population and more general changes in the distribution of and nature of work (e.g. demographic changes, changing gender participation, more part time working, etc), therefore headline jobs should not be seen as an indicator of the state of the labour market.

The lower panel of Figure 6.1 shows the increase in migrant employment compared to the same quarter the year previously. The figures reveal a notable change in the trend in migrant employment since the onset of the economic downturn at the start of 2008. Prior to this point the number of migrants working in the region was continuing an upwards trend, as established in the previous report and noted in earlier sections. Since 2008Q1 this trend has been arrested, at least temporarily, with LFS estimates of migrant employment in fact slightly declining. Some caution is noted at this point as migrant employment estimates are based on smaller samples within the LFS and are therefore subject to larger sampling variation. This contrasts to the employment of UK-born workers which has continued to increase steadily. This development, its timing and implications are in contrast to the findings of the previous report.

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[113]   Jones P. and Green A.E. (2009) 'The quantity and quality of jobs: changes in UK regions, 1997-2007', *Environment and Planning A* 41 (10), 2474-95.

Figure 6.1   East Midlands employment by migrant status, 2007Q1-2009Q3

	2007q1	2007q2	2007q3	2007q4	2008q1	2008q2	2008q3	2008q4	2009q1	2009q2	2009q3
Total	2,003	2,015	2,029	2,023	2,033	2,007	2,038	2,049	2,041	2,043	2,065
Migrant	176	194	199	199	206	204	201	192	206	207	194
UK-born	1,827	1,822	1,830	1,824	1,828	1,804	1,837	1,856	1,835	1,835	1,871
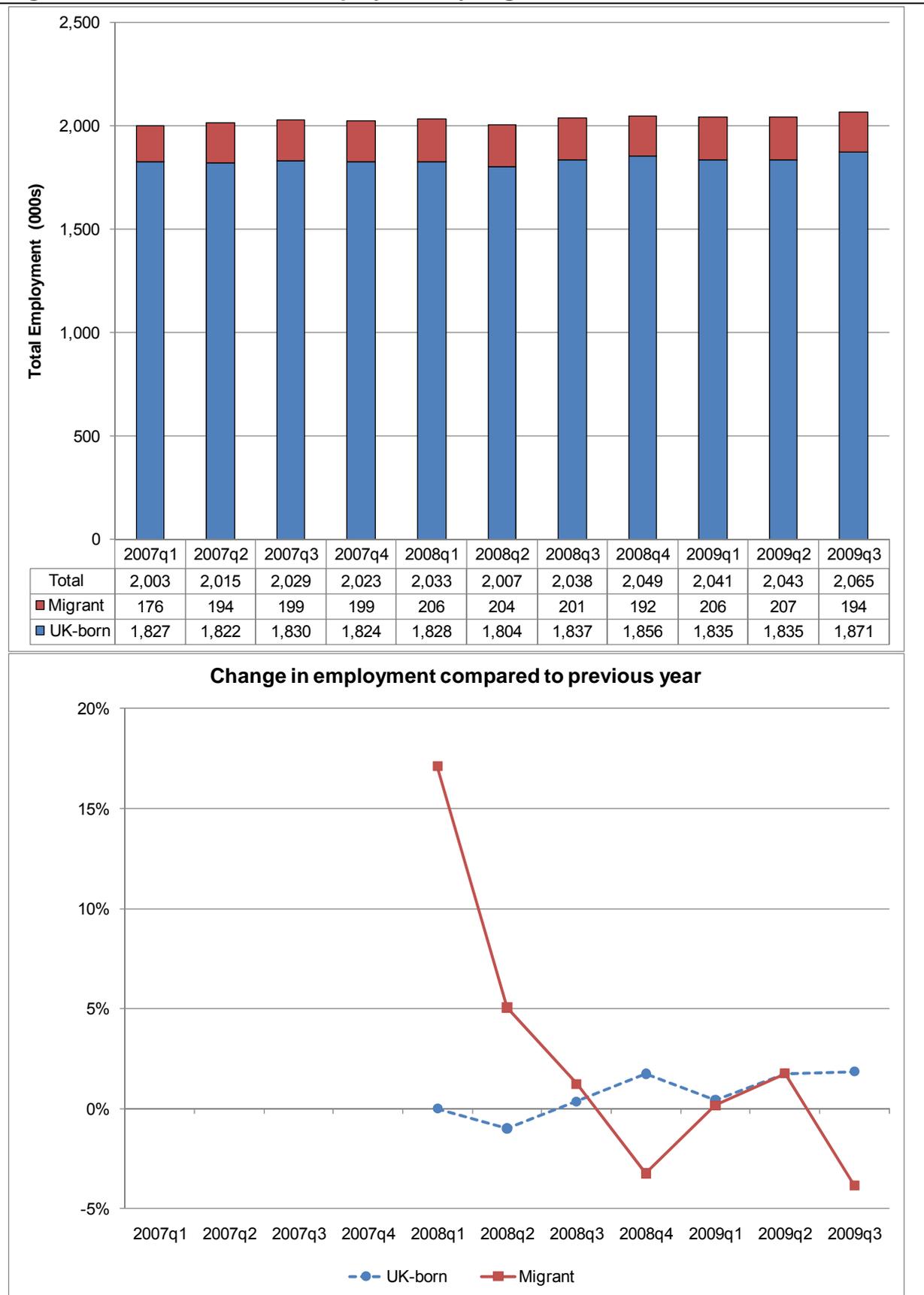
Source: LFS quarterly datasets 2007Q1 – 2009Q3

6.3   Industrial and occupational concentration of migrant employment

6.3.1   Definitions

The previous report established the concept of 'migrant dense' (MD) areas of work. First, *density of employment* is defined as measuring the percentage of all workers (by cohort) working within a particular job category (industry/occupation) - i.e. for industry/occupation *i* and cohort *y*,

$$e\left(i, \text{migrant}\right) = \text{\textit{\% of cohort i employed in industry/ occupation i}}$$

Note that when using the LFS data percentages are calculated based on the regressed (weighted) rather than raw sample numbers.

Density of employment (by industry/occupation) is calculated separately for UK-born workers and by migrant cohort, so giving separate measures of density of employment for each group per industry/occupation of employment. Using these figures there is particular interest in instances by industry/occupation where, based on LFS employment estimates,

$$e\left(i, \text{migrant}\right) > e\left(i, \text{UK - born}\right)$$

A *migrant dense area of work* is then defined as an industry or occupation in which the above condition is met for *both* the last two cohorts of migrants (i.e. for 1992-2003 and post 2003 cohorts). Although employment densities for pre-1992 cohort migrants are reported these are not instrumental in defining the discrete measure. This follows definitions established in the previous report.

Finally, as well as the discrete definition of migrant dense industries (as defined above) the degree of *relative migrant density* is also defined, based on the ratio of the measures of density of employment for the two groups (migrants and UK-born workers) in industry/occupation *i*. i.e.

$$\frac{e\left(i, \text{migrant}\right)}{e\left(i, \text{UK - born}\right)}$$

6.3.2   Industry and occupation data

The main development in the analysis since the previous report is the introduction by the ONS of a new system of classification of industries. The Standard Industrial Classification (SIC2007) replaces the former SIC2003 categories. The analysis of migrant densities in this report primarily uses the new SIC2007 classification. SIC2007 is analysed on the following disaggregations by:
- Industry Sector (21-fold classification of industry)
- Industry Division (80-fold classification of industry)

Since the LFS datasets supply SIC2007/SIC2003 conversions, migrant dense industries are also listed based on the previous standard (i.e. SIC2003).

In terms of occupation, the Standard Occupational Classification (SOC2000) standards still apply, as previously. Occupation is analysed on the following disaggregations:
- SOC2000 Major Group (9-fold classification of occupation)
- SOC2000 Minor Group (81-fold classification of occupation)

6.3.3   Migrant employment by industry

Table 6.1 shows the employment of UK-born and migrant workers by industry sector (SIC2007 based) and by migrant cohort. The figures are based on an analysis of the LFS merged dataset and restricted to place of employment in the East Midlands region. The marker '^' indicates instances where the density of employment of migrant workers (by cohort) is greater than that of UK born workers. Note that the figures should be treated as indicative only since they are subject to standard sampling error. It is noted that some industries have very small numbers employed (estimated regional employment <5,000). These industries are deliberately excluded from the analysis.

Based on this analysis and applying definitions listed above, Table 6.2 lists MD industries in the East Midlands region based on SIC2007 classifications, with relative values by cohort. Most notable here is the increased concentration of migrant employment in Manufacturing from more established to more recent migrant cohorts. There is also high and increasing employment amongst recent migrants in Transport and Storage Industries. I: Accommodation and Food Services and N: Administration and Support Services are also classified as MD. The four industries listed above account for almost a half of all employment of post-2003 migrants. Note that Agriculture is not identified here; in part this is due to the fact that the LFS does not fully capture seasonal workers in agriculture (see Annex 1). Finally the notably different pattern of employment of recent migrants, compared to those longer established, can be seen in the decreasing relative numbers of migrants who are opting to work in Health and Social Work which noting Table 6.1 (and see previous report) has been a traditional employment base for migrant workers.

A similar analysis to the one above is carried out by Industry division where the list of jobs is much longer, but where sampling errors may be larger. The results of the analysis of employment by Industry division are shown in Annex 9. Based on SIC2007 Industry Divisions (see Annex 10), the following industries are classified as migrant dense:

- 10 Manufacture of Food Products
- 14 Manufacture of Wearing Apparel
- 28 Manufacture of Machinery N.E.C.
- 52 Warehousing & Support For Transport
- 71 Architectural & Engineering
- 78 Employment Activities
- 79 Travel, Tour Operator, Reservation
- 80 Security & Investigation Activities
- 81 Services to Buildings And Landscape
- 82 Office Administration, Support and Other

In terms of employment of recent migrants, high densities of employment in the Food Production and in Warehousing/Transport support are particularly notable.

A similar analysis of SIC2003 is reported by industry sector (Annex 11) and by industry division (Annex 12). This analysis reveals the migrant dense industry sectors and divisions listed below. Despite the change in system of classification, some obvious similarities in terms of areas of migrant dense employment may be identified.

SIC 2003 MD Industries
- D: Manufacturing
- H: Hotels & Restaurants
- I: Transport, Storage & Communication

SIC 2003 MD Industry Divisions
- 15: Food, Beverage Manufacture
- 18: Clothing, Fur Manufacture
- 29: Machinery Equipment Manufacture
- 55: Hotels, Restaurants
- 63: Auxiliary Transport Activities, Travel Agents

Table 6.1   Migrant employment by industry sector (SIC2007)

Industry sector (% of total employment by cohort)	UK born	Migrant Cohort		
		Pre-1992	1992-2003	Post-2003
A Agriculture, Forestry and Fishing	1.4	0.9	0.3	3.8^
C Manufacturing	15.1	17.1^	17.6^	29.8^
D Electricity, Gas, Air Conditioning Supply	0.6	0.3	1.2^	0.0
E Water Supply, Sewerage, Waste	0.9	0.5	0.4	1.1^
F Construction	8.9	5.0	3.1	3.7
G Wholesale, Retail, Repair of Vehicle	16.7	13.0	14.0	12.8
H Transport and Storage	5.6	6.9^	8.8^	14.2^
I Accommodation and Food Services	4.1	6.0^	10.7^	5.5^
J Information and Communication	2.3	3.0^	2.7^	1.5
K Financial and Insurance Activities	2.5	2.7^	1.6	0.0
L Real Estate Activities	0.8	0.7	0.4	0.5
M Professional, Scientific, Technical Activities	4.6	3.9	3.5	1.8
N Admin and Support Services	3.8	4.6^	8.0^	6.7^
O Public Administration and Defence	6.1	6.7^	1.8	2.3
P Education	9.9	7.7	7.4	3.4
Q Health and Social Work	12.0	16.8^	16.7^	8.7
R Arts, Entertainment and Recreation	2.1	1.1	0.5	1.5
S Other Service Activities	2.1	2.9^	1.2	2.8^
T Households as Employers	0.4	0.0	0.0	0.0
All Industries	**100**	**100**	**100**	**100**

Source: Merged LFS data 2007-2009
Note: *(a)* ^ indicates that employment density for migrant cohorts greater than that of UK-born workers; *(b)* Industries with LFS re-weighted employment in the East Midlands region of less than 5,000 are treated as being non-reportable and are therefore excluded from the analysis. These are: B Mining and Quarrying; U Extraterritorial Organisations.

Table 6.2   Migrant dense industry sectors with relative densities

Industry sector	Migrant Cohort		
	Pre-1992	1992-2003	Post-2003
C: Manufacturing	1.13	1.16	1.97
H: Transport and Storage	1.24	1.58	2.54
I: Accommodation and Food Services	1.44	2.58	1.33
N: Admin and Support Services	1.21	2.11	1.77
Relative Density (All of the above)	**1.21**	**1.57**	**1.96**
Employment as % of total (All of the above)	**28.7%**	**34.6%**	**45.1%**

6.3.4   Migrant employment by occupation

The analysis of the previous section is now repeated for occupation rather than industry. Table 6.3 shows the employment of UK-born and migrant workers by SOC2000 major occupation group and by migrant cohort. Again, the figures are based on an analysis of the LFS merged dataset and restricted to place of employment in the East Midlands region and the marker again indicates that density of employment of migrant workers (by cohort) is greater than that of UK born workers. Since employment by occupation is more evenly spread than by industry and total employment by major occupation is generally large, sampling errors are less of an issue. However, figures for percentage employment should again be treated as indicative rather than exact.

Table 6.4 lists MD major group occupations along with relative migrant densities by cohort. Only two of the nine major groups are classified as migrant dense. These are the lowest skilled occupation groups: Process, Plant, Machine Operatives and Elementary Occupations. These two occupations in combination account for more than 60 per cent of employment of recent (post-2003) migrants. For this cohort a pronounced switch to lower skilled employment compared to previous cohorts of migrants is evident. This pattern also differs significantly from that documented in the previous report, where a bi-polar distribution of migrant employment was noted in highest (i.e. professional) and lowest skilled jobs. Whilst this still applies to earlier migrant cohorts, there are much lower levels of density of employment of post-2003 migrants in higher skilled employment.

Table 6.3   Migrant employment by SOC2000 major group

SOC Major group (% of total employment by cohort)	UK born	Migrant Cohort		
		Pre-1992	1992-2003	Post-2003
1 Managers and Senior Officials	15.6	19.1^	8.1	4.2
2 Professional Occupations	10.9	13.6^	13.5^	6.2
3 Associate Professional and Technical	11.9	12.3^	12.2^	2.5
4 Administrative and Secretarial	11.1	9.7	5.3	4.2
5 Skilled Trades Occupations	12.4	10.2	6.3	10.3
6 Personal Service Occupations	8.6	9.2^	9.0^	7.1
7 Sales and Customer Service Occupations	8.0	5.3	7.5	5.3
8 Process, Plant and Machine Operatives	8.6	12.2^	15.8^	20.3^
9 Elementary Occupations	13.0	8.3	22.3^	39.9^
Total	**100**	**100**	**100**	**100**

Source: Merged LFS data 2007-2009
Note: ^ indicates that employment density for migrant cohort greater than that of UK-born workers

Table 6.4   Migrants dense SOC Major groups with relative densities

SOC Major group	Migrant Cohort		
	Pre-1992	1992-2003	Post-2003
8 Process, Plant, Machine Operatives	1.42	1.84	2.37
9 Elementary Occupations	0.64	1.71	3.06
Relative Density (All of the above)	**0.95**	**1.76**	**2.79**
Employment as % of total (All of the above)	**20.5%**	**38.1%**	**60.2%**

A similar analysis is also carried out for the longer list of SOC2000 Minor Occupations, where again instances of very low levels of employment (re-grossed estimate <5,000) are excluded from the analysis. The results of the analysis are shown in Annex 12. The list of Minor Occupations classified as migrant dense is shown below.

- 211: Science Professionals
- 213: Information & Communication Technology Professionals
- 221: Health Professionals
- 543: Food Preparation Trades
- 611: Healthcare & Related Personal Service
- 811: Process Operatives
- 812: Plant and Machine Operatives
- 813: Assemblers and Routine Operatives
- 822: Mobile Machine Drivers, Operatives
- 913: Elementary Process Plant Occupations
- 914: Elementary Goods Storage Occupations
- 923: Elementary Cleaning Occupations

Whilst amongst these more detailed occupations most are in SOC Major Groups 8 and 9, confirming the analysis above, some of the higher skilled professional occupations (in Science, Information & Communication Technology and Health) are classified as migrant dense once defined at a more precise level. This is not surprising given what might have been anticipated based on the findings of the previous report and other similar studies. That

said, the relative concentration of recent migrants in a small number of narrowly defined low skilled occupations is notable. In particular employment in three Minor Occupations, 811: Process Operatives; 913: Elementary Process Plant Occupations and 914: Elementary Goods Storage Occupations, accounts for almost 30 per cent of employment of recent (post-2003) migrants in the region.

6.4   Changes in employment by industry and occupation 2007–2009

This section examines changes in employment in relation to migrant dense areas of work. This is useful in two respects. First, an analysis of changes of employment with respect to UK-born versus migrant workers will allow us to examine to what extent and where, if at all, migrant employment is expanding at the cost of UK-born workers. In particular we might expect to see decreases in UK-born employment in migrant dense industries and occupations as cheaper (demand-side explanation) or more willing (supply-side) migrant labour displaces employment of UK-born workers. This articulates the logic of the so called 'crowding out' hypothesis, which emphasises the likely negative impacts of migrant workers on UK-born workers. Although evidence of such effects is thin on the ground.[114]

The second aspect of the analysis is the response of employment of migrant and UK-born workers to changes in demand for labour during the economic downturn of 2008–09. The differential impact of the recession by industry and by occupation will affect prospects for migrant employment. If the recession bites hardest in migrant dense areas of work then we would expect this to impact on reducing numbers of migrants employed (for which there is preliminary evidence – see Figure 6.1) or displacement of migrants in to other areas of work. The fact that the impact of the recession on migrant employment is in part predictable, via its composite effects through changing industrial and occupational demand, is revisited in discussion of future prospects in section 9.

6.4.1   Changes in employment by industry

The analysis in the next two subsections examines changes in employment based on the first and last quarters of the merged LFS dataset, i.e. between 2007Q1 and 2009Q3 (the last available). First, Figure 6.2 analyses changes in employment for UK-born and migrant workers in migrant dense industries. The analysis reveals that, in general, migrant dense industries have suffered a decline in employment during the period, where the loss of jobs has been shared between UK-born and migrant workers broadly in line with proportions employed (migrant employment accounts for approximately 20 per cent of total employment in migrant dense industries). Of the migrant dense industries, Manufacturing has been particularly badly impacted, as has Transport and Storage. Only Accommodation and Food has generated net positive job creation during the period, but with most of the net new employment going to UK-born workers.

The industries which have expanded during the period are those which are not traditionally migrant dense (i.e. industries outside Manufacturing, Transport & Storage, etc). In several expanding service sectors a relatively large proportion of new jobs have gone to migrant workers. This finding is consistent with the notion that migrant workers are being displaced from what has been their traditional employment base and are moving into other industries of the economy, as some of the migrant dense industries are badly affected by the economic downturn. The results are not consistent with the 'crowding out' of the UK-born by migrant workers.

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[114] Coats D (2008), *Migration Myths: Employment, Wage and Labour Market Performance.* Work Foundation.

Figure 6.2   Change in employment by migrant dense industry, 2007Q1 – 2009Q3
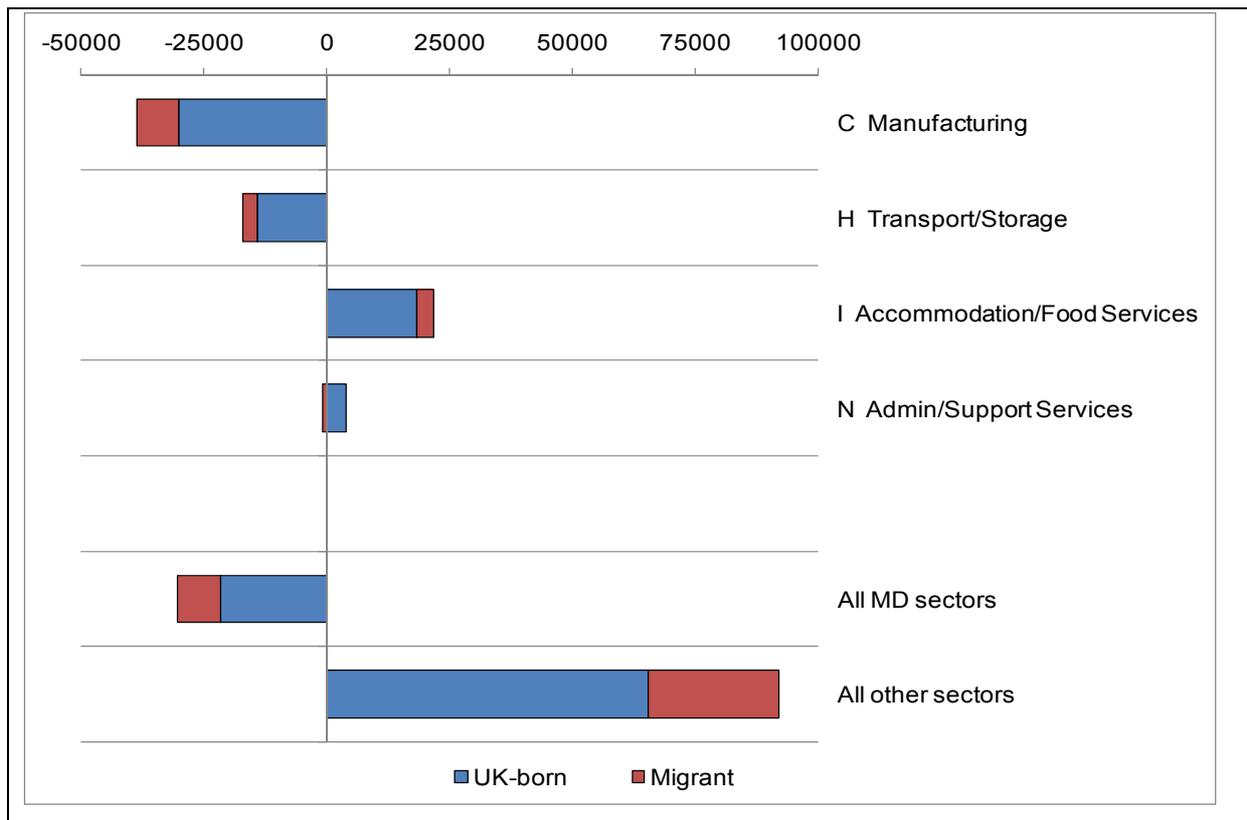
Figure 6.3   Change in employment by migrant dense division, 2007Q1 – 2009Q3
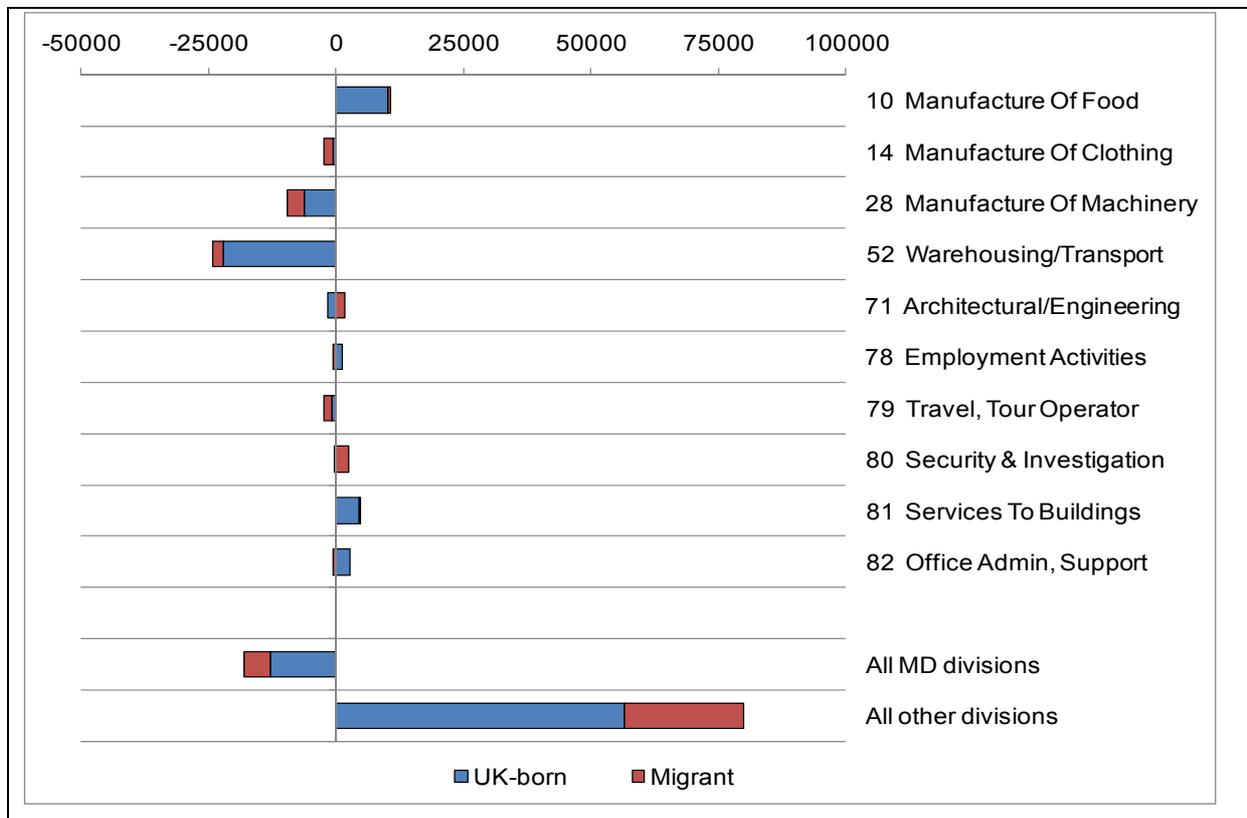
A more detailed analysis is available by industry division (see Figure 6.3). The figures broadly confirm the previous findings with evidence of a negative impact of the economic downturn in migrant dense industries but broadly not elsewhere. Migrant dense industry divisions have lost employment, with the proportionate impact on migrant workers compared to UK-born workers being broadly in line with the underlying employment base. Particularly badly hit migrant dense industries are the Warehousing and Transport division and Manufacture of Machinery. However, migrant workers *per se* are not particularly penalised relative to UK-born counterparts. The only migrant dense industry notable for creating employment in manufacturing is the Manufacture of Food industry. However most of the net new jobs have been taken up by UK-born rather than migrant workers. Compared to job losses in migrant dense divisions, other divisions have created jobs in net terms during the period, with a disproportionately high share of these new jobs going to migrant workers.

6.4.2   Changes in employment by occupation

A similar analysis of employment by MD occupations reveals a more mixed picture. Figure 6.4 shows changes in employment by migrant dense major group occupations. There are only two of these, although they cover a large migrant employment base. There is a contrast of outcomes in the two occupations. A small net job creation in Process, Plant & Machinery Occupations masks a picture of decreasing migrant employment compared to expanding numbers of UK-born workers. In contrast, a small net loss in the total number of jobs in Elementary Occupations masks an increase in migrant employment compared to a decrease in employment of UK-born workers. The apparent switch of migrant employment to lower skilled employment within the region is consistent with the analysis above which demonstrated the tendency of more recent migrants to concentrate in lower skilled jobs.

Whilst taken as a whole, employment of migrants in MD occupations (broadly defined) has declined with displacement by (rather than of) UK-born workers, turning the notion of a displacement hypothesis highlighted in the previous report on its head. However, large gains in migrant employment, relative to employment base, are evident in occupations where, up to this point, migrant employment has not been particularly concentrated.

Figure 6.4   Change in employment by migrant dense major occupation, 2007Q1–2009Q3
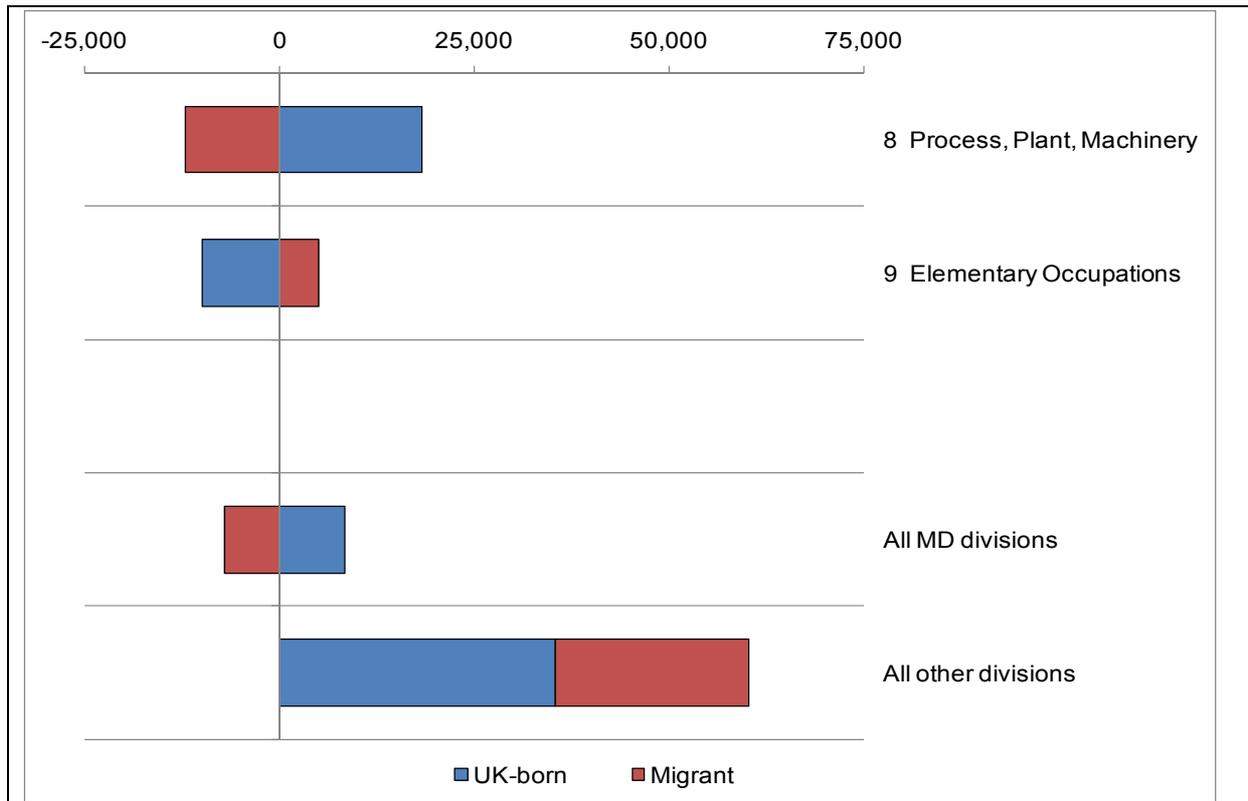
Figure 6.5   Change in employment by migrant dense minor occupation, 2007Q1–2009Q3
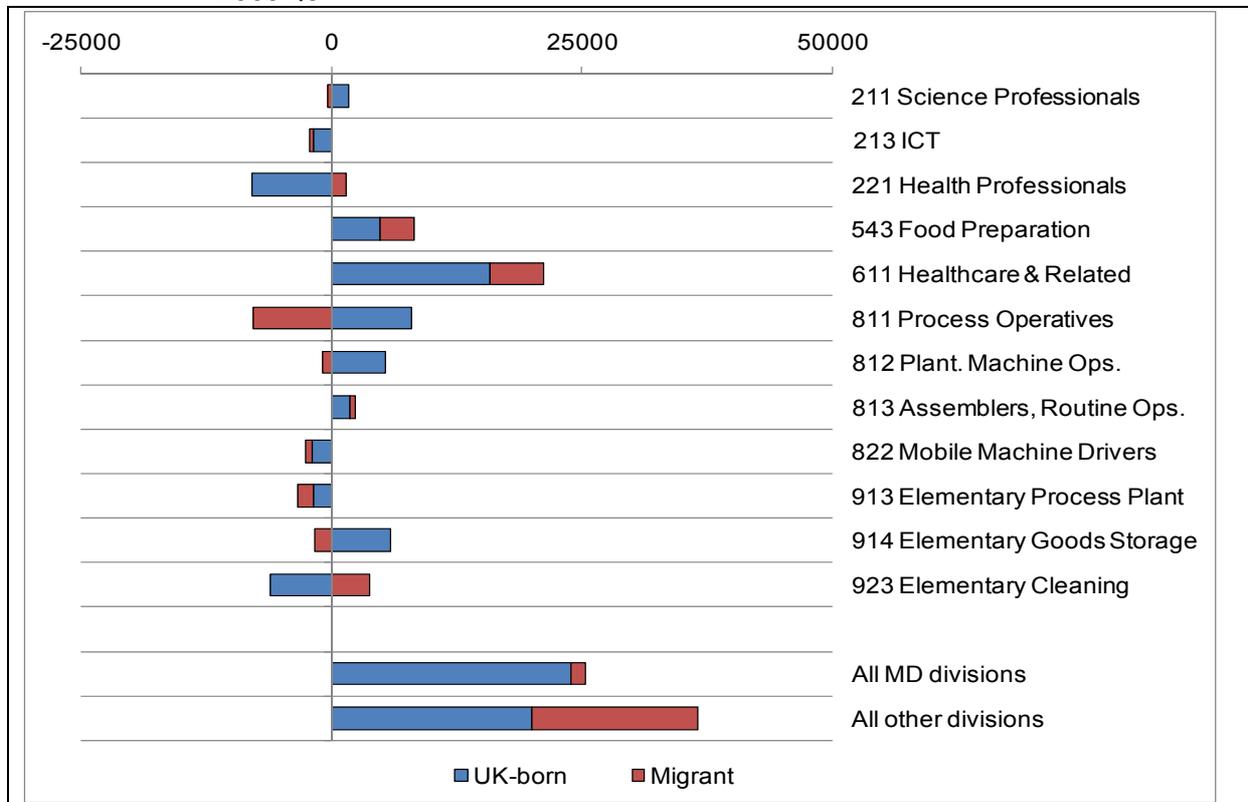
6.5 Unemployment of UK-born and migrant workers during 2007–2009

As highlighted earlier, whilst total employment continues to trend upward, the impact of the economic downturn is apparent in worsening labour market conditions during 2008-09. Consequently, unemployment in the region whether measured by the wider International Labour Organisation (ILO) definition, see Figure 6.6, or narrower claimant count, see Figure 6.7, has increased markedly after 2007. Total numbers unemployed are analysed according to the ILO measure in Table 6.5 for UK born and migrant workers by cohort. We can see that whilst increased unemployment affects all groups, according to the LFS estimates, it is UK-born workers rather than migrant workers who have experienced the largest increase in unemployment in absolute and relative terms, with total numbers of UK-born unemployed increasing by almost a half, according to broader ILO definition, and almost doubling based on narrower claimant counts, since the beginning of 2007.

Figure 6.6   Unemployment rate in the East Midlands region, 2007Q1–2009Q3
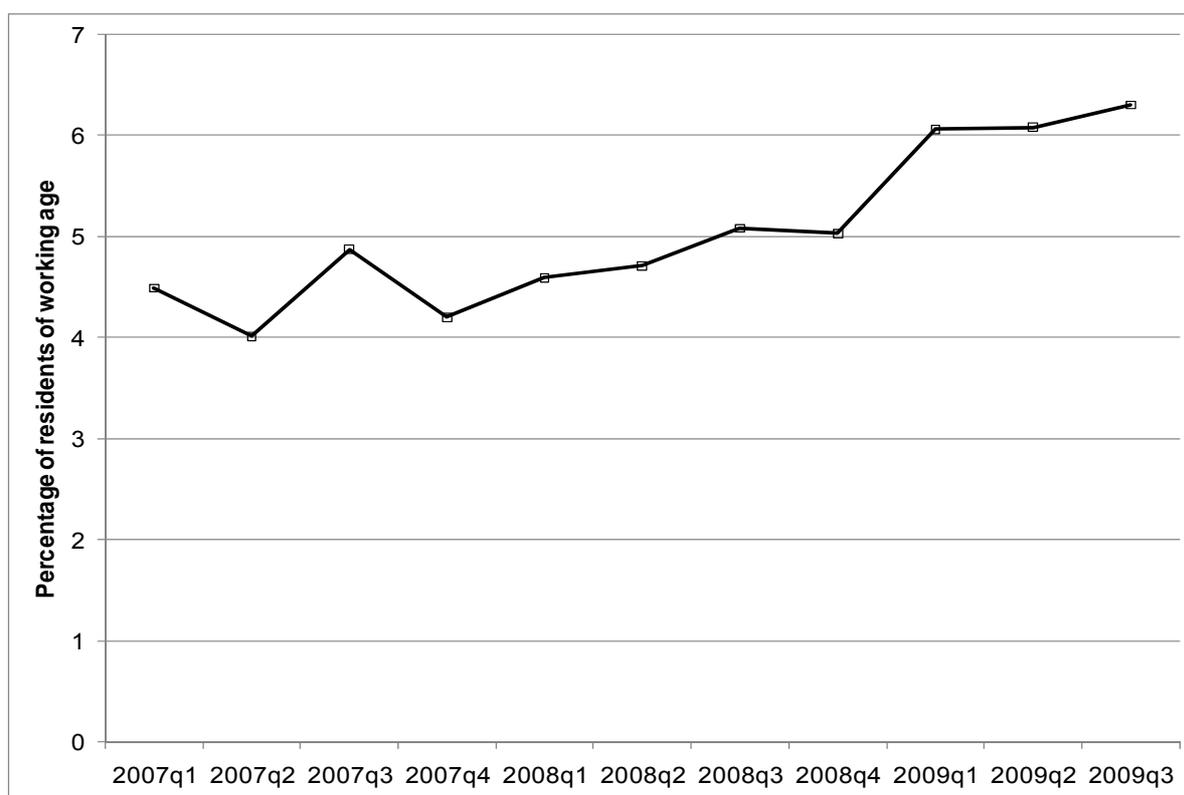
Source: LFS quarterly datasets 2007Q1 – 2009Q3

Table 6.5   Unemployment by migrant status and cohort (ILO definition estimates)

Labour Force Survey	UK-born	Pre-1992	1992-2003	Post-2003
2007Q1	106,641	5,503	5,146	4,002
2008Q2	109,788	4,343	8,641	5,736
2009Q3	154,197	6,336	6,070	5,209
Change 2007Q1 – 2009Q3	**47,556**	**833**	**924**	**1,207**
% change	*44.6%*	*15.1%*	*18.0%*	*30.2%*

Source: Merged LFS data 2007-2009

Figure 6.7   JSA claimant count in the East Midlands region, January 1997–November 2009
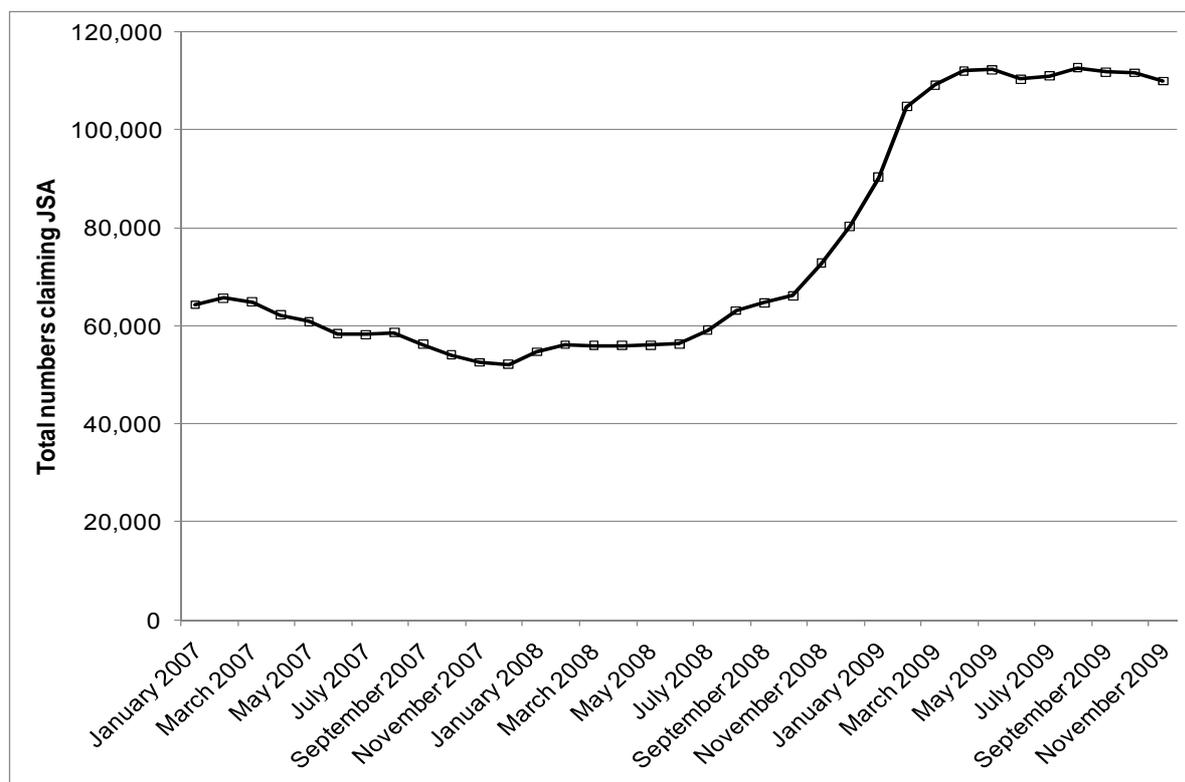
Source: JSA claimant count, via Nomis

For those who are unemployed, information is available from the LFS on that person's last job, detailed by industry and by occupation. Table 6.6 analyses this information by industry sector of origin. Since there is particular interest in the consequences of migrant employment on UK-born workers, the analysis of last job is restricted to UK-born workers unemployed at the time of the survey. Since for this group the sample is large, the figures are presented by year. MD industries are indicated.

The comparison most worthy of note is in the difference between figures for 2009Q3, when the effects of the recession are evident in terms of its impact on the labour market, and the two previous quarters when conditions were more benign. A marker indicates MD industries (by industry of origin) where the percentage of unemployed workers originating from an industry is higher in 2009 than in previous years. Although this information should be treated as indicative rather than conclusive, it is likely to reveal industries where pressures to shed staff were greatest during 2008/09. Note that whilst comparisons are valid within industry, over time, comparisons between industries do not necessarily indicate labour market slack; (instead, high values may reflect a combination of a larger employment base and/or higher rates of labour turnover).

The analysis by industry reveals that the following industry sectors are increasingly a source of unemployment based on analysis of last job:

- F: Construction
- G: Wholesale, Retail, Repair of Vehicles
- L: Real Estate Activities
- O: Public Admin and Defence

This list of industries is not surprising given the well documented downturn in the housing and motor vehicle industries following the credit crunch. Notably, none of these industries

69

are migrant dense. Moreover, MD industries have been associated with lower employment wastage in 2009 than was the case previously. It may be speculated that the figures for MD industries may reflect lower voluntary rates of turnover of UK-born staff due to harsher labour market conditions. The cross tabulation of industry of last job is repeated for industry division with results shown in Annex 15. This more detailed analysis highlights a much longer list of industries which are increasingly a source of unemployment based on analysis of last job. Construction and Real Estate Activities are again highlighted in a disparate list which, notably, is not necessarily dominated by migrant dense areas of work.

Table 6.6   Industry sector in last job of ILO unemployed UK-born

Last job (% of employment by Industry)	2007Q1	2008Q2	2009Q3	MD
A Agriculture, Forestry and Fishing	0.0	2.0	1.7	
C Manufacturing	18.4	20.5	17.2	MD
D Electricity, Gas, Air Conditioning Supply	0.6	1.5	0.9	
E Water Supply, Sewerage, Waste	1.5	1.3	0.9	
F Construction	11.1	7.0	15.2*	
G Wholesale, Retail, Repair of Vehicles	16.0	14.7	16.4*	
H Transport and Storage	4.5	8.1	5.7	MD
I Accommodation and Food Services	12.0	10.0	8.6	MD
J Information and Communication	3.3	2.3	2.8	
K Financial and Insurance Activities	3.8	2.8	1.8	
L Real Estate Activities	0.6	0.0	0.9*	
M Prof, Scientific, Technical Activities	3.6	1.5	2.8	
N Admin and Support Services	9.0	7.1	8.1	MD
O Public Administration and Defence	0.7	0.6	2.6*	
P Education	3.5	6.3	5.7	
Q Health and Social Work	5.9	11.7	6.3	
R Arts, Entertainment and Recreation	4.1	2.2	1.8	
S Other Service Activities	1.4	0.0	0.9	
Total	**100**	**100**	**100**	
MD industry	**43.9**	**45.7**	**39.5**	
Other industry	**56.1**	**54.3**	**60.5***	

Source: Merged LFS data 2007-2009
Note: *(a)* The analysis is restricted to UK-born workers currently unemployed, resident in the East Midlands region. Industries with LFS re-weighted employment in the East Midlands region of less than 5,000 are therefore excluded from the analysis. *(b)* * indicates a figure for 2009 which higher than both of the previous surveys; *(c)* MD indicates a migrant dense industry.

Finally this analysis is repeated by occupation based on SOC Major Group (see Table 6.7) and SOC minor group (see Annex 16). What is interesting here is that larger proportions of people were coming into unemployment from higher skilled occupations, including Managers and Senior Officials; Associate Professional and Technical Occupations; and Administrative and Secretarial Occupations. Relatively fewer workers were coming into unemployment from lower skilled jobs in 2009, including from migrant dense areas of work. In this respect the impact of migrant workers on the unemployment prospects for UK-born workers appears to be benign. Again, it is suggested that lower voluntary rates of turnover in harsh labour market conditions may go some way to explaining this.

Table 6.7   Occupation of last job (SOC major group)

Occupation (% of employment by occupation)	2007Q1	2008Q2	2009Q3	MD
1 Managers and Senior Officials	5.9	7.1	9.6*	
2 Professional Occupations	5.9	3.1	3.2	
3 Associate Professional and Technical	7.3	5.5	9.8*	
4 Administrative and Secretarial Occupations	10.0	2.3	10.8*	
5 Skilled Trades Occupations	12.8	10.7	12.7	
6 Personal Service Occupations	3.3	8.8	6.3	
7 Sales and Customer Service Occupations	12.5	10.9	11.0	
8 Process, Plant and Machine Operatives	10.6	11.8	8.5	MD
9 Elementary Occupations	31.8	39.9	28.1	MD
Total	**100**	**100**	**100**	
MD occupation	**42.4**	**51.7**	**36.6**	
Other occupation	**57.6**	**48.3**	**63.4***	

Source: Merged LFS data 2007-2009
Note: *(a)* The analysis is restricted to UK-born workers currently unemployed, resident in the East Midlands region. Industries with LFS re-weighted employment in the East Midlands region of less than 5,000 are therefore excluded from the analysis. *(b)* * indicates a figure for 2009 which higher than both of the previous surveys; *(c)* MD indicates a migrant dense industry.

6.6   Analyses of claimant count data at local level

The analysis above reveals a picture of worsening labour market conditions in the East Midlands during 2008 and 2009, combined with decreasing numbers of 'new' migrant workers (as recorded by NINo and WRS data), possibly responding to worsening economic conditions in the UK. The broad picture is as follows:

- The unemployment claimant count based on number of JSA claimants in the region increased from 54,643 in January of 2008 to 110,063 in December 2009. This represents an increase of more than 100 per cent in claimant numbers, and comes despite a fall in the claimant count during 2007 (from 64,294 in January 2007);
- Numbers of overseas nationals allocated NINos fell from a peak level of 40,720 in 2006/07 to 38,460 a year later in 2007/08 (a decrease of 5.5 per cent), with a larger fall to 32,990 in the year 2008/09 (a decrease of 14.2 per cent).

It is possible to supplement the regional level analysis with an analysis of local area data, based on local authority areas, of which there are 40 such areas in the East Midlands region. The important aspect of the local analysis is a deeper probing of the questions:

- To what extent are increases in claimant unemployment associated with higher migrant numbers?
- To what extent do decreasing NINo registrations reflect local labour market conditions?

With respect to the first question, a positive significant correlation at local level would suggest an adverse impact of migrant workers, in terms of 'crowding out' prospects for UK-born workers (the vast majority of claimants) in tougher labour market conditions. With respect to the second question, it may be suggested that patterns of new migrant registrations locally are likely to reflect relative labour market conditions. A reasonable hypothesis is that migrant numbers may well have fallen most where increases in unemployment have been most dramatic.

Figure 6.8 analyses the numbers of new migrant workers locally, measured by 2008/09 NINo registrations as a percentage of the working age population resident in that area, against the percentage increase in claimant count unemployment[115] between January 2008 and December 2009. Each scatter point represents a local authority area, with the largest authorities in terms of migrant numbers identified on the graph. The analysis reveals a negative correlation (rather than positive correlation as we might have expected), although the R-squared measure of fit (of 6.5 per cent) was not significant. The results therefore reveal no evidence of a negative impact on claimant unemployment associated with higher level of migrant registration. A diverse spread is apparent in terms of changes in unemployment in smaller local authorities where migrant registrations are relatively small. In the local areas with high numbers of migrant registrations there is a mixed picture. In Boston (where NINo registrations are highest in 2008/9) the change in claimant count unemployment is in line with the regional figure. In Nottingham, Leicester and Derby claimant unemployment has increased less dramatically in percentage terms than elsewhere, despite, higher migrant numbers, whereas there were higher than average rises in Northampton, Corby and South Holland, suggesting the importance of local factors.

Figure 6.8:   NINo registrations and changes in claimant count unemployment
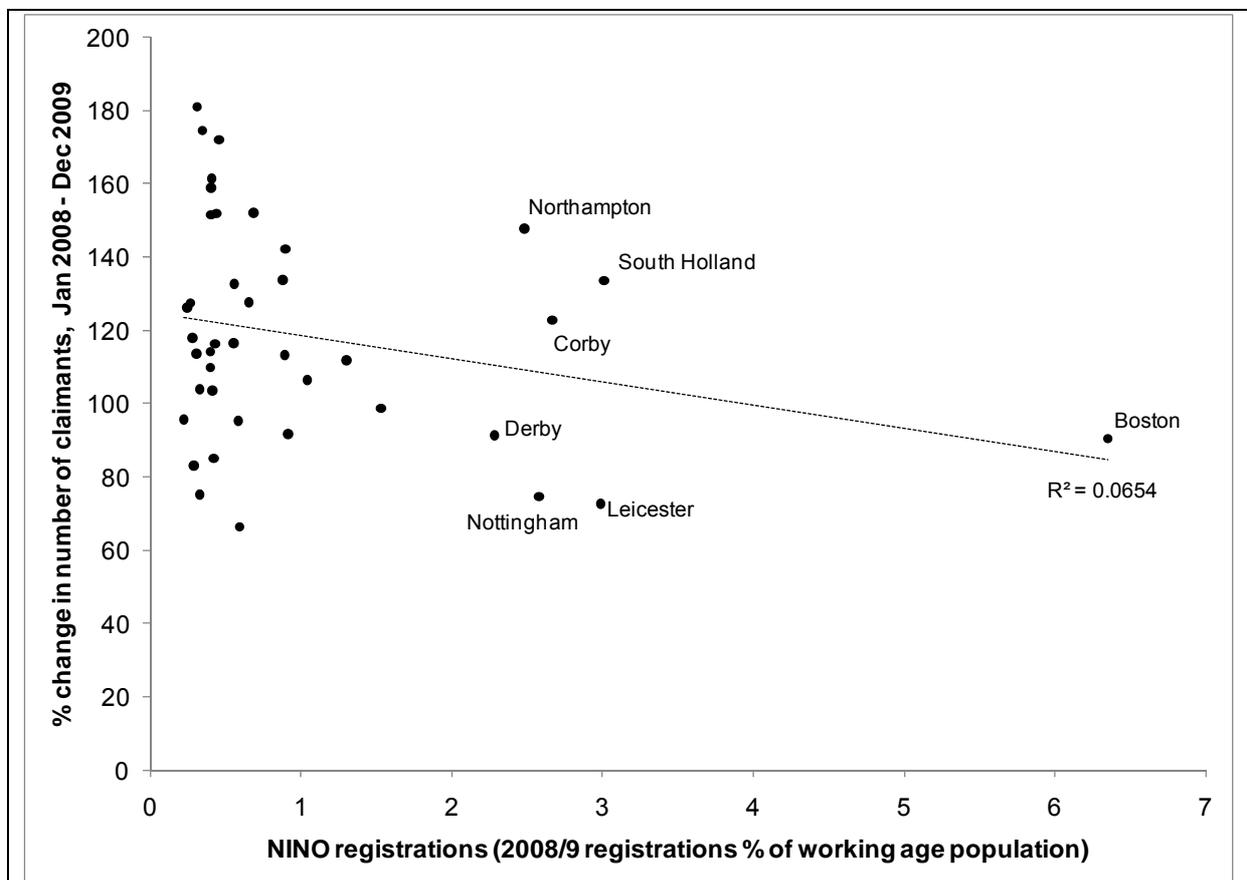
Sources: NOMIS, DWP

Figure 6.9 analyses changing NINo registrations in relation to local unemployment. The horizontal axis measures the percentage increase in the claimant count between January 2008 and December 2009, i.e. corresponding to the vertical axis in the previous chart. The vertical axis measures the percentage change in numbers of NINo registrations locally in 2008/09 compared to a year earlier. The local areas with largest numbers of new migrants,

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[115]   Claimant count numbers are used here as this data is more robust than APS unemployment rates at local authority level. There is a strong local correlation between increasing claimant counts and decreasing APS employment rates.

identified previously, are also highlighted on the chart. The figures reveal no correlation of this data at a local level, with wide variation in both changes in migrant numbers and claimant count locally but with no systematic effect. This analysis suggests that changes in new migrant registrations were not in response to economic conditions at the local level. Whilst somewhat surprising at first sight, it should be noted that the migrant worker registrations have decreased in total at the regional level reflecting tougher economic conditions. At the local level, it may be that migrant employment is concentrated in sectors and occupations of employment less affected by the downturn, or that migrants move into other types of work compared to the majority of claimants who are UK-born. The implication is that migrants may not become unemployed.

Figure 6.9:   Changing NINo registrations in relation to local unemployment
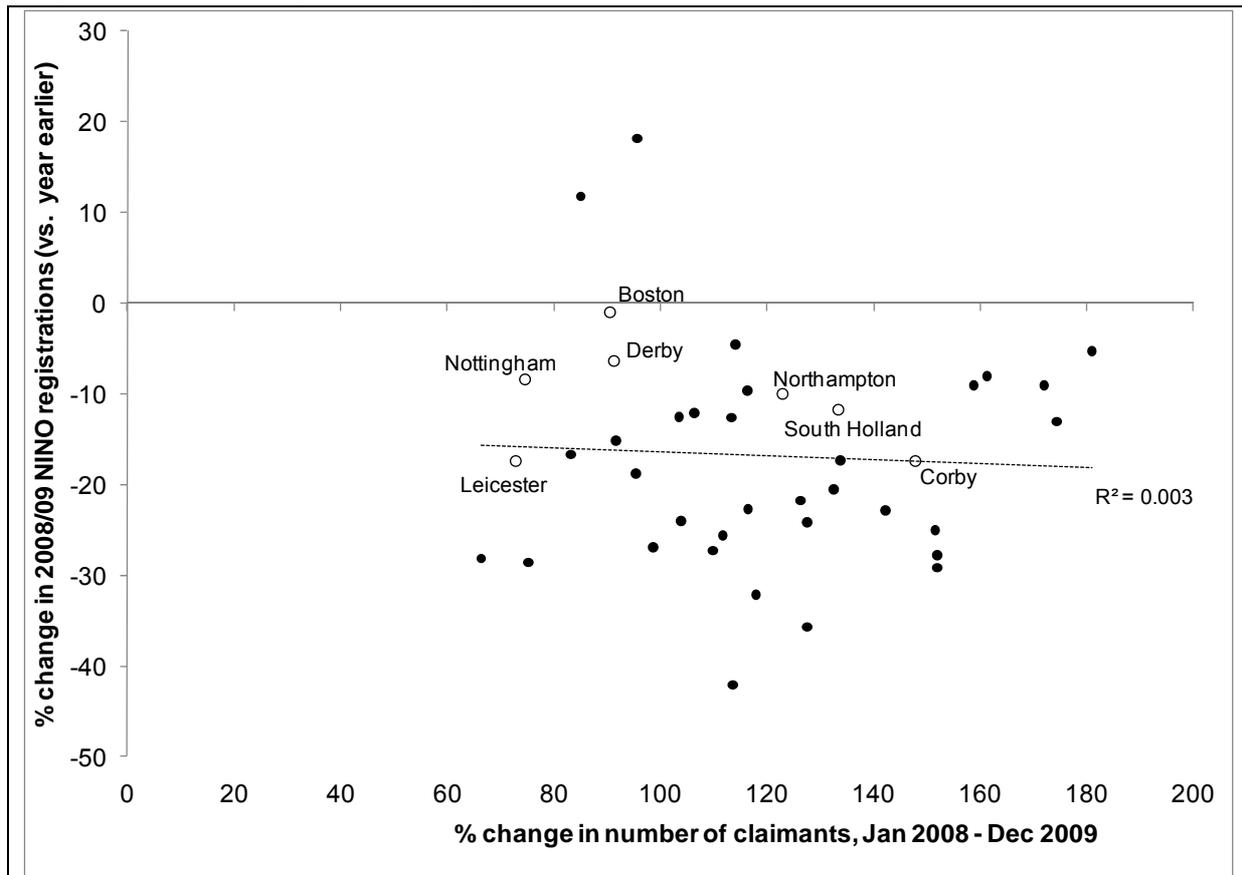
Sources: NOMIS, DWP

6.7   Key points and comparisons with the previous report

This section has updated findings from the previous research report on migrant workers in the East Midlands region, covering the period to 2006. The preoccupation at that point was the rapid expansion of migrant employment and the potential impact of this on UK-born workers. The more recent period is a distinctly different one with the onset of the economic downturn since the beginning of 2008 with its impact on rising unemployment and harsher labour market conditions. As a consequence, during 2008/2009 there was a small decline in migrant employment in the region, arresting the upward trend in migrant employment that had occurred for most of the previous decade.

As well as a quantitative change there have been qualitative changes in patterns of migrant employment. Recent migrant workers, notably from A8 countries following the expansion of the EU in 2004, are increasingly concentrated in a small number of industries and in lower

skilled jobs than previous waves of migrants. There is a particular and increasing tendency for recent migrants' employment to be based in Elementary Occupations, performing more menial roles, for example in the Manufacturing and Warehousing industries. In contrast to previous findings, we see less of a tendency towards a bi-polar type distribution of migrant employment (as highlighted in the previous report) with smaller numbers of migrants in specialised professional and technical roles. A tendency is also evident for increasing migrant employment in areas of low migrant concentration, perhaps in part due to the effect of contracting employment in migrant dense areas of work during the recession.[116] We might also expect some movement out of migrant 'segments' as some migrant workers become more familiar with the UK labour market and are willing to use their skills elsewhere. Initiatives to improve migrant skills utilisation are important in this respect.[117]

Finally, there is little or no evidence in this report regarding the negative impact of migrant employment on UK-born workers. Rather there is some evidence that the recession has impacted migrant employment to a greater extent than UK-born workers, with migrant dense industries bearing much of the brunt of the downturn. The lack of observable impact of economic migration on native employment confirms the findings of recent national studies.[118]

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[116] As noted earlier in the report, interviews with two SAWS operators highlighted a move of some migrant workers out of construction and hospitality into agricultural work.

[117] ekosgen (2010) *Improving Migrant Skills Utilisation in the East Midlands: Final Evaluation (Draft Report)*, report to *emda* by ekosgen, Sheffield.

[118] See Coates (2008) *op cit.*; Gilpin N., Henty M., Lemos S., Portes J. and Bullen C. (2006) 'The impact of freedom of movement of workers from Central and Eastern Europe on the UK labour market', *DWP Research Paper* 29; Lemos S. and Portes J. (2008) *The impact of migration from new European Union Member States on native workers*, DWP.

7.   The impact of migrant workers on wages

- This section is concerned with two phenomena. First, it considers the impact of migrant workers on wages within migrant dense industrial sectors and occupational groups, looking for any evidence that migrant workers have depressed wage levels. Secondly, it examines the wage gap between UK-born and migrant workers. It draws upon data from the Labour Force Survey (LFS) for 2001-9 and the Annual Survey of Hours and Earnings (ASHE) for 2002-8.

- Wages in migrant dense occupations are similar in the East Midlands and other parts of the UK. However, for non-migrant dense occupations, wages are lower in the East Midlands. Thus, the 'gap' in relative wages between migrant dense and other occupations is narrower in the East Midlands than elsewhere in the UK. No effect of increased migration on relative wages can be identified.

- Wage growth declined during the latter part of the period as the economy moved into recession. In both the East Midlands and the rest of the UK, the decline in wage growth is particularly apparent in migrant dense occupations, but this decline is greater in the East Midlands than in the rest of the UK.

- Wages in migrant dense industries are similar in the East Midlands and other parts of the UK. The gap in relative wages between migrant dense and other sectors is narrower in the East Midlands than the rest of the UK, as wages within non-migrant dense industries are again lower in the East Midlands.

- There was a significant decline in the relative earnings of migrant workers in the East Midlands during the latter part of the period. The decline in relative wages in particular affects more recent migrants as the relative wages of longer established migrants have not declined.

- The relative pay penalty associated with being a migrant worker more than doubled over the course of the decade, with this increase being even greater in the East Midlands compared to the rest of the UK.

- The sharpest decline in relative earnings was experienced by migrant workers who had lived in the UK for less than five years (but there were also weaker influences for longer established migrants). This decline was sharper in the East Midlands than in the remainder of the UK.

- After controlling for differences in the composition of the workforce using multivariate regression techniques, adjusted relative wage differentials for people employed in migrant dense occupations remain relatively stable over time for both the East Midlands and the rest of the UK, and increased migration in the latter part of the decade had no discernable effect.

- After controlling for personal and job-related characteristics, the rate of growth of earnings in migrant dense occupations relative to other occupations declined between 2003/4 and 2004/5 more quickly in the East Midlands than in the remainder of the UK. Beyond 2005, wage growth in migrant dense occupations remained lower in the East Midlands compared to elsewhere in the UK.

7.1   Introduction

The aim of this section is to consider aspects of pay in relation to migrant workers. The analysis is broadly divided into two component parts. In the first part, the impact of migrant workers on earnings at a sectoral and occupational level is considered. The basic hypothesis under consideration is that in sectors/occupations where migrant workers are most likely to be found (i.e. in migrant dense sectors and occupations) wage growth may be suppressed

due to a relative abundance of cheap labour.[119] Where evident, this kind of 'wage suppression' may be seen as a having a negative impact for UK-born workers, but may be positive (at least in some respects) for businesses in the East Midlands region. On the other hand a counter hypothesis exists, based on the notion that migrant worker supply responds to labour and/or skill shortages (i.e. migrant workers are most likely to be attracted to sectors/occupations where supply of indigenous labour/skills is in short supply or sector demand is expanding beyond the ability of the indigenous workforce to meet the requirements of employers). In these instances it is reasonable (on the basis of standard economic theory) to suppose that excess demand for labour will manifest itself in relatively high wage growth, leading to a positive association between wage growth and migrant density. It is therefore an empirical question to examine whether migrant dense areas of the labour market will be associated with relatively high or low wages.

The second part of the analysis moves away from attempting to identify the effect of migrant workers on wages and considers the relative wages of migrants explicitly. That is, the analysis seeks to estimate the size of the wage gap between UK-born and migrant workers. The analysis particularly focuses upon whether the relative earnings of migrants within the East Midlands differ to those observed in the rest of the UK. Migrants are first considered as a single group of people observed within the LFS who were born outside of the UK. The analysis then proceeds to use a more refined definition of migrant workers, distinguishing migrants on the basis of the number of years that they have resided in the UK. The basic hypothesis under consideration surrounds the issue of segmented labour market theory, which suggests that certain areas of employment become identified as 'migrant' jobs (in a similar way to certain areas of employment being considered as 'male' or 'female'[120] (see Crompton, 1990). Whilst the causes of segmentation are debatable (organisation of working arrangements, discrimination, etc), 'crowding' in migrant segmented labour markets can contribute to an excess supply of labour, in turn contributing to lower earnings among migrants. Whilst this process may also underpin general changes in relative earnings in migrant dense occupations as discussed above, it is expected that the effect of excess supply on wage relativities would be expected to be most clearly observed directly among migrant workers due to the segmented nature of migrant labour markets. Spill-over effects, may also be observed where even wages earned by 'established' migrant workers are depressed by excess supply within 'entry' level occupations.

7.2   Data sources and general analytical approach

7.2.1   Data sources

The analysis is based upon data from the LFS covering the period 2001-09 and data from the ASHE covering the period from 2002-08. Although the LFS is the largest regular household survey conducted in the UK, sample sizes constrain the level of detail that can be incorporated within statistical analysis of the data. This is particularly relevant in the present context where we are attempting to consider *within a region* the relative earnings associated with being a migrant or being employed in a migrant dense occupation. These problems are compounded by the fact that information on earnings is not collected from all respondents to the LFS. Individuals generally participate in the LFS over five successive quarters (or 'waves'). However, data on earnings is only collected from those participating in their fifth and final wave of interviews. For analysis based upon the LFS, the available data is sub-

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[119]   At national level analyses have shown that those most susceptible to competition from migrant workers have seen weaker wage inflation, with the presence of migrant workers and fear of unemployment helping to contain wage pressure – see Blanchflower D. and Shadforth C. (2009) 'Fear, unemployment and migration', *Economic Journal* 119, F136-F182

[120]   See Crompton R. and Sanderson K. (1990) *Gendered Jobs and Social Change,* Unwin Hyman, London.

divided into three periods (as in the analyses presented in section 7): 2001-03, 2004-06 and 2007-09. For each of these pooled data sets, data from different quarters of the LFS is merged in a way such that individuals who appear in successive quarters of the LFS only appear once within each of the pooled 3-year data sets.

The value of utilising the ASHE data is that it is the largest survey of earnings conducted within the UK. Up until 2006, ASHE provided detailed and accurate information on earnings (collected directly from employers) for approximately 150,000 employees per annum. Following cuts to the ASHE sample made by ONS from 2007, information is now collected for approximately 130,000 employees. This large sample size means that the ASHE data is the best source of information for providing detailed information on the relative earnings of those in migrant dense occupations and industries within the East Midlands. To put this into context, one year of ASHE data provides earnings information on approximately ten times as many people as that which is collected from a single quarter of the LFS.

In addition to its sample size, an important benefit of the ASHE data is that it is a panel data set that tracks the same individual over time for as long as they remain an employee. People drop out of the ASHE data if they retire, become unemployed, move into self-employment or leave the labour force. It is therefore possible to consider not only the level of someone's earnings at a single point in time, but also the growth of their earnings from one year to the next. An employee's earnings may be expected to increase over time due to the effects of increased tenure upon earnings (e.g. experience within a job being rewarded by progression up a salary scale or promotion) and the outcomes of negotiated pay increases. The ASHE data therefore allows consideration of whether the rate of growth of earnings among those employed in migrant dense areas of the labour market has potentially been 'checked' by the effects of inward migration.[121]

7.2.2 General analytical approach

The analysis of earnings is firstly presented in terms of a descriptive analysis of earnings expressed both in terms of relative median earnings and earnings growth. Comparisons are presented between wages within migrant dense and non-migrant dense areas of the labour market, and between migrants and non-migrants. In each case, comparisons are made between the East Midlands and the rest of the UK. Migrant density is defined both in terms of occupation and industry. For both of these definitions, data are presented on earnings for those employed in migrant dense areas of the labour market based upon both broad and more detailed derivations of migrant density. As discussed above, the analysis of earnings growth is restricted to the ASHE data where employees are tracked over time.

The analysis of earnings based upon an industry based derivation of migrant density is subject to difficulties associated with the movement from SIC2003 to SIC2007 within the LFS during 2009. This is in contrast to the occupation based derivation of migrant density, where occupational information is consistently classified to the 2000 vintage of the Standard Occupational Classification (SOC) within both the LFS and ASHE. We also expect that if inward migration is having an effect on earnings, either in terms of absolute levels or in terms of the rate of earnings growth, these effects may be expected to be more readily observed among migrant dense occupations rather than migrant dense industries. All industries embody a wide variety of occupations, encompassing a variety of skill levels (managerial and professional through to unskilled elementary work) that are brought

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[121] Note that some of the material presented in this section contains statistical data from ONS which is Crown copyright and reproduced with the permission of the controller of HMSO and Queen's Printer for Scotland. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

together in order to produce a good or a service. If migrant labour is generally used to fill occupations within sectors where there is a shortage of labour, it is unlikely that changing supply conditions around a particular occupation will affect all other occupations in that industry (an increase in the supply of construction labourers will be unlikely to affect the earnings of architects, for example). Relative earnings in migrant dense industries may be affected insofar as these sectors are likely to consist of a relatively high share of migrant dense occupations. For this reason, within the analysis of earnings undertaken on the larger ASHE data, a more detailed analysis is presented that considers the relative earnings and earnings growth within different migrant dense occupations.

Simple comparisons of average wages and wage growth between those employed in migrant dense and non-migrant dense areas of the labour market could be attributable to a number of characteristics or factors. For example, the earnings of those employed in migrant dense occupations may experience a relative decline if these jobs are being increasingly filled by women or are increasingly characterised by part-time workers (due to lower earnings associated with these groups). The migrant wage differential may also be expected to change over time if the characteristics of migrant worker population also change. For example, if the migrant worker population in the UK is increasingly made up of younger people, we would expect the migrant wage differential to increase due to the lower wages that are generally received by less experienced, younger workers. In such a case, the relative decline in migrant wages could be seen as a compositional effect rather than representing the effects of an increased supply of labour competing for jobs that have been traditionally filled by migrants.

To take account of these compositional changes, multivariate regression techniques are utilised that attempt to identify the separate and additional effect on relative wages of being:
a) employed within a migrant dense area of the labour market; and
b) a migrant.

It is acknowledged that movements in the relative earnings of those employed in migrant dense areas of the labour market may be affected by a number of factors, among which changing supply conditions as a result of inward and outward migration is but one. For example, technological change may result in a de-skilling of particular occupations or industries resulting in a decline in relative earnings. Whilst the analysis may reveal, for example, that relative earnings have declined in areas of the labour market that are believed to have been most affected by inward migration, we are unable to infer that this association represents a causal relationship. Overall movements in wage levels will be the outcome of a number of influences, among which the supply of migrant labour is but one.

Within the regression analyses, in order to identify the separate and additional effect of supply conditions on relative earnings, we simultaneously control for a variety of personal and workplace characteristics. Measures that control gender, age, hours worked, job tenure, contractual status (permanent/temporary) and whether or not an individual works in the public sector are included. The inclusion of information on job tenure within the regression analysis warrants further discussion. By definition, all new recruits to a post, whether they be migrants or not, may be expected to receive lower earnings due to the relative lack of experience in employment. At an aggregate level, falling wages within migrant dense areas of the labour market could partly reflect the increased supply of labour from which these jobs can be filled or partly reflect the fact that these jobs are simply being filled by less experienced workers, irrespective of their migrant status. The emphasis of the analysis is to consider how the effects of the increased supply of labour have affected relative earnings within migrant dense areas of the labour market. To this end, the compositional changes that may occur within these occupational areas associated with the employment of new workers,

such as tenure, are controlled for. It is acknowledged that the ability of employers to replace experienced workers with less experienced workers is itself an outcome of supply conditions created by inward migration that is separate and additional to any dampening effect on wages of an increased supply of labour. In practice, the inclusion/omission of measures to control for job tenure made relatively little difference to the results derived from the statistical analysis.

Where appropriate, both the descriptive analysis and multivariate analysis utilises the four derivations of migrant density discussed in section 6. These include two measures of migrant density based upon occupation (derived at SOC Major Group and SOC Minor Group level) and two measures based upon industry (derived at SIC sector and division level). For the occupational derivation of migrant density, further analysis is undertaken that distinguishes between different migrant dense occupations. As discussed above, analysis of migrant wages firstly makes the simple distinction between migrants and non-migrants and then goes into further detail to distinguish migrant workers according to their length of time in the UK.

7.3   Relative earnings

7.3.1   Migrant dense occupations

Relative earnings in migrant dense (MD) occupations derived from the LFS are presented in Table 7.1. It can be seen that wages in MD occupations in the East Midlands are similar to those observed in migrant dense occupations elsewhere in the UK. This finding reflects the relatively homogenous nature of jobs within these occupations across the UK. However, for the non MD occupations, wages are lower in the East Midlands. This is likely to reflect compositional effects, with fewer high paying jobs within managerial, administrative and professional occupations within the East Midlands compared to elsewhere. As a result, the 'gap' in relative wages observed between MD and non-MD occupations is actually narrower in the East Midlands compared to the rest of the UK. Very similar patterns are observed in the ASHE based analysis of relative earnings presented in Table 7.2. Both data sources reveal these ratios to be relatively stable over time, with no discernible impact of increased migration on earnings being observed during the latter part of the period. Within both data sources, similar differences are observed in the scale of these ratios according to the derivation of migrant density used (e.g. SOC Major Group derivation versus SOC Minor Group derivation).

Table 7.1:   Relative Earnings in Migrant Dense Occupations: LFS

SOC Major Group Derivation	2001/3	2004/6	2007/9
Median Hourly Earnings (£)			
non md : East Midlands	7.89	8.88	9.38
md: East Midlands	5.64	6.21	6.67
non md: elsewhere	8.65	9.70	10.64
md: elsewhere	5.54	6.17	6.79
All	*7.69*	*8.65*	*9.55*
Ratios of Median Earnings			
md:non md ratio - East Midlands	0.72	0.70	0.71
md:non md ratio - elsewhere	0.64	0.64	0.64
md East Midlands:md elsewhere	1.02	1.01	0.98
non md East Midlands:non md elsewhere	0.91	0.92	0.88
SOC Minor Group Derivation	**2001/3**	**2004/6**	**2007/9**
Median Earnings (£)			
non md : East Midlands	7.57	8.46	8.92
md: East Midlands	6.09	6.76	7.08
non md: elsewhere	8.13	9.17	10.08
md: elsewhere	6.24	7.00	7.69
All	*7.69*	*8.65*	*9.55*
Ratios of Median Earnings			
md:non md ratio - East Midlands	0.80	0.80	0.79
md:non md ratio - elsewhere	0.77	0.76	0.76
md East Midlands:md elsewhere	0.98	0.97	0.92
non md East Midlands:non md elsewhere	0.93	0.92	0.89

Source: LFS
Note: 'md' refers to 'Migrant Dense'.

Table 7.2:   Relative Earnings in Migrant Dense Occupations: ASHE

SOC Major Group Derivation	2002	2003	2004	2005	2006	2007	2008
Median Hourly Earnings (£)							
non md : East Midlands	8.52	8.89	9.02	9.41	9.87	9.92	10.33
md: East Midlands	5.91	6.15	6.47	6.66	6.89	7.00	7.32
non md: elsewhere	9.45	9.72	10.01	10.26	10.66	11.00	11.36
md: elsewhere	6.00	6.32	6.50	6.75	6.96	7.17	7.34
All	*8.32*	*8.62*	*8.88*	*9.13*	*9.48*	*9.80*	*10.07*
Ratios of Median Earnings							
md:non md ratio - East Midlands	0.69	0.69	0.72	0.71	0.70	0.71	0.71
md:non md ratio - elsewhere	0.63	0.65	0.65	0.66	0.65	0.65	0.65
md East Midlands:md elsewhere	0.98	0.97	0.99	0.99	0.99	0.98	1.00
non md East Midlands: non md elsewhere	0.90	0.91	0.90	0.92	0.93	0.90	0.91
SOC Minor Group Derivation	2002	2003	2004	2005	2006	2007	2008
Median Earnings (£)							
non md : East Midlands	8.05	8.39	8.60	9.00	9.40	9.38	9.81
md: East Midlands	6.35	6.67	6.93	7.17	7.29	7.33	7.66
non md: elsewhere	8.96	9.20	9.49	9.72	10.09	10.40	10.74
md: elsewhere	6.64	6.90	7.16	7.40	7.60	7.92	8.13
All	*8.32*	*8.62*	*8.88*	*9.13*	*9.48*	*9.80*	*10.07*
Ratios of Median Earnings							
md:non md ratio - East Midlands	0.79	0.80	0.81	0.80	0.78	0.78	0.78
md:non md ratio - elsewhere	0.74	0.75	0.75	0.76	0.75	0.76	0.76
md East Midlands:md elsewhere	0.96	0.97	0.97	0.97	0.96	0.93	0.94
non md East Midlands: non md elsewhere	0.90	0.91	0.91	0.93	0.93	0.90	0.91

Source: ASHE.
Note: 'md' refers to 'Migrant Dense'.

Finally, relative earnings in detailed MD occupations derived from the ASHE are presented in Table 7.3. MD occupations within professional posts (SOC Major Group 2) are associated with higher relative earnings compared to non MD occupations. All occupations within this professional group are characterised by high levels of skills, education and training necessary for the competent performance of work tasks. The MD occupations within this group are no exception to this and will therefore command relatively high earnings. Non MD occupations will consist of a variety of jobs across the occupational distribution, consisting of both low skilled and high skilled posts. Professional occupations, whether they be MD or not, would be expected to pay more than non-MD occupations that are characterised by both skilled and unskilled work. In contrast, MD occupations associated with lower levels of skills, education and training are associated with lower relative earnings compared to non-MD occupations. Earnings within these groups are lower than those estimated for all MD occupations presented in Tables 7.1 and 7.3 as this finer level of occupational detail enables

us to exclude relatively well paid professional and managerial MD occupations from the calculation of relative earnings among these employees. The ratios estimated for the East Midlands are similar to those estimated for elsewhere in the UK. It is again observed that wages in migrant dense occupations in the East Midlands are similar to those observed in migrant dense occupations elsewhere in the UK. Finally, it is not apparent that any of these MD occupations have experienced any change in their relative median wage during the course of the period of analysis.

Table 7.3:   Relative Earnings in Detailed Migrant Dense Occupations: ASHE

Minor Group Derivation	2002	2003	2004	2005	2006	2007	2008
							2008
Median Hourly Earnings (£)							
non md : East Midlands	8.05	8.39	8.56	9.00	9.40	9.38	9.81
md - SOC2: East Midlands	14.96	15.42	16.20	17.45	17.80	18.67	18.75
md - SOC5/6: East Midlands	5.76	6.28	6.46	7.00	7.17	7.34	7.61
md - SOC8: East Midlands	6.94	7.21	7.48	7.83	7.98	7.98	8.26
md - SOC9: East Midlands	5.54	5.84	6.05	6.18	6.48	6.54	6.90
non md: elsewhere	8.96	9.20	9.41	9.72	10.09	10.40	10.74
md - SOC: elsewhere	16.89	17.63	18.39	19.16	19.74	19.91	20.34
md - SOC5/6: elsewhere	6.17	6.41	6.81	7.11	7.37	7.72	8.00
md - SOC8: elsewhere	7.28	7.59	7.79	8.21	8.47	8.72	8.94
md - SOC9: elsewhere	5.59	5.83	6.00	6.24	6.39	6.57	6.75
All	*8.32*	*8.62*	*8.82*	*9.13*	*9.48*	*9.80*	*10.07*
Ratios of Median Earnings	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
md:non md ratio - East Midlands							
md - SOC2: non md East Midlands	1.86	1.84	1.89	1.94	1.89	1.99	1.91
md - SOC5/6: non md East Midlands	0.72	0.75	0.75	0.78	0.76	0.78	0.78
md - SOC8: non md East Midlands	0.86	0.86	0.87	0.87	0.85	0.85	0.84
md - SOC9: non md East Midlands	0.69	0.70	0.71	0.69	0.69	0.70	0.70
md:non md ratio - elsewhere							
md - SOC2: non md elsewhere	1.89	1.92	1.95	1.97	1.96	1.91	1.89
md - SOC5/6: non md elsewhere	0.69	0.70	0.72	0.73	0.73	0.74	0.74
md - SOC8: non md elsewhere	0.81	0.82	0.83	0.84	0.84	0.84	0.83
md - SOC9: non md elsewhere	0.62	0.63	0.64	0.64	0.63	0.63	0.63
md East Midlands:md elsewhere							
md - SOC2	0.89	0.87	0.88	0.91	0.90	0.94	0.92
md - SOC5/6	0.93	0.98	0.95	0.99	0.97	0.95	0.95
md - SOC8	0.95	0.95	0.96	0.95	0.94	0.91	0.92
md - SOC9	0.99	1.00	1.01	0.99	1.01	0.99	1.02
non md East Midlands:non md elsewhere	0.90	0.91	0.91	0.93	0.93	0.90	0.91

Source: ASHE.
Notes: See section 6.3 for details of these detailed occupations; 'md' refers to 'Migrant Dense'.

7.3.2 *Migrant dense industries*

Relative earnings in migrant dense industries derived from the LFS are presented in Table 7.4. Similar findings emerge compared to the analysis of occupations, with wages in migrant dense industries within the East Midlands being comparable to those observed in the rest of the UK, again reflecting the relative homogeneity of jobs within these sectors. Once again, the gap in relative wages observed between MD and non-MD sectors is narrower in the East Midlands compared with the rest of the UK. Inconsistent results are observed in the movement of relative earnings in migrant dense sectors during the 2007/9 period when comparing sector based and division based derivations. This divergence is however not observed in the ASHE based analysis presented in Table 7.5, which demonstrates that relative earnings within migrant dense areas of the labour market have remained relatively unchanged. Given the larger sample sizes and consistency of the industry classification, the results derived from the ASHE data should be considered as more reliable and robust.

Table 7.4:   Relative Earnings in Migrant Dense Industries: LFS

Sector Derivation	2001/3	2004/6	2007/9
Median Hourly Earnings (£)			
non md : East Midlands	7.19	7.97	8.61
md: East Midlands	7.20	8.00	8.05
non md: elsewhere	7.79	8.84	9.83
md: elsewhere	7.55	8.35	9.00
All	*7.69*	*8.65*	*9.55*
Ratios of Median Earnings			
md:non md ratio - East Midlands	1.00	1.00	0.94
md:non md ratio – elsewhere	0.97	0.95	0.92
md East Midlands:md elsewhere	0.95	0.96	0.89
non md East Midlands:non md elsewhere	0.92	0.90	0.88
Division Derivation	**2001/3**	**2004/6**	**2007/9**
Median Hourly Earnings (£)			
non md : East Midlands	7.31	8.20	8.50
md: East Midlands	6.37	6.92	8.00
non md: elsewhere	7.95	8.96	9.63
md: elsewhere	6.00	6.79	9.00
All	*7.69*	*8.65*	*9.55*
Ratios of Median Earnings			
md:non md ratio - East Midlands	0.87	0.84	0.94
md:non md ratio – elsewhere	0.76	0.76	0.94
md East Midlands:md elsewhere	1.06	1.02	0.89
non md East Midlands:non md elsewhere	0.92	0.92	0.88

Source: LFS
Note: 'md' refers to 'Migrant Dense'.

Table 7.5:   Relative Earnings in Migrant Dense Industries: ASHE

Median Hourly Earnings	2002	2003	2004	2005	2006	2007	2008
Sector Derivation (£)							
non md : East Midlands	7.51	7.90	8.04	8.33	8.73	8.91	9.17
md: East Midlands	7.68	8.08	8.41	8.69	8.91	8.83	9.50
non md: elsewhere	8.43	8.71	8.96	9.23	9.62	9.95	10.22
md: elsewhere	8.29	8.59	8.90	9.10	9.29	9.64	9.97
All	*8.32*	*8.62*	*8.88*	*9.13*	*9.48*	*9.80*	*10.07*
md:non md ratio - East Midlands	1.02	1.02	1.05	1.04	1.02	0.99	1.04
md:non md ratio - elsewhere	0.98	0.99	0.99	0.99	0.97	0.97	0.98
md East Midlands:md elsewhere	0.93	0.94	0.95	0.96	0.96	0.92	0.95
non md East Midlands: non md elsewhere	0.89	0.91	0.90	0.90	0.91	0.90	0.90
Division Derivation (£)	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
non md : East Midlands	7.72	8.08	8.29	8.62	8.95	9.00	9.43
md: East Midlands	6.55	6.79	6.99	7.34	7.64	7.64	7.68
non md: elsewhere	8.56	8.84	9.12	9.37	9.76	10.08	10.37
md: elsewhere	6.80	6.99	7.28	7.45	7.41	7.58	7.80
All	*8.32*	*8.62*	*8.88*	*9.13*	*9.48*	*9.80*	*10.07*
md:non md ratio - East Midlands	0.85	0.84	0.84	0.85	0.85	0.85	0.81
md:non md ratio - elsewhere	0.79	0.79	0.80	0.79	0.76	0.75	0.75
md East Midlands:md elsewhere	0.96	0.97	0.96	0.99	1.03	1.01	0.98
non md East Midlands: non md elsewhere	0.90	0.91	0.91	0.92	0.92	0.89	0.91

Source: ASHE
Note: 'md' refers to 'Migrant Dense'.

7.3.3   Relative earnings growth

Table 7.6 presents estimates of the growth in annual earnings among employees derived from ASHE. These growth rates are derived for employees who are observed to remain in MD and non-MD occupations within consecutive years of ASHE. An individual employee may experience one of a number of transitions in their employment characteristics from one year to the next, such as a new job in a new occupation which is associated with a change in location. However, it remains the case that a majority of people within ASHE will remain in the same job from one year to the next. Given the complex picture of transitions and the relatively small number of people for whom such a transition occurs, for ease of exposition, the table does not present figures of earnings growth for those individuals who either:

  a) move into or out of the East Midlands; or
  b) move into or out of employment within MD occupations.

Hence, employees who change job but remain employed within an MD occupation are retained in the analysis.

Overall, it can be seen that wage growth declined during the latter part of the decade as the economy moved towards and entered the recession. Both within the East Midlands and the rest of the UK, the decline in wage growth is more apparent within MD occupations. However, this decline is observed to be greater within the East Midlands than elsewhere. Within 2006/7 and 2007/8, the rate of growth in MD occupations within the East Midlands is estimated to be approximately 70 per cent of that observed within MD occupations within the rest of the UK. Whilst wage growth in non-MD occupations has also declined in the East Midlands during the latter part of the decade, it is within MD occupations that the relative earnings growth of those working in the East Midlands has exhibited the largest relative decline. The closer examination of detailed MD occupations presented in the lower half of Table 7.6 points to the relatively slow growth in earnings that is experienced by those who are employed within relatively low skilled MD occupations, such as routine operatives and other elementary occupations. Such movements in wages may support the view that it is among low skilled occupations that changes in the relative supply of labour associated with inward and outward migration has had the largest effect on relative earnings.

7.3.4   Relative earnings of migrants

Table 7.7 presents the relative earnings of migrants, comparing East Midlands with the rest of the UK. Considering all migrants (upper panel of Table 7.7), it can be seen that there has been a significant decline in the relative earnings of migrants in the East Midlands during the latter part of the period, with the ratio of migrant to non-migrant earnings declining from 97 per cent to 87 per cent. It is also observed during this period that the wages received by migrants in the East Midlands declined relative to the wages received by migrants elsewhere in the UK, declining from 87 per cent to 78 per cent. Wage differentials among non-migrants have remained relatively stable, pointing towards the depressing effects upon wages of an increased supply of migrant labour among those jobs held by migrants.

The lower panel of Table 7.7 refines this analysis, by considering the relative wages of different cohorts of migrant workers. Relative wages amongst migrant workers who have resided in the UK for longer than five years have remained relatively stable. This finding is observed both within the East Midlands and within the wider UK labour market. It is recent migrants to the UK (i.e. those who have been in the UK for less than five years) who have exhibited a relative decline in their earnings position. This trend is apparent both within the East Midlands and the wider UK labour market. Due to the relatively small sample sizes that underpin this analysis, it is not possible to say whether the scale of the decline observed within the East Midlands during the period of analysis is any larger than that observed in the rest of the UK.

Table 7.6: Relative Earnings Growth in Migrant Dense Occupations: ASHE

Derivation: SOC Minor Broad Categories	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8
Mean Earnings Growth (%)						
non md : East Midlands	7.4%	6.0%	8.2%	5.8%	5.4%	5.0%
md: East Midlands	6.7%	6.1%	6.4%	4.5%	3.8%	3.3%
non md: elsewhere	6.9%	6.4%	8.0%	6.3%	6.0%	5.4%
md: elsewhere	6.5%	6.1%	6.7%	4.9%	5.2%	4.4%
All	*7.1%*	*6.5%*	*8.0%*	*6.1%*	*5.9%*	*5.2%*
Ratios of Earnings Growth						
md:non md ratio - East Midlands	0.90	1.02	0.79	0.78	0.70	0.66
md:non md ratio - elsewhere	0.94	0.96	0.84	0.78	0.87	0.82
md East Midlands:md elsewhere	1.03	1.00	0.96	0.92	0.72	0.74
non md East Midlands:non md elsewhere	1.06	0.94	1.02	0.92	0.89	0.92
Detailed Categories	**2002/3**	**2003/4**	**2004/5**	**2005/6**	**2006/7**	**2007/8**
Mean Earnings Growth (%)						
non md : East Midlands	7.4%	6.0%	8.2%	5.8%	5.4%	5.0%
md - SOC2: East Midlands	10.3%	7.2%	5.9%	5.8%	5.9%	3.7%
md - SOC5/6: East Midlands	8.0%	7.8%	7.8%	5.4%	5.6%	5.2%
md - SOC8: East Midlands	5.0%	3.3%	6.3%	4.1%	3.3%	3.4%
md - SOC9: East Midlands	6.4%	7.0%	5.8%	4.1%	2.6%	3.2%
non md: elsewhere	6.9%	6.4%	8.0%	6.3%	6.0%	5.4%
md - SOC: elsewhere	7.8%	6.2%	7.6%	6.4%	6.2%	5.5%
md - SOC5/6: elsewhere	7.3%	7.5%	6.7%	5.2%	6.1%	4.2%
md - SOC8: elsewhere	5.0%	4.7%	6.5%	4.1%	4.7%	4.5%
md - SOC9: elsewhere	6.0%	6.0%	6.2%	4.6%	4.4%	3.8%
All	*7.1%*	*6.5%*	*8.0%*	*6.1%*	*5.9%*	*5.2%*
Ratios of Earnings Growth						
md - SOC2: non md East Midlands	1.40	1.20	0.72	1.00	1.10	0.74
md - SOC5/6: non md East Midlands	1.08	1.30	0.95	0.94	1.04	1.05
md - SOC8: non md East Midlands	0.68	0.55	0.78	0.70	0.62	0.69
md - SOC9: non md East Midlands	0.87	1.16	0.71	0.70	0.48	0.64
md - SOC2: non md elsewhere	1.13	0.97	0.95	1.02	1.02	1.03
md - SOC5/6: non md elsewhere	1.05	1.17	0.83	0.83	1.01	0.78
md - SOC8: non md elsewhere	0.72	0.74	0.81	0.64	0.78	0.84
md - SOC9: non md elsewhere	0.87	0.94	0.77	0.73	0.73	0.72
md - SOC2	1.32	1.16	0.77	0.90	0.96	0.66
md - SOC5/6	1.09	1.04	1.16	1.04	0.92	1.26
md - SOC8	1.00	0.71	0.98	1.00	0.70	0.76
md - SOC9	1.06	1.17	0.93	0.88	0.58	0.82
non md East Midlands:non md elsewhere	1.06	0.94	1.02	0.92	0.89	0.92

Table 7.7:   Relative Earnings of Migrants: LFS

	2001/3	2004/6	2007/9
Median Hourly Earnings			
Migrant versus Non-Migrants (£)			
non migrant : East Midlands	7.19	8.02	8.61
migrant: East Midlands	7.03	7.83	7.48
non migrant: elsewhere	7.69	8.71	9.61
migrant: elsewhere	8.46	9.00	9.63
All	*7.69*	*8.65*	*9.55*
migrant:non migrant ratio - East Midlands	0.98	0.98	0.87
migrant:non migrant ratio – elsewhere	1.10	1.03	1.00
migrant East Midlands:migrant elsewhere	0.83	0.87	0.78
non migrant East Midlands:non migrant elsewhere	0.94	0.92	0.90
Detailed Migrant Derivation			
non migrants : East Midlands	7.19	8.00	8.61
migrants < 5 yrs: East Midlands	8.50	7.14	6.67
migrants 5-20 yrs: East Midlands	6.13	7.69	7.50
migrants 20yrs+: East Midlands	7.00	8.61	8.93
migrants < 5 yrs: elsewhere	8.23	7.78	7.69
migrants 5-20 yrs: elsewhere	8.11	9.17	10.23
migrants 20yrs+: elsewhere	8.87	10.27	11.16
All	*7.54*	*8.65*	*9.55*
< 5 years in UK			
migrant:non migrant ratio - East Midlands	1.18	0.89	0.78
migrant:non migrant ratio - elsewhere	1.07	0.90	0.80
5-20 years in UK			
migrant:non migrant ratio - East Midlands	0.85	0.96	0.87
migrant:non migrant ratio - elsewhere	1.06	1.06	1.07
20+ years in UK			
migrant:non migrant ratio - East Midlands	0.97	1.08	1.04
migrant:non migrant ratio - elsewhere	1.15	1.18	1.16

Source: LFS
Note: 'md' refers to 'Migrant Dense'.

7.4   Adjusted wage relativities

As described above, the relative wages of those employed in migrant dense areas of the labour market or the relative wages of migrants themselves may change over time due to a variety of compositional changes that may influence the earnings of workers in these groups. This sub-section takes account of such changes by presenting wage relativities estimated for these groups derived from results of multivariate statistical analysis. The differentials estimated from these procedures are referred to as 'adjusted differentials' and can be considered as the estimated 'separate and additional' effects on earnings of a) being employed in a migrant dense occupation and b) being a migrant, after having controlled for other characteristics of individuals in the sample for which we have information (e.g. age, gender, hours worked). For ease of exposition, the results of these models are presented graphically in Figures 7.1, 7.2 and 7.3.

Figure 7.1 shows the adjusted wage differentials associated with being employed in MD occupations; (results based on the industry derivation are not presented due to inconsistencies in the industrial classification used within the LFS during the period of the analysis as referred to in section 7.2.2). It is observed that adjusted relative wage differentials associated with being employed within MD occupations remain relatively stable over time. Differentials based on the more detailed measure of migrant density derived at the Minor Group level of SOC are similar in the East Midlands compared to those observed in the rest of the UK. No discernible influence that can be attributed to increased levels of migration can be identified.

Figure 7.1: Adjusted Wage Differentials – Migrant Dense Occupations: LFS

Wage Relativities: Migrant Dense Occupations
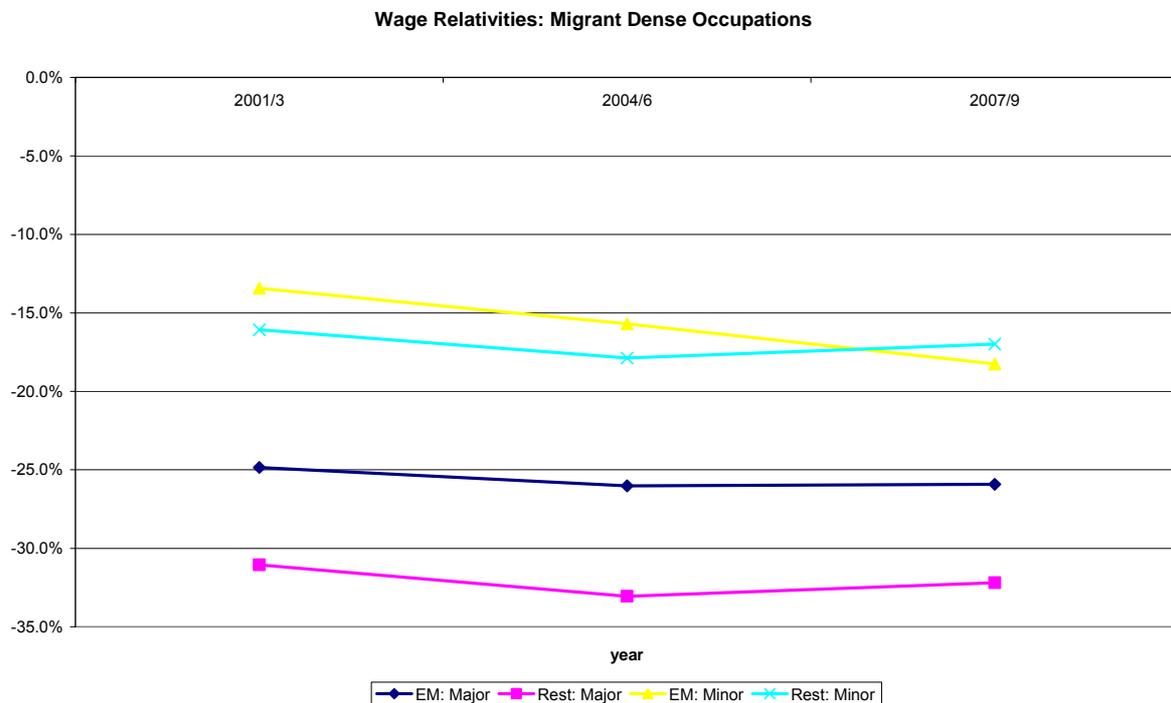
Source: LFS

Figure 7.2 shows the adjusted wage differentials associated with being employed in MD occupations derived from ASHE. It is observed that adjusted relative wage differentials associated with being employed within MD occupations did narrow up until 2005. Within the East Midlands, during 2006 the MD wage differential appears to widen, remaining relatively

stable thereafter. It is possible that this stabilisation in relative wages within MD occupations post 2005 could be attributed to an increased supply of migrant labour - 'checking' the narrowing of the wage differentials in these occupations that had occurred during the earlier part of the decade. This pattern is more evident when focusing upon relative wages within low skilled MD occupations located within Major Groups 8 and 9 of the Standard Occupational Classification (see Figure 7.3). The pattern of narrowing wage differentials that had occurred during the early part of the period of analysis was reversed post 2005, with this being particularly evident within the East Midlands.

Figure 7.2: Adjusted Wage Differentials – Migrant Dense Occupations: ASHE

Wage Relativities: Migrant Dense Occupations
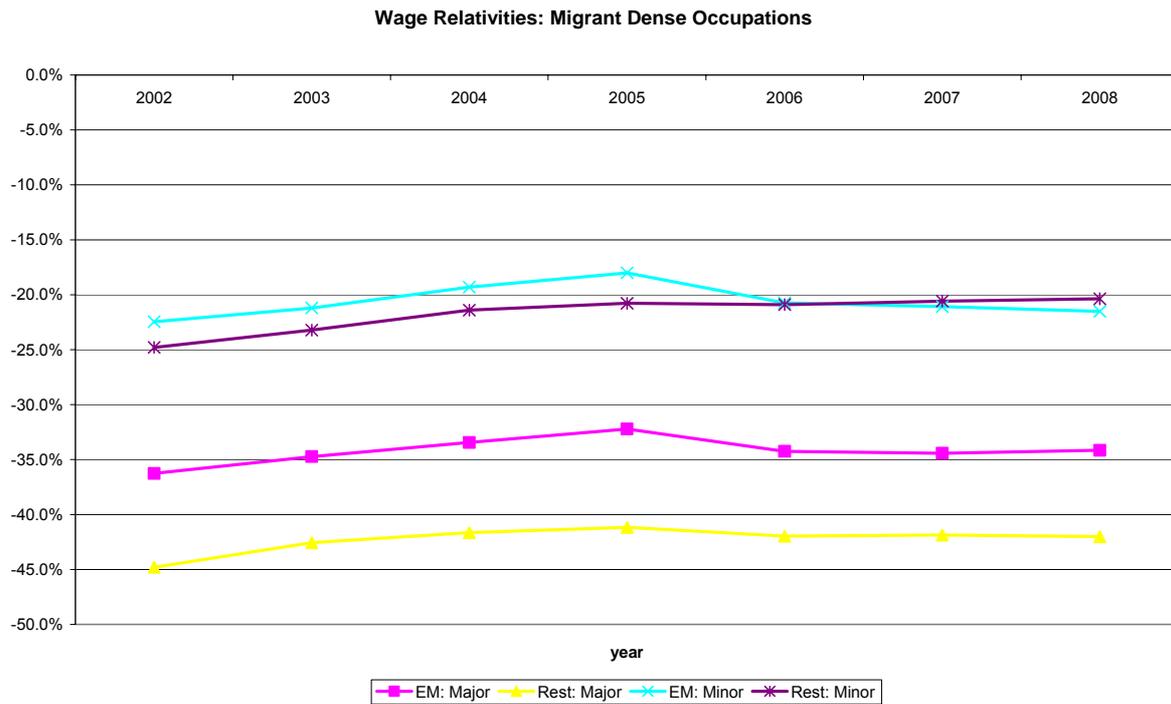
Source: ASHE

Figure 7.3: Adjusted Wage Differentials – Detailed Migrant Dense Occupations: ASHE

Wage Relativities: Detailed Migrant Dense Occupations
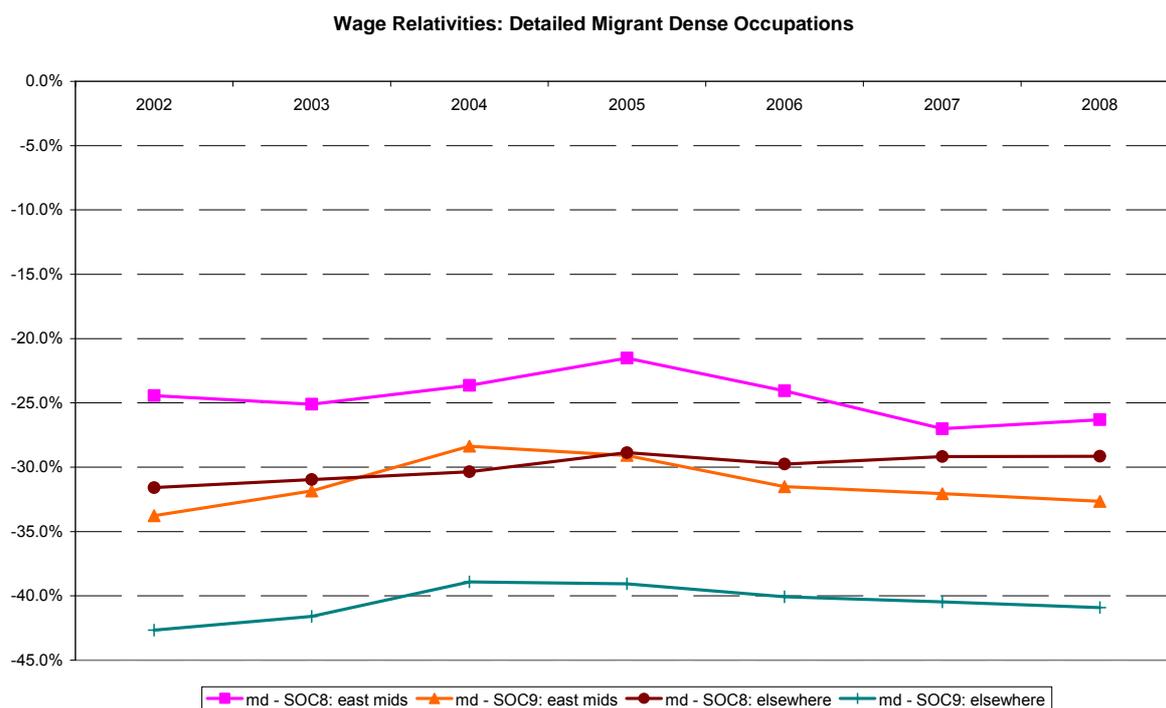
Source: ASHE

These patterns are clearer in Figures 7.4 and 7.5 that present adjusted measures of wage growth in MD occupations within the East Midlands and elsewhere in the UK. Within the East Midlands, after controlling for personal and job related characteristics (gender, age, hours worked, job tenure, contractual status and whether or not an individual works in the public sector), the rate of growth in earnings within MD occupations relative to non MD occupations declined by 2 percentage points between 2003/4 and 2004/5. This is in comparison to a decline of 1.25 percentage points observed in the rest of the UK. Beyond 2004/5, the rate of growth in hourly earnings exhibited by those employed in MD occupations in the East Midlands is approximately 1.5 percentage points lower than that exhibited by those employed in non-MD occupations, suggesting a widening earnings gap between those employed in MD and non-MD occupations post 2005. This differential in earnings growth in the East Midlands is demonstrated to be wider than that observed in the rest of the UK. Although the relatively small sample sizes lead to difficulties in making comparisons over time, these patterns are shown to exist within low skilled MD occupations (Figure 7.5), indicating that the overall differences estimated cannot be attributed entirely to compositional changes within MD occupations over time.

Using LFS data, Figure 7.6 shows adjusted wage differentials associated with being a migrant worker. The regression models include controls for age, gender, hours worked and whether or not the respondent worked within the public sector. It can be seen that within the rest of the UK, the relative penalty in pay associated with being a migrant worker increases from approximately 7 per cent to 15 per cent between 2001/3 and 2007/9. In other words, the relative earnings disadvantage faced by migrant workers doubles during the period covered by the analysis. Within the East Midlands, this penalty in pay increases from 11 per cent to 28 per cent, a relatively sharp increase compared to that observed within the rest of the UK.

Figure 7.4:   Annual Wage Growth in Migrant Dense Occupations

Percentage Point Difference in Annual Wage Growth
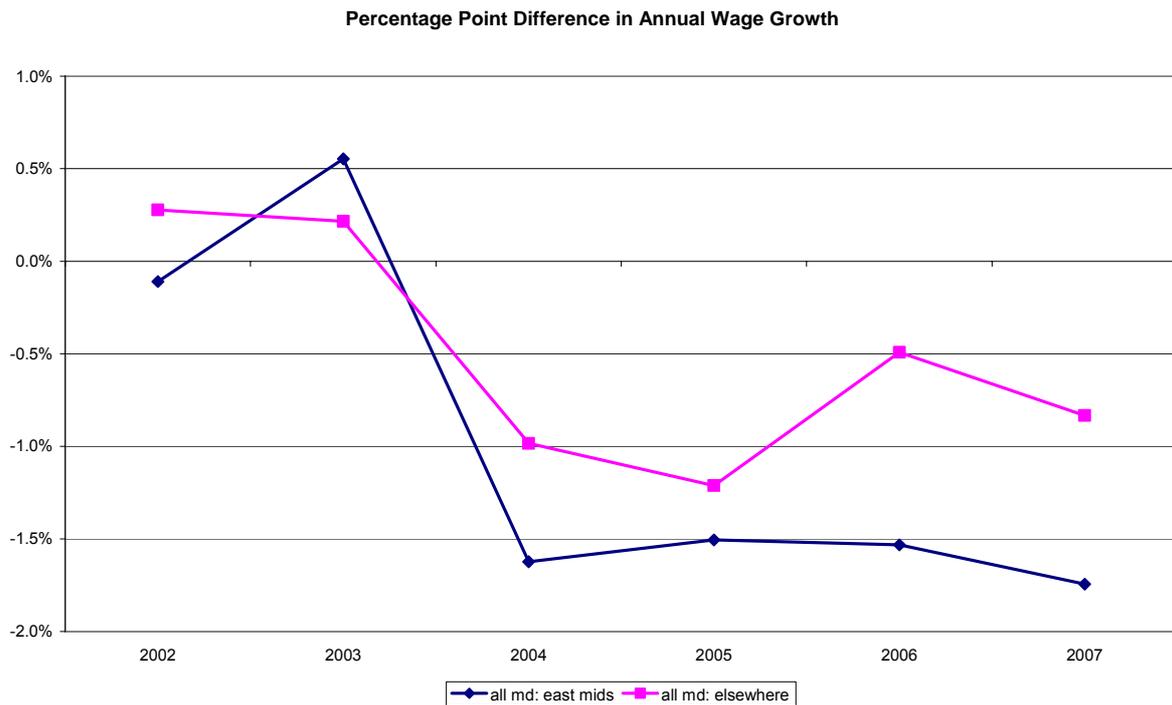
Source: ASHE

Figure 7.5:   Annual Wage Growth in Selected Migrant Dense Occupations

Percentage Point Difference in Annual Wage Growth
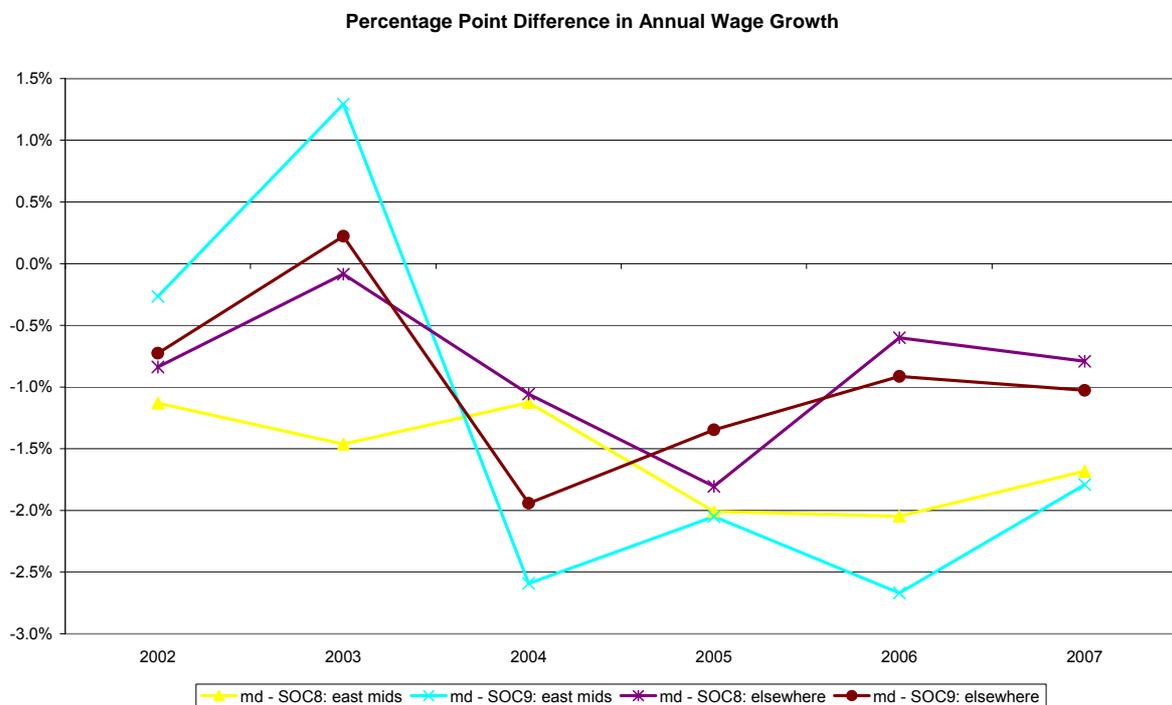
Source: ASHE

Figure 7.6: Adjusted Wage Differentials – Migrant Workers

Migrant Wage Differential
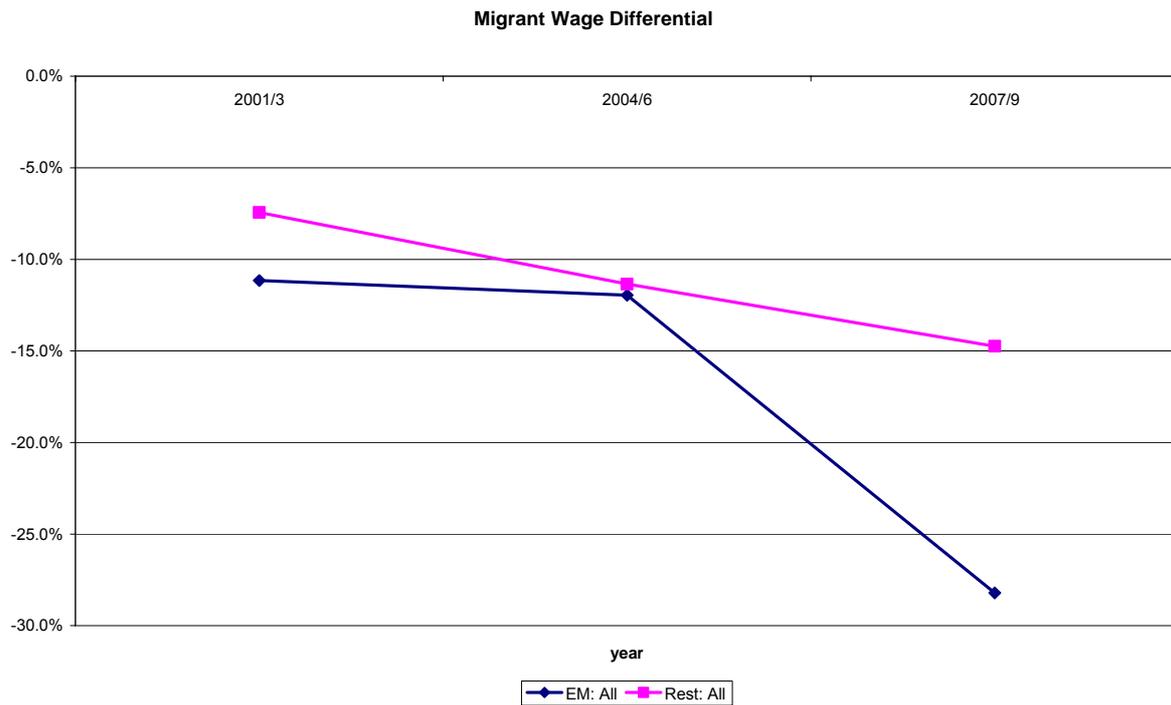
Source: LFS

Figure 7.7: Adjusted Wage Differentials – Migrant Workers – detailed breakdown

Migrant Wage Differentials: By Cohort
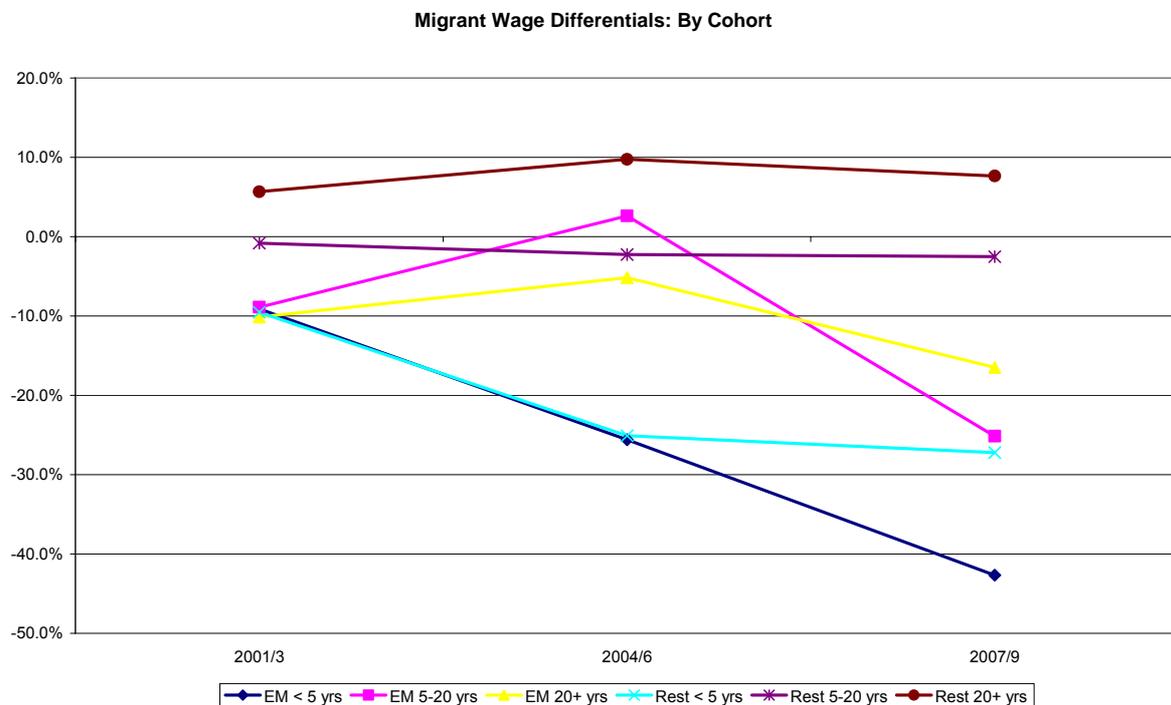
Source: LFS

Figure 7.7 presents adjusted wage differentials associated with being a migrant worker, distinguishing migrant workers according to length of time spent in the UK. As described in the descriptive analysis, the sharpest relative decline in hourly earnings is observed among migrants who have been based in the UK for less than 5 years. Within the UK, this

differential was approximately 15 per cent by the end of the decade. The decline in relative earnings is more apparent within the East Midlands, where the relative penalty in pay associated with migrant workers grew from 12 per cent to 28 per cent over the same period. The analysis also provides evidence that may suggest that the increased supply of migrant labour has had spill-over effects among migrant workers who have been based in the UK for a longer period. This is particularly evident within the East Midlands, where the relative earnings of those migrants who have been in the UK for 5-20 years and more than 20 years have also exhibited a decline in their relative earnings during the latter part of the decade. These migrant wage differentials have remained relatively stable within the rest of the UK.

7.5   Conclusions

The analysis in this section has presented a detailed overview of the relative earnings of those employed in MD occupations and sectors within the East Midlands compared with the rest of the UK. In the analysis of earnings, it has to be noted that the relative earnings position of those employed in MD areas of the labour market in the East Midlands is more favourable than those employed in such jobs elsewhere in the UK. However, given that the earnings of MD occupations in the East Midlands are comparable to those elsewhere in the UK, this finding reflects the relatively low-skilled composition of non-MD jobs rather than the relatively high-skilled composition of MD jobs in the East Midlands.

The relative earnings position of those employed in MD areas of the labour market in the East Midlands has remained relatively stable during the course of the last decade. Analysis of ASHE data suggests that the improvement in the relative earnings position of those employed in MD jobs that occurred during the first part of the period did not continue in later years. This is most graphically demonstrated by an analysis of earnings growth, which does suggest that this 'check' in earnings growth was stronger in the East Midlands. The timing of these changes points to the potential importance of inward migration on labour market outcomes. However, it is the analysis of the penalty in pay associated with migrant labour that points to a widening of the migrant wage differential, with the evidence again suggesting that this effect is more apparent in the East Midlands than nationally. The effect of inward migration on earnings is most readily observed among the incumbent migrant population who are likely to be concentrated in areas of the labour market where recent migrants will also seek work. Whilst such influences will have spill-over effects among the wider population employed in MD areas of work, the dilution of these influences among a wider group of people, many of whom will not be competing for work with recent migrants, make it more difficult to observe an effect upon earnings among the wider population. The operation of internal labour markets within most organisations means that those who are outside of the organisation are unable to exert downward pressure on wages in order to price themselves in to work.

8. Migrant workers' contribution to GVA

- This section updates previous estimates of the contribution made by migrant workers to regional Gross Value Added (GVA). The methodology developed in the earlier study is applied to more recent data. Estimates are made for migrants arriving in the UK before 1992, between 1992 and 2003 and after 2003. Three sets of estimates of the migrant contribution are developed: the base estimate, a wage-adjusted estimate and a LFS-reflated estimate.

- The base estimates are derived from the industrial distribution of migrant workers and regional GVA by industry data, but the wage-adjusted estimates take into account the occupational specialisation of migrant workers. The LFS-reflated estimates adjust for the potential undercount of migrant workers by the LFS. These provide the best indication of the migrant contribution to regional GVA.

- The analysis reveals that migrant workers are paid less than their UK-born counterparts, with later migrants experiencing a particular penalty in earnings. The occupational composition of employment is largely responsible for this, since migrants (particularly more recent migrants) tend to be employed in less skilled/lower paid occupations.

- In 2009, people born outside the UK contributed an estimated 10.0 per cent of the value of output in the East Midlands region. This figure is slightly higher than the estimated figure of 9.6 per cent (circa 2005), as reported in the previous study. Over the period from 2007 to 2009 the overall contribution of migrants in the region increased from an estimated 9.3 per cent (in 2007) to 10.0 per cent of GVA (in 2009). Migrant contribution peaked at an estimated 10.6 per cent in 2008, declining slightly thereafter concurrent with the impact of the economic downturn.

- The employment of post-2003 migrants has continued to increase over the period from 2007 to 2009. However, the contribution of this group to GVA has increased more slowly than their employment base, (and in fact decreased slightly during 2008-09). This is due to the increasing concentration of recent migrants in lower value-added industries (such as Agriculture, Manufacturing and Transport and Storage & Communication industries) and in lowest skilled occupations. For the same reason, wage adjustment calculations have a much greater downward impact on estimated GVA contribution for post-2003 migrants than for less recent migrant cohorts.

8.1 Introduction

The estimates provided in this section of the report update the Gross Value Added (GVA) estimates provided in the previous report.[122] The last report detailed estimates through to 2006. This section applies the same methodology, updating estimates based on latest available data for 2007–09, from the Labour Force Survey and the Cambridge Econometrics/IER regional GVA database. It is noted that a very similar methodology to that developed in the earlier *emda* migrant report was used latterly by Oxford Economics in order to calculate estimates of the economic contribution of migrant labour to regional GVA in England (see DCLG, 2009).[123]

Gross Value Added (GVA) quantifies the total value of production in the region, using production based measures of Gross Domestic Product (GDP). GVA is calculated by summing the contribution to the economy of each individual producer (and in total each industry) to the value of total output by estimating the value of an output (goods or services) less the value of inputs used in that output's production process.

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[122] Green *et al.* (2007) *op cit.*
[123] DCLG (2009) *Regional Economic Performance: A Migration Perspective*. Economics paper 4. http://www.communities.gov.uk/publications/communities/ecoperformancemigration4

By calculating the quantity and value of input of migrants into the production process, annually and by industry, we are able to estimate the monetary value of migrant contribution to economic activity, expressed as a percentage of total GVA. The data and methodology for deriving these estimates is described below, as are the results of the updated analysis.

8.2   Data

8.2.1   GVA data

This paper utilises GVA estimates for the East Midlands region over the period 2007–09 (inclusive). The data was taken from the latest available Cambridge Econometrics/IER estimates of output based on the multi sector model and are consistent with the Annual Business Inquiry (ABI) figures. The estimates were last updated in December 2009. Note that the 2009 figure is based on the latest forecast rather than on an actual figure.

The GVA figures are available for the East Midlands region by detailed industry. The industry categories are based on Standard Industrial Classification SIC2003. The starting point for the analysis is GVA data for 39 industries. These are mapped into 13 SIC2003 sectors for consistent comparison with LFS employment estimates. Some industry sectors are merged to facilitate the analysis where sample numbers of migrants by industry are restrictively small. (Sectors A and B; C and E and OPQ are merged, respectively, to create new working industry categories). Whilst the new standard industrial classification definition (SIC2007) are available in the LFS, at this point the GVA data is only available using the older SIC2003 standard. Whilst use of the newer standard would be preferable in terms of consistency with employment estimates presented elsewhere, the industry classification is instrumental only in disaggregating production activities. Therefore using SIC2003 rather than SIC2007 will make little material difference to final estimates.

8.2.2   Employment and earnings data

The GVA estimates are combined with information on employment of migrants for each of the SIC2003 industry sectors for each year: 2007, 2008 and 2009. Estimates of migrant and non-migrant employment by sector are produced using the weighted (re-grossed) LFS data for the East Midlands for 2007-09 (inclusive). As previously, the following *non-overlapping* LFS quarterly surveys are used:
- 2007Q1
- 2008Q2
- 2009Q3

Note that the LFS surveys start one year after the analysis of the previous report. The five quarter time interval between the surveys ensures no double counting of individuals in the LFS. Regarding a detail of timing, whilst GVA estimates relate to the value of output for the whole year, the LFS estimates represent employment snapshots within the year. So that GVA and employment estimates may be combined, we assume for convenience that employment patterns do not vary within year. Since employment composition measured by broad industrial sector indeed varies little in the short run, these assumptions will be fairly robust.

Earnings data is also available from the LFS in the form of gross hourly earnings (*HOURPAY*) observable for each individual in the survey as they enter (wave 1) and leave (wave 5) the survey. This data is utilised, as detailed below, to provide information regarding the marginal value of migrant employment compared to that of UK-born workers. Since earnings data are included in only two out of the five waves in each of the surveys listed above, we supplement these observations with data on earnings from the other quarters

within respective calendar years. This ensures sufficiently large raw sample numbers for earnings data.

8.2.3   Disaggregation of migrants in analyses

As outlined in section 6, employment estimates are produced for the following groups of migrants, based on country of birth (i.e. outside the UK) and the year of arrival into the UK:
- Pre-1992 migrants.
- 1992-2003 migrants.
- Post 2003 migrants.

8.3   Methodology

As in the previous report, three sets of estimates of migrant contribution to GVA are calculated for each year 2007, 2008 and 2009. These are a:
1. Base estimate.
2. Wage-adjusted estimate – taking account of the uneven earnings distribution of migrants within industries.
3. LFS-reflated estimate – taking account of the fact that migrants are undercounted in the LFS.

For further details of the methodology see Annex 17.

8.4   Results

Table 8.1 shows the annual estimates of Gross Value Added (GVA) for the East Midlands region, by industry, for 2007-09. Note that the values are in £millions at current prices. As well as showing the GVA estimates in absolute terms, the table shows the percentage of GVA analysed by industry, highlighting industries which contribute most to regional GVA. The industry key is shown below the table. The impact of the economic downturn after 2008 can be seen in the table with an estimated 5.7 per cent decrease in GVA between 2008 and 2009. The table forms the starting point for the calculations detailed above.

Table 8.2 shows the detailed employment estimates by industry, derived from the LFS. The figures show, for each migrant cohort in turn, migrant employment as a percentage of total industry employment. Note that the percentage in tables (a) – (c), representing each of the cohorts in turn, sum by industry and year to the totals in table (d), representing all migrants. Differences in employment by industry reflect different migrant densities by sector, as detailed in the previous section. These figures when applied to the GVA estimates in Table 8.1 provide the base estimates.

Table 8.1   GVA by Industry at constant 2009 values, East Midlands

Industry (SIC2003)	2007		2008		2009	
	£million	**%**	**£million**	**%**	**£million**	**%**
A, B: Agriculture, etc	908	1.4%	903	1.3%	869	1.4%
C, E: Mining, quarrying, energy	1,921	2.9%	1,865	2.8%	1,719	2.7%
D: Manufacturing	14,221	21.2%	13,714	20.5%	11,919	18.9%
F: Construction	4,865	7.3%	4,885	7.3%	4,149	6.6%
G: Wholesale, Retail, & Motor Trades	9,945	14.9%	9,778	14.6%	9,226	14.6%
H: Hotels & Restaurants	1,947	2.9%	1,930	2.9%	1,867	3.0%
I: Transport, Storage & Communication	5,490	8.2%	5,554	8.3%	5,274	8.3%
J: Financial Intermediation	3,534	5.3%	3,766	5.6%	3,819	6.0%
K: Real Estate, Renting & Business Activities	9,289	13.9%	9,540	14.2%	9,117	14.4%
L: Public Admin & Defence	3,053	4.6%	3,019	4.5%	2,958	4.7%
M: Education	3,777	5.6%	3,837	5.7%	3,863	6.1%
N: Health & Social Work	5,240	7.8%	5,472	8.2%	5,615	8.9%
OPQ: Other Community, Soc. & Personal etc	2,776	4.1%	2,796	4.2%	2,812	4.4%
All	**66,965**	**100%**	**67,060**	**100%**	**63,206**	**100%**
Change on prev. year	*3.2%*		*0.1%*		*-5.7%*	

Source: Cambridge Econometrics/IER

Table 8.2   Migrant employment as a percentage of total employment, by cohort

(a)   PRE-1992 COHORT

Industry (SIC2003)	2007	2008	2009
A, B: Agriculture, etc	5.0	1.3	1.1
C, E: Mining, quarrying, energy	5.5	0.0	2.7
D: Manufacturing	4.2	4.7	3.3
F: Construction	1.1	2.1	3.5
G: Wholesale, Retail, & Motor Trades	3.9	2.9	2.8
H: Hotels & Restaurants	5.4	6.1	4.4
I: Transport, Storage, & Communication	4.8	4.8	3.4
J: Financial Intermediation	3.5	2.6	7.5
K: Real Estate, Renting & Business Activities	4.0	3.5	5.8
L: Public Admin & Defence	4.0	4.5	4.5
M: Education	3.1	2.9	3.1
N: Health & Social Work	4.6	6.6	5.0
OPQ: Other Community, Soc. & Personal etc	2.6	3.9	2.3
All Industries	*3.8*	*4.0*	*3.8*

Source: Labour Force Survey

(b)   1992-2003 COHORT

Industry (SIC2003)	2007	2008	2009
A, B: Agriculture, etc	1.6	1.1	1.5
C, E: Mining, quarrying, energy	3.5	2.9	3.9
D: Manufacturing	3.3	2.7	2.6
F: Construction	1.1	1.1	0.8
G: Wholesale, Retail, & Motor Trades	1.5	3.8	1.5
H: Hotels & Restaurants	7.0	6.8	5.5
I: Transport, Storage, & Communication	4.7	2.9	3.3
J: Financial Intermediation	3.4	1.6	0.0
K: Real Estate, Renting & Business Activities	3.8	3.3	3.2
L: Public Admin & Defence	0.9	1.5	0.0
M: Education	2.5	3.2	0.6
N: Health & Social Work	3.6	3.8	3.6
OPQ: Other Community, Soc. & Personal etc	0.0	0.7	2.1
All Industries	*2.8*	*2.9*	*2.2*

Source: Labour Force Survey

Industry (SIC2003)	2007	2008	2009
A, B: Agriculture, etc	3.6	8.6	9.9
C, E: Mining, quarrying, energy	0.0	0.0	0.0
D: Manufacturing	4.8	6.2	4.9
F: Construction	0.7	2.4	0.9
G: Wholesale, Retail, & Motor Trades	1.0	3.2	2.7
H: Hotels & Restaurants	2.1	3.5	4.8
I: Transport, Storage, & Communication	6.0	5.2	8.3
J: Financial Intermediation	0.0	0.0	0.0
K: Real Estate, Renting & Business Activities	1.2	3.8	2.3
L: Public Admin & Defence	1.2	1.4	0.9
M: Education	0.6	0.4	2.0
N: Health & Social Work	0.9	1.2	3.8
OPQ: Other Community, Soc. & Personal etc	3.1	2.9	2.6
All Industries	**2.1**	**3.2**	**3.3**

Source: Labour Force Survey

(d) **ALL MIGRANTS**

Industry (SIC2003)	2007	2008	2009
A, B: Agriculture, etc	10.2	11.0	12.4
C, E: Mining, quarrying, energy	9.0	2.9	6.7
D: Manufacturing	12.3	13.5	10.8
F: Construction	2.9	5.6	5.2
G: Wholesale, Retail, & Motor Trades	6.4	9.9	7.0
H: Hotels & Restaurants	14.5	16.4	14.7
I: Transport, Storage, & Communication	15.5	13.0	15.0
J: Financial Intermediation	6.9	4.3	7.5
K: Real Estate, Renting & Business Activities	9.0	10.6	11.2
L: Public Admin & Defence	6.1	7.4	5.3
M: Education	6.2	6.6	5.7
N: Health & Social Work	9.1	11.6	12.3
OPQ: Other Community, Soc. & Personal etc	5.7	7.5	7.0
All Industries	**8.7**	**10.1**	**9.3**

Source: Labour Force Survey

As detailed above, the LFS is also utilised to provide earnings data for migrants (relative to all workers). Whilst these calculations are performed by industry in order to derive final GVA figures, Table 8.3 summarises the data, showing the absolute and relative earnings of UK-born and migrant workers for all Industries, by year. Note that it is the relative rather than absolute figures which are important in the calculations. Note the 'all industry' differential is applied in industry cases where earnings samples of migrants (raw cohort < 10) are restrictively small.

The figures reveal that migrant workers are paid less than their UK-born counterparts, with later migrant groups in particular suffering a penalty in pay (as highlighted in section 7). Analysis reveals that whilst a small proportion of these differentials can be explained by the industries of employment, the vast majority of differentials can be accounted for by the occupational composition of employment. As detailed elsewhere, migrants (and recently arrived migrants in particular) tend to be employed in lower skilled/lower paid occupations. This fact is reflected in wage-adjusted estimates of GVA being generally lower than base estimates.

Table 8.3:   Hourly earnings of UK-born and migrant workers, all industries

Cohort	Measure	UK-born	Pre-92	1992 - 2003	Post -2003	All
2007	Mean	£10.64	£11.47	£8.57	£7.75	£9.37
	Relative to UK-born	-	1.078	0.805	0.728	0.881
2008	Mean	£10.86	£11.48	£9.76	£7.56	£9.66
	Relative to UK-born	-	1.057	0.899	0.697	0.890
2009	Mean	£11.06	£11.91	£9.41	£8.00	£9.84
	Relative to UK-born	-	1.077	0.851	0.723	0.890

Source: Labour Force Survey

Finally, applying the wage adjustments and the 20 per cent reflation to LFS data, in turn, we arrive at estimates of migrant contribution to GVA by cohort, based on year of arrival into the UK. Figure 8.1 presents the time series estimates for each of the years 2007–09 for each of the cohorts, in (a)–(c) respectively. The figures for all migrants, in (d), are the sum of the figures for the three cohorts in previous charts. The charts show the percentage of employment in each period by cohort, along with estimates of contribution to GVA according to the three measures listed above. The LFS reflated measure should be taken as the most accurate estimate.

Figure 8.1   Migrant contribution to GVA, by cohort

(a)   PRE-1992 COHORT
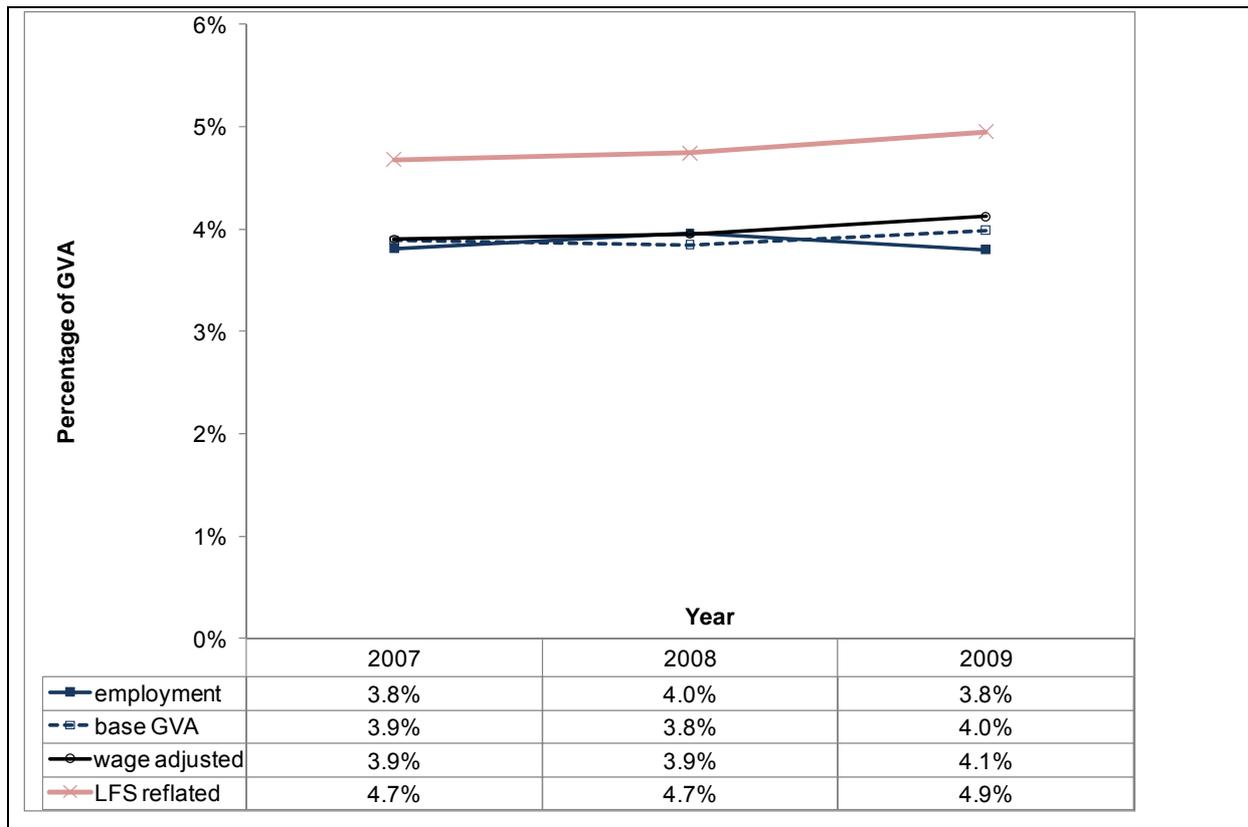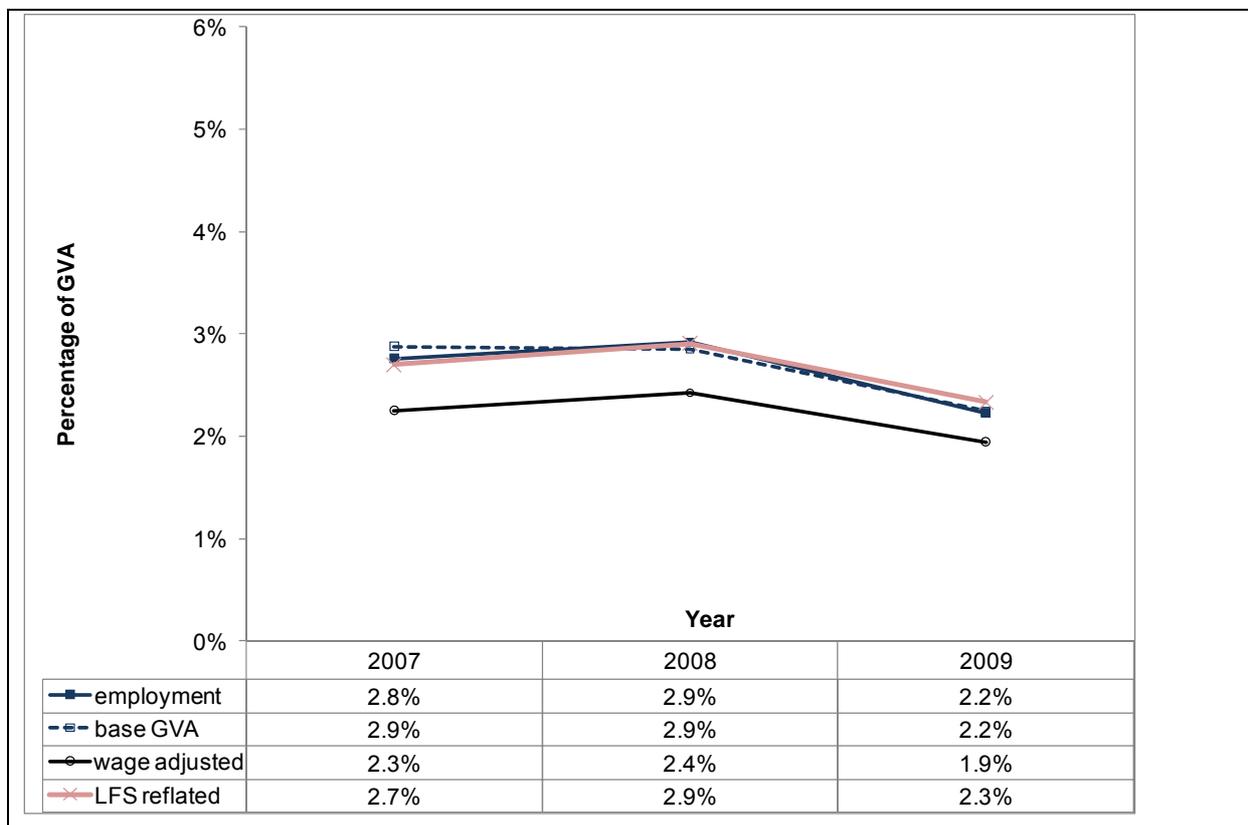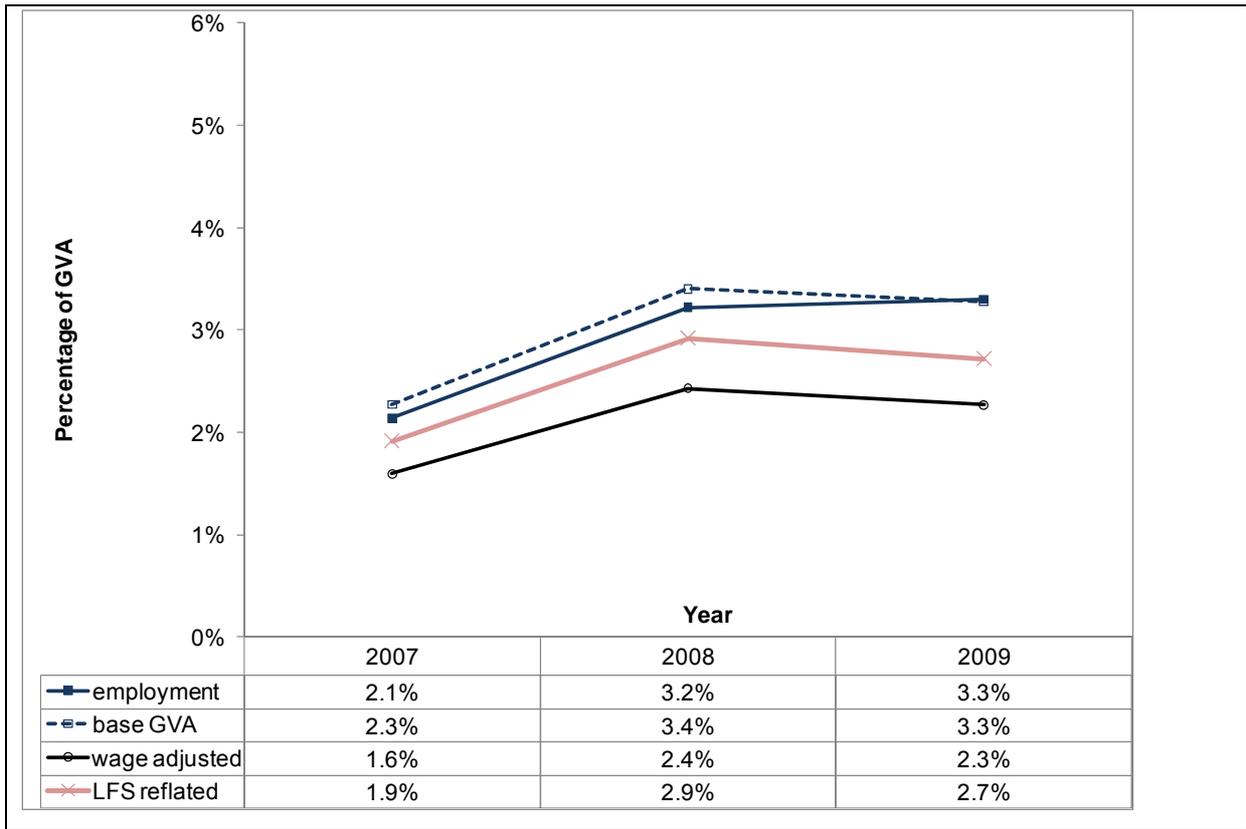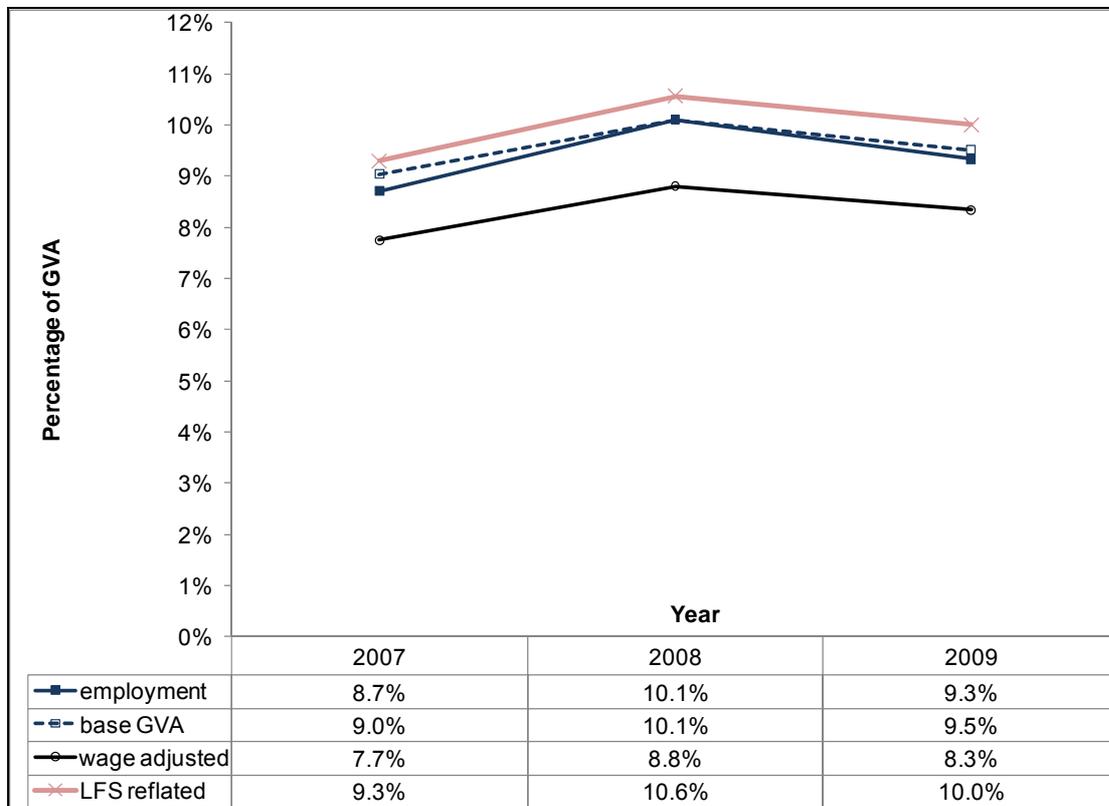
	2007	2008	2009
Year			
employment	3.8%	4.0%	3.8%
base GVA	3.9%	3.8%	4.0%
wage adjusted	3.9%	3.9%	4.1%
LFS reflated	4.7%	4.7%	4.9%

(b)   1992-2003 COHORT

	2007	2008	2009
Year			
employment	2.8%	2.9%	2.2%
base GVA	2.9%	2.9%	2.2%
wage adjusted	2.3%	2.4%	1.9%
LFS reflated	2.7%	2.9%	2.3%

(c)   Post-2003 COHORT

Year	2007	2008	2009
employment	2.1%	3.2%	3.3%
base GVA	2.3%	3.4%	3.3%
wage adjusted	1.6%	2.4%	2.3%
LFS reflated	1.9%	2.9%	2.7%

(d)   ALL MIGRANTS

Year	2007	2008	2009
employment	8.7%	10.1%	9.3%
base GVA	9.0%	10.1%	9.5%
wage adjusted	7.7%	8.8%	8.3%
LFS reflated	9.3%	10.6%	10.0%

Source: Calculations based on Cambridge Econometrics estimates of GVA and LFS employment estimates.

The figures reveal an increase in migrant contribution between 2007 and 2008 partially offset by a decrease in migrant contribution to GVA during 2008-09. Within lie two notable cohort effects. Firstly, we see a decreased role of migrants who arrived during the period 1992-2003. The decreased contribution of this group is particularly notable after 2008. Secondly, a lower contribution from post-2003 migrants based on the falling value of their economic output rather than decreased employment numbers. Numbers employed amongst this group increased even during the recession in 2008-09. However, the increasing tendency of this group to be concentrated in lower value occupations results in decreased overall estimated contribution to GVA. Finally it is noted that contribution from pre-1992 migrants has remained stable during the period. Moreover, as would be reasonably expected, this group has an industry and employment profile (as captured via GVA and earnings measures) more similar to that of UK-born workers, presumably reflecting the longevity in the UK labour market.

Finally, Table 8.4 analyses migrant GVA estimates in cross section by industry for each of the respective cohorts. These estimates are based on average figures for the period 2007 – 2009. The figures, presented by cohort, show the value of GVA generated by migrants in each sector as a percentage of total migrant (cohort) contribution. Thus higher GVA-value will generate higher contributions, as will higher levels of employment. The figures reveal highest contributions correlating with highest GVA sectors (see Table 8.1), but also reflect recent (post-2003) shifts in employment of migrants towards sectors such as Agriculture, Manufacturing and Transport, Storage & Communication industries. This finding is particularly interesting with reference to the first of these industries since it is acknowledged (see the previous report) that there may well be an under-reporting of migrants in Agriculture sector due to the seasonal nature of the work and the transient nature of employment. Figures of contribution to GVA in this sector may well be much higher than those stated here.

Table 8.4   Migrant contribution to GVA, analysed by Industry

Industry	Pre-1992	1992-2003	Post-2003	All Cohorts
A, B: Agriculture, etc	0.9	0.7	3.4	1.5
C, E: Mining, quarrying, energy	2.1	3.7	0.0	2.0
D: Manufacturing	17.8	18.5	31.7	21.5
F: Construction	4.1	2.8	3.2	3.5
G: Wholesale, Retail, & Motor Trades	12.3	13.0	12.9	12.7
H: Hotels & Restaurants	4.1	7.2	3.5	4.8
I: Transport, Storage, & Communication	9.7	10.7	18.1	12.1
J: Financial Intermediation	6.9	3.5	0.0	4.3
K: Real Estate, Renting & Business Activities Activities	15.5	18.2	11.8	15.3
L: Public Admin & Defence	5.1	1.4	1.8	3.3
M: Education	5.1	5.7	2.0	4.5
N: Health & Social Work	12.9	13.2	7.4	11.6
OPQ: Other Community, Soc. & Personal etc	3.3	1.5	4.2	3.1
Total	**100**	**100**	**100**	**100**

Source: Calculations based on Cambridge Econometrics estimates of GVA and LFS employment estimates.

8.5   Key points and comparisons with previous report

It is estimated that in 2009 people born outside the UK contributed approximately 10 per cent of the value of output in the East Midlands region. This estimate is based on the LFS reflated figure. This figure is only marginally higher than that reported for 2005, but has occurred in the context of the economic downturn, which has impacted on the volume and nature of migrant employment. Therefore continued growth in migrant contribution seems likely as the economy recovers during the coming years.

Migrant employment has continued to increase since estimates for 2005 provided in the previous report, with the exception of the last year when employment decreased slightly during 2009 due to the effects of the recession. Migrant contribution to GVA peaked in 2008 at 10.6 per cent. The continued increase in employment of post-2003 migrants, predominantly from A8 countries, despite the recession has been offset by the decrease in employment of 1992-2003 migrants.

There is a pronounced difference between patterns of contribution to GVA from recent (post-2003) migrants compared to previous cohorts. This group has notably different patterns of employment, and are more likely to be employed in Agriculture, Manufacturing and Transport/Communication industries than are previous cohorts. However, most notable is their different occupational profile, based in lower skilled employment, which is reflected in lower relative wages and in turn lower contribution to GVA once calculations are earnings adjusted. Efforts to improve migrant skills utilisation would help to enhance their contribution to GVA. Despite rising numbers of post-2003 migrants in employment, the shift in employment to lower skilled occupations amongst this group has partially offset the growth in contribution to GVA from this cohort.

9. Effect of the economic downturn and changes in numbers of migrant workers: future prospects for the East Midlands

- During the recession the number of migrant workers arriving in the East Midlands has declined. This section provides some indications of likely future prospects relating to migrant workers in the East Midlands, drawing especially on projected future trends in employment.

- The effect of recession on demand for migrant workers is estimated here by comparing the latest employment data with that just before the recession started. This analysis reveals that while the demand for migrant labour as a whole was sustained during the recession, the demand for migrants arriving after 2003 declined by 5-6 per cent during the period from the start of 2007 to the end of 2009.

- Industries where the employment of migrant workers is high have been deeply affected by loss of employment, particularly in the Manufacturing sector and in Transport and Storage. However, at the other end of the scale the regional (and UK) employment base has expanded in service sector occupations where demand for migrant employment is also relatively high, notably in the Accommodation, Food Services sector and in Administrative and Support Services. A mixed picture therefore emerges.

- Migrant employment is concentrated in industries with high labour turnover, and employment in these industries increased during the recession. If the prime determinant of demand for migrant workers is the availability of job opportunities, then it is likely to remain robust. On the other hand, the shift of employment from occupations demanding low skills to those demanding high skills may operate to reduce demand for migrant workers, who are still concentrated in lower-skilled occupations.

- Cambridge Econometrics' regional employment forecasts were used to estimate probable future changes in the demand for migrant workers. A steady increase in total employment is projected for the region, with a continued relative shift of employment from the manufacturing to the service sector. Existing shares of migrants in employment by industry were applied to projections of employment by industry to estimate future migrant employment. This suggests that after a decrease in 2009/10, followed by a recovery, the demand for migrants (and particularly for those with the characteristics of post-2003 migrants) will grow more slowly than overall employment.

- These projections suggest that there will be faster growth in employment (from 2009 to 2020) in jobs requiring higher level qualifications than in jobs with low qualification requirements. However, they reveal a large and sustained projected increase in employment in industries with high labour turnover (e.g. Distribution, Retailing and Hotels & Catering), which may be associated with higher demand for migrant workers. If the industrial pattern of demand for migrant labour changes, it is likely that the overall demand for migrant labour will increase more quickly.

- Uncertainty about the future numbers and characteristics of migrant workers emphasises the need to enhance the capability of the regional labour market and institutions to adapt to changing circumstances.

9.1 Introduction

Previous sections of the report have highlighted how changes in the economic and political context (at regional, national and international scales) have influenced the volume and characteristics of migrant workers entering the UK and arriving in the East Midlands. Difficulties in measuring migrant flows means that it is not possible to say precisely how

many migrant workers there are in the East Midlands, and more particularly, how many migrant workers have left.

Despite these uncertainties, there is merit in exploring possible future prospects for the East Midlands. Here the approach taken is to examine medium-term projections of labour demand in the East Midlands and what this might mean for changes in the number of migrant workers. It should be noted that this represents one possible scenario and that other economic and policy changes might mean that the future would look somewhat different. Nevertheless this approach provides a useful benchmark for consideration of future prospects.

9.2   Demand for migrant labour in the context of recession and recovery

Future employment prospects for migrant workers in the East Midlands will be influenced by changes in the overall level of demand for labour and in the composition of employment following the recession as a result of underlying structural changes as the regional economy shifts from a manufacturing to a service sector base. In this section the effects of the recession on employment change are outlined and the implications for the demand for migrant workers are contemplated. Prospects for migrant employment in 2015 and 2020, based on Cambridge Econometrics' forecasts of regional employment, are examined.

9.2.1   The effect of the recession and demand for migrant workers

As detailed previously in section 6, migrant employment in the East Midlands increased from an estimated 176,000 workers in 2007Q1 to 206,000 (approximately +20 per cent) at its peak in 2008Q1 after which it declined slightly to the latest estimate of 194,000 (2009Q3 figure); still up by more than 10 per cent in the period 2007Q1-2009Q3 despite the effects of economic downturn during the second half of that period.

However, against this backdrop is the changing composition on employment due to the effects of the recession which itself has implications for migrant employment since - as detailed previously – migrant employment is particularly concentrated in fairly narrow sectors of the economy. Table 9.1 shows the change in employment between 2007Q1– 2009Q3 by SIC2007 industry sector along with the percentage of jobs occupied by migrant workers in each sector. The data in the table is ranked in descending order according to the number of UK jobs lost (negative figures at the top of the table) or gained (positive figures at the bottom of the table). Note that the regional figures correlate closely with the national picture in terms of the effect of the recession, whilst the UK estimates are more reliable in terms of portraying the picture of structural change based on the LFS data.

Table 9.1 reveals that the effects of the economic downturn have been felt most in manufacturing and in the construction industry. During the period there has been a net loss of jobs in the following sectors in the region as well as in the UK:
- C: Manufacturing;
- F: Construction;
- G: Wholesale, Retail, Vehicles;
- H Transport and Storage;
- J Information and Communications;
- K Financial and Insurance.

However, net gains in employment in some sectors are also apparent, particularly in the public sector and in some areas of the service sector where the recession has been much less pronounced. There is an almost static picture in terms of overall change in employment. The downturn can best be thought of as effecting an economic restructuring rather than an across the board jobs cull.

With this in mind, the key question is how changes in the composition of demand for labour have affected potential demand for migrant workers. Table 9.1 allows consideration of this question, although in a crude fashion, by examining whether the worst affected sectors are those highest in migrant employment. The table shows that the effect on demand for migrants is not unambiguously positive or negative. Industries where the employment of migrant workers is high have been deeply affected by loss of employment, particularly in the Manufacturing sector and in Transport and Storage. However, at the other end of the spectrum the regional (and UK) employment base has expanded in service sector occupations where demand for migrant employment is also relatively high, notably in the Accommodation, Food Services sector and in Administrative and Support Services. A mixed picture therefore emerges.

Table 9.1   Analysis of change in employment by Industry

Industry Sector	Change in employment 2007Q1-2009Q3 (000s)		% migrant employment by Industry, East Midlands	
	UK	East Midlands	All migrants	Post-2003 Migrants
C: Manufacturing	-685	-39	13.4	6.2
F: Construction	-294	-30	4.6	1.2
G: Wholesale, Retail, Vehicle	-171	38	8.4	2.6
J: Information and Communication	-161	-6	10.5	2.4
H: Transport and Storage	-126	-17	14.7	5.8
O: Public Admin and Defence	-67	14	6.1	0.8
T: Households as Employers	-59	-8	0.6	0.0
B: Mining and Quarrying	-14	2	4.5	0.0
K: Financial and Insurance	-11	-12	5.8	0.1
E: Water Supply, Sewerage	5	2	8.0	3.8
L: Real Estate Activities	9	3	7.7	1.4
D: Electricity, Gas, Air Conditioning	21	2	7.6	1.7
U: Extraterritorial Organisations	32	4	0.0	0.0
A: Agriculture, Forestry, Fishing	36	4	8.4	5.8
S: Other Service Activities	66	-4	10.7	4.8
R: Arts, Entertainment, Recreation	67	1	7.4	3.8
I: Accommodation, Food Services	172	22	15.0	4.7
N: Admin and Support Services	181	3	14.6	5.8
Q: Health and Social Work	294	29	11.9	2.4
P: Education	319	31	5.8	0.6
M: Prof, Scientific, Technical Activ.	328	18	6.4	1.2
All jobs	**-60**	**55**	**9.7**	**3.1**

Source: LFS merged dataset
Note: The figures for % migrant employment are taken for the whole period 2007Q1-2009Q3

To clarify this picture, the changing pattern of demand for migrant labour during the downturn is estimated (i.e. estimating employment numbers each quarter relative to 2007Q1). In short, it is assumed that the 'demand for migrant labour' can be proxied based on patterns of employment before the onset of the recession. Taking the 2007Q1 base, the percentage of migrants in each industry in the East Midlands region is estimated (i.e.

mimicking Table 9.1 for this period only). The changes in employment demand by industry are then tracked forward each quarter, calculating the effect on demand for migrant labour, assuming that the underlying composition of migrant demand (i.e. by industry) remains unchanged. The results of this exercise are shown in Figure 9.1.

Figure 9.1   Estimates of demand for migrant labour, 2007Q1 – 2009Q3
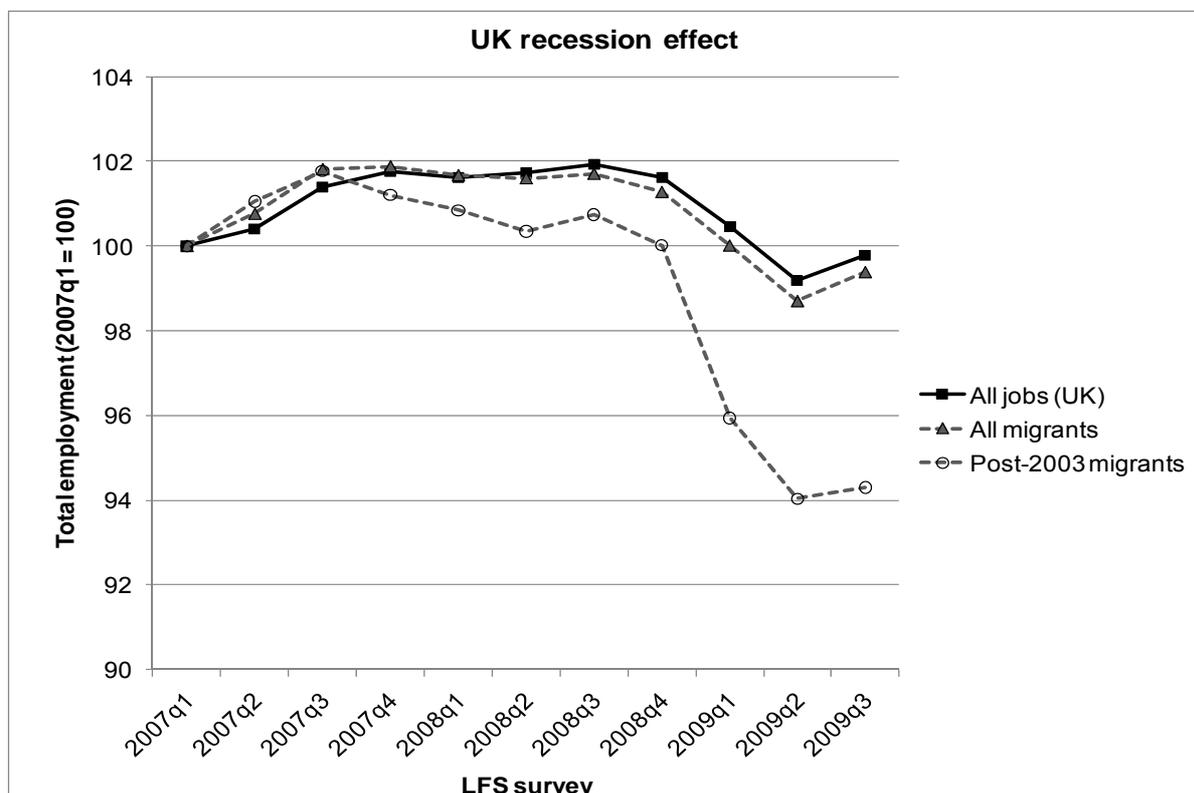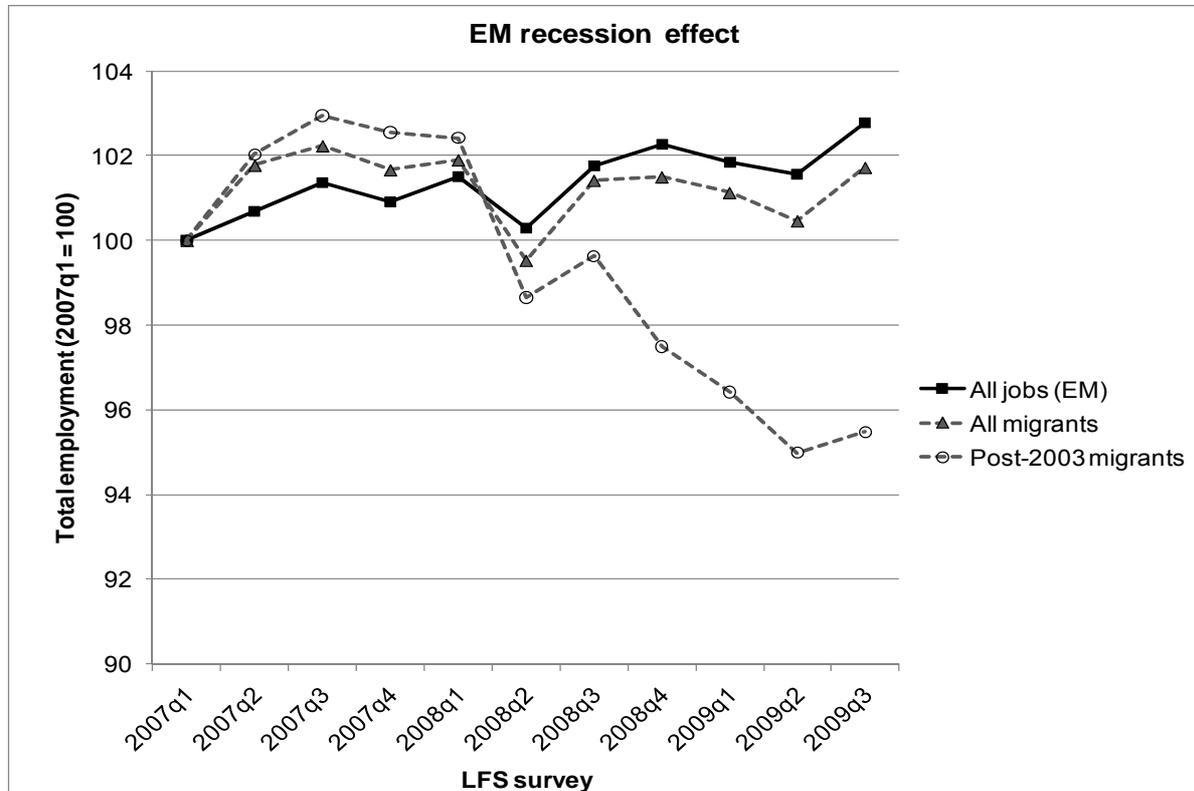
Note that the exercise is repeated twice: once using data on employment change for the East Midlands region (see upper panel: 'EM Recession Effect') and once using data on employment change for the UK as a whole (see lower panel: 'UK Recession Effect'). The latter exercise retains the East Midlands migrant figures for composition of employment but uses a larger and more reliable dataset for the relative change in employment for each industry. The lower figure is therefore likely to be the best guide, although the results are somewhat similar in each case.

The analysis is separated by all migrants and those arriving after 2003. The analysis reveals that whilst the demand for all migrant workers has held quite steady during the downturn, reflecting changes in all employment, there has been a notable reduction in the demand for post-2003 migrants. This is primarily due to the concentration of the latter group in the manufacturing sector where job losses have been severe. Estimates show a downward trend in demand for post-2003 migrants during 2008 and 2009. Based on what we understand to be the traditional base for migrant employment (i.e. implicit in the modelling of initial employment composition) we estimate that the demand for post-2003 migrant workers has declined by 5-6 per cent during the period 2007Q1 to 2009Q3, and by a slightly greater amount if we take the change from its peak in early 2008.

Two notable remarks regarding this analysis are:
- The changes will not necessarily be reversed in a symmetric fashion in an economic recovery following the recession. This is because changes in structure may be in part permanent rather than wholly transitory. To give a more precise handle on this, likely changes in future employment demands are investigated later based on Cambridge Econometrics forecasts.
- In relation to the composition of migrant employment, the analysis assumes that composition of migrant employment by industry is fixed (which is convenient as a modelling assumption). This may in fact change as migrant employment expands beyond its 'traditional' composition into a wider employment base; which one might hypothesise is particularly applicable to recent migrants (given the analyses presented in section 6 and the qualification levels of migrant workers relative to the entry level jobs in which many are employed).

This analysis has used base level employment composition as a means of estimating demand for migrant labour. Alternative indicators may be used. In this respect two other important aspects of migrant employment are now considered. These relate to job turnover (9.2.2) and highest qualifications of migrant workers (9.2.3).

9.2.2   Job turnover as a predictor of migrant demand

Migrant employment tends to be concentrated in higher turnover industries, where the churning of staff is high and employment opportunities arise more frequently. The analysis in Annex 18 confirms the positive association of the job turnover rate (the percentage of staff leaving each month) and migrant employment across an array of narrowly defined industry divisions.[124]

Using industry division, jobs were ranked from highest to lowest turnover and two discrete categories were identified for the purposes of this analysis.
- The top decile (9 of 88 industry divisions – e.g. 78: Employment Activities; 56: Food and Beverage Service Activities; 80: Security and Investigation Activities; 87: Residential Care Activities; etc) are identified as being '*highest* turnover jobs'.

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[124]   The association is investigated by minor group occupation and although weakly confirmed is less pronounced.

- The top quartile (22 of 88 industry divisions – e.g. 88: Social Work Activities without Accommodation; 63: Information Service Activities; 96: Other Personal Service Activities, etc, in addition to the 'highest turnover jobs' above) are identified as being '*high turnover jobs*'.

Using this list of jobs the change in the number of these jobs in the East Midlands is examined relative to a 2007Q1 base during the period covering the economic downturn to 2009Q3. The results are shown in Figure 9.2. The analysis reveals a notable increase in employment in high and highest turnover industries during and despite the recession.[125] If the key variable is the *availability* of opportunities rather than industry of employment per se, this analysis suggests that the demand for migrant employment has remained robust and continues to grow.

Figure 9.2   Employment in high turnover industries, East Midlands
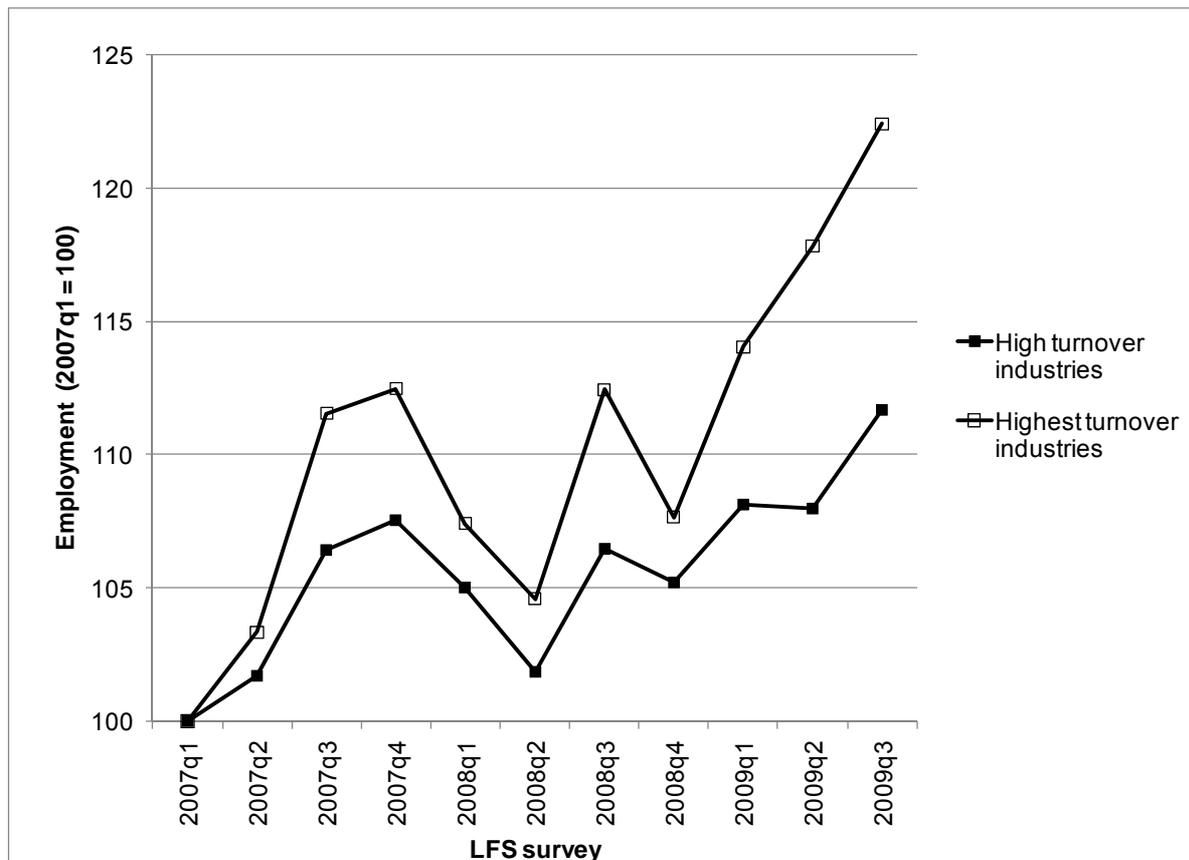
9.2.3   Changing employment demand by qualification level

The other recognised aspect of migrant work is the tendency of migrant employment to be concentrated in a bi-polar fashion in highest and lowest skilled areas (as was especially apparent in the previous report on migrant workers in the East Midlands). This is confirmed for UK data in Annex 19 which shows migrant worker by highest qualification (as an imperfect proxy for skill). However, the pronounced recent trend in migrant employment in the East Midlands towards lower skilled areas of work should be noted.

Figure 9.3 shows the change in employment in the East Midlands region by highest qualification group (those employed possessing qualifications at NVQ Level 4 and above)

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[125]   The analysis reveals increased employment in high turnover jobs. This should not be confused with increased job turnover per se.

and lowest qualification group (those employed possessing no formal academic qualifications). The trends confirm the long established trend towards greater numbers employed in higher skilled (higher qualification) jobs and lower numbers employed in lower skilled (lower qualification) jobs, which is likely to have been accentuated by the effect of decreases in employment in Manufacturing and Construction. At face value this trend does not necessarily bode well for demand for migrant workers in the region, unless reversed during the economic recovery, since, as noted previously, the region has increasingly attracted larger numbers of low skilled migrant workers.

Figure 9.3   Employment in highest and lowest qualification categories, East Midlands
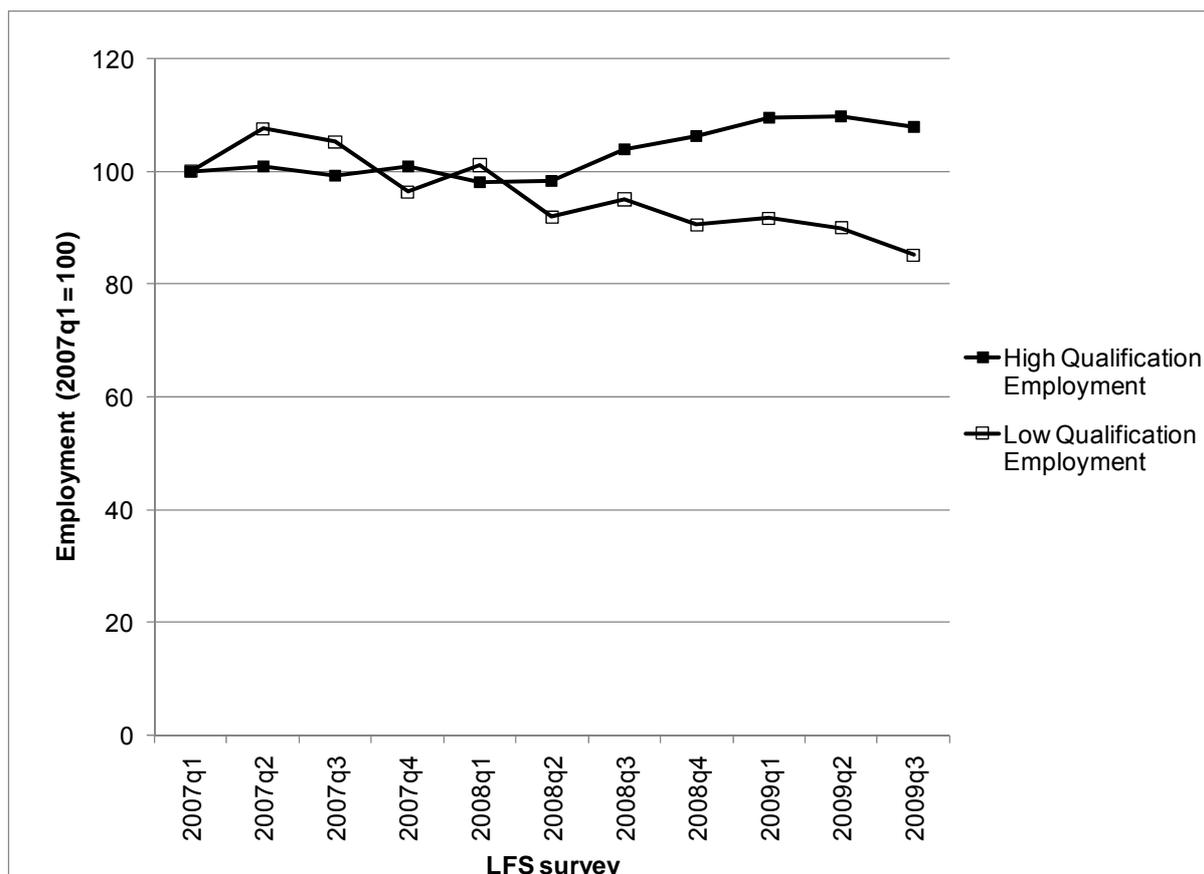
9.2.4   Projections of employment demand with special attention to migrant workers

Cambridge Econometrics produces a regular series of forecasts of regional employment, the latest of which available at the time of analysis relates to June 2009. These projections give an indication of the likely future evolution of employment based on a multi-sector model incorporating latest information regarding macro economic factors. The employment projections are available by industry (using a Cambridge Econometrics derivative of SIC1992 classifications). However, projections are not available for migrant employment. These are inferred separately in the analysis which follows.

The headline figures for the East Midlands region, through to 2020, show a steady projected increase in total future employment as the regional economy recovers from recession and continues its trend growth after 2010. Table 9.2 analyses the projections by broad industry category; (more detailed industry categories are used in the projections of migrant demand). The figures reveal a continued industrial restructuring with, notably, a continued decrease in

numbers employed in manufacturing being more than offset by the expansion of the service sector.

Table 9.2   Forecasts of East Midlands employment (thousands)

Industry	2007	2008	2009	2010	2011	2015	2020	change to 2015	change to 2020
Agriculture etc	31	44	42	40	39	33	26	-21%	-38%
Mining & quarrying	6	6	6	6	6	5	4	-17%	-33%
Manufacturing	311	298	275	270	272	263	248	-4%	-10%
Electricity, gas, water	13	13	13	13	13	11	10	-15%	-23%
Construction	169	173	149	141	142	151	159	1%	7%
Services	1641	1632	1602	1579	1589	1623	1685	1%	5%
Total employment	**2172**	**2166**	**2088**	**2048**	**2061**	**2086**	**2133**	**0%**	**2%**

Source: Cambridge Econometrics

Figure 9.4   Projections of demand for migrant workers, East Midlands
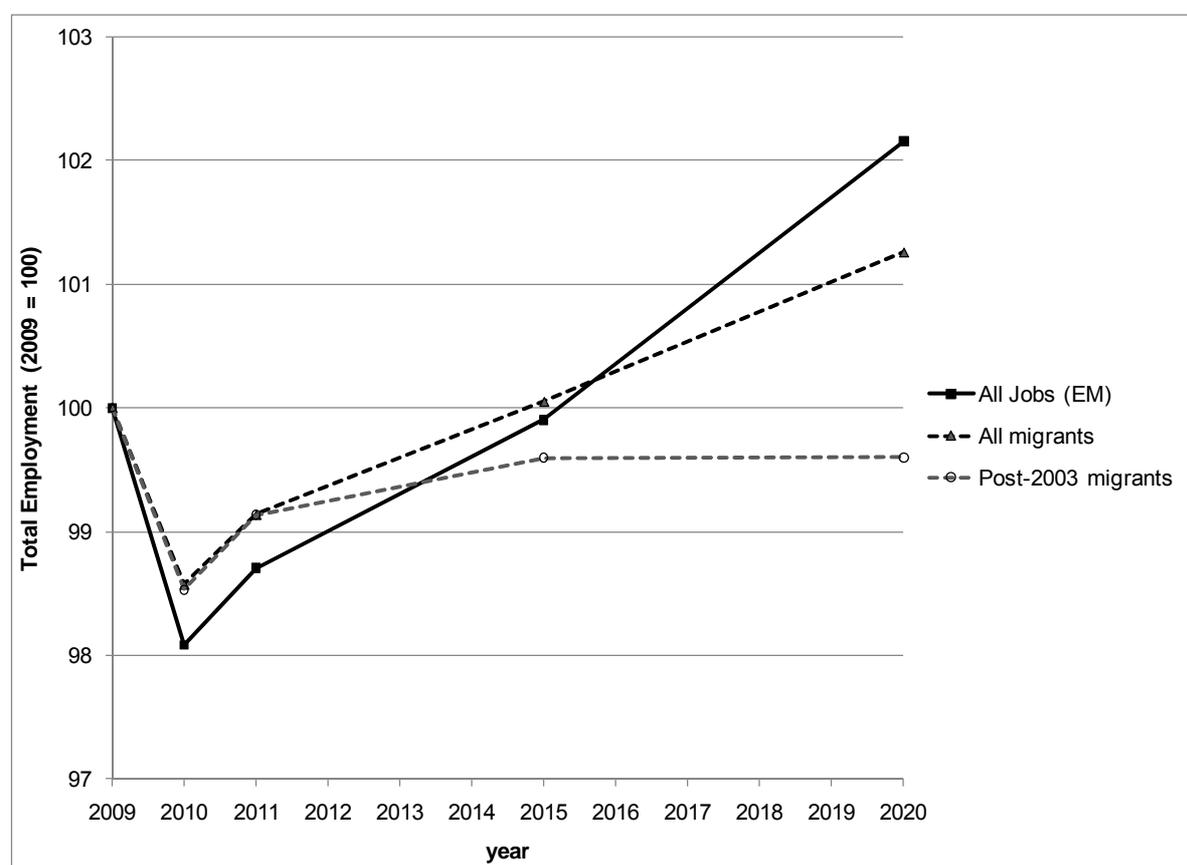
Source: Own calculations based on employment projections from Cambridge Econometrics

Using the detailed forecasts by industry, the demand for migrant employment can be projected forward based on the methods employed in section 9.2.1 which tracked changes in migrant demand from a historical perspective. As previously, taking the pre-recession regional composition on employment (vis-à-vis migrant versus non-migrant employment) as a base measure of industry demand, by observing changes in industry demand over time we can in turn infer the demand for migrant workers. This analysis provides a useful benchmark. However, it is noted that this is *ceteris paribus* and assumes no change in migrant employment structure. The results are shown in Figure 9.4. The trends reveal that the

projected demand for migrant employment, based on a 'traditional' employment structure for migrant workers, will be flat with a decrease in 2009/10 followed by a recovery and a flattening off thereafter. The demand for migrants, and particularly those with characteristics of post-2003 migrants, is projected to grow more slowly than overall employment.

Finally, the analyses in sections 9.2.2 and 9.2.3 are extended based on the derived demand for migrant workers, as based on patterns of job turnover and job qualifications. Figure 9.5 shows the profile of employment in all jobs through to 2020 along with projected employment in highest turnover jobs (using a highest quartile turnover list, constructed as previously using Cambridge Econometrics industry classifications). The chart also shows projected employment in highest qualification and lowest qualification employment *ceteris paribus* – i.e. purely based on changes in industry structure and assuming no trend changes in overall qualification structure in the working population as a whole.

Figure 9.5   Projections of employment demand by job type, East Midlands
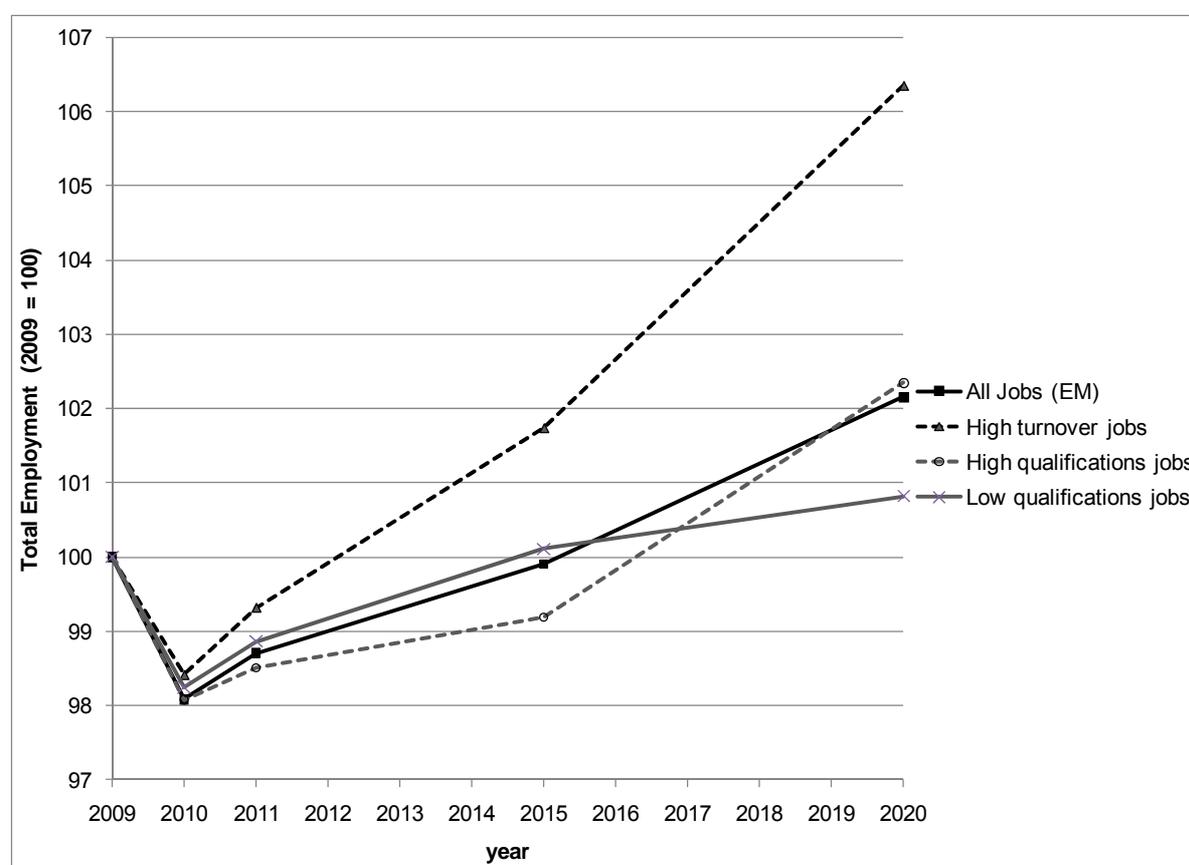
Source: Own calculations based on employment projections from Cambridge Econometrics

The results reveal a long run rate of increase in highest qualification jobs greater than that in lowest qualification jobs. However, the key finding is the large and continued projected increase in employment in high turnover industries. This is driven primarily by the continued expansion of roles in service sector employment, particularly in areas such as Distribution, Retailing and Hotels & Catering. Assuming that high turnover continues to be associated with higher migrant employment, and/or assuming that migrant employment will expand into these high opportunity-high turnover sectors, then the expansion of the service sector in the region is likely to be associated with higher demand for migrant workers.

9.3   Discussion

The analysis of changing employment facilitated by the Cambridge Econometrics' projections provides a useful benchmark for analysis. It should be treated as being indicative of employment trends vis-à-vis future migrant employment, and the figures (percentage changes in future employment) are indicative rather than definitive. Whilst central projections of total employment are robust, the employment of migrant workers is a relatively small and volatile percentage of a large total and projections are therefore much less robust and subject to error.

The central message from the forecasts is that, all things being equal, the projected stock of migrant workers is likely to be relatively flat, comparable with current employment levels. This is based on the key assumption that the composition of migrant employment by sector will remain constant. However, this assumption will not necessarily hold. Net changes in migrant demand mask a great deal of employment churning, with short-term employment contracts, together with migrant churning, as migrants return home and new migrants arrive. Therefore opportunities arising through job turnover are key to understanding the demand for migrant workers. The expansion of high turnover industries in the service sector where short term job opportunities are plentiful may well facilitate the expansion of migrant employment into industries where migrant employment is not necessarily concentrated at present. If migrant employment has greater penetration throughout the service sector, for example comparable to current levels of employment in manufacturing, then migrant employment can expand within a much larger and growing pool of employment. It is worth noting here that during recession there is evidence that migrant workers have moved into other sectors in the face of changing employment opportunities. This suggests that although migrant workers are more concentrated in some sectors than in others, and their immediate fortunes may depend on employment prospects in those sectors, they have also demonstrated considerable flexibility in moving to take up jobs in other sectors in the region (and beyond).

Finally, it should be noted that the analyses presented here do not take account of any changes in employer recruitment preferences and behaviour. As noted in previous sections, in general the evidence suggests that many employers regard migrant workers positively, but a marked change in employer preferences and/or behaviour could have implications for future prospects.

10. Conclusions and policy implications

Shortcomings in available data sources mean that it is difficult to make accurate estimates of the numbers of migrant workers in the East Midlands, and of changes therein (especially with respect to outflows). Hence there is an ongoing need for improvements in statistics in order to monitor flows of migrant workers (as traditionally defined), as well as looking at 'mobility' more generally – particularly since such changes may have important sectoral, occupational and local impacts.

Despite the data issues outlined above, evidence from a range of different sources indicates that the number of migrant workers arriving in the East Midlands has declined during the recession. Economic factors are clearly important in shaping migration flows. A particular coincidence of factors in the period from 2004 to 2006 – including a buoyant labour market in the region and the UK, exchange rates that were favourable for migrant workers and restrictions on free movement for migrants from Central and Eastern Europe in many of the larger EU economies – made the UK a particularly attractive destination for migrant workers. It seems unlikely that there will be such a culmination of factors in the future that will make the UK such an attractive destination for migrant workers vis-à-vis other competing destinations as was the case in the period from 2004 to 2006. Since this time 'opportunity differentials' that operated in favour of inflows of migrant workers to the UK have become less marked as a result of both economic and policy changes. Changing economic conditions mean that there is no longer a tight labour market: there has been a downturn in vacancies and an upturn in unemployment. However, it remains unclear whether the slowdown in the number of migrant workers coming to the East Midlands is a permanent feature or whether a return to employment growth in a slow recovery will see a revival in the demand for migrant labour. What should be borne in mind is that non-economic factors can play a significant role in migration flows alongside economic ones. For example, social networks play an important ongoing role in facilitating migration even when the rationales for initial economic triggers prompting labour migration dissipate.

For migration flows from outside the EEA managed migration policy will play an important role in shaping the volume and composition of migration flows. Rules regarding managed migration have become increasingly restrictive with the introduction of the PBS and the Conservative-Liberal Democrat Coalition Government has a policy to place an annual cap on such flows. No such controls can be placed on 'free movement' of migrants from elsewhere in the EU, but some of the key migration source countries in the EU (notably Poland) have introduced mechanisms to encourage return.

The results of the analyses of the employment of migrant workers in the East Midlands underscore concerns that some employers may be using successive waves of migrants to fill jobs at the lower end of the labour market and are under-utilising their skills. This may have detrimental effects for the migrant workers themselves, who stand to gain in monetary, self-development and employment terms from improved utilisation of their skills. Post-2003 migrants are disproportionately concentrated in low paid jobs and it appears that the recession has exacerbated slower and lower wage growth in migrant dense occupations at the lower end of the skills spectrum. Together with the increase in the relative pay penalty associated with being a migrant worker, this emphasises the importance of prioritising the enforcement of monitoring surrounding registration for NI/PAYE, the national minimum wage, and health and safety to ensure effective 'floors' in terms of the quality of employment among these vulnerable groups.

The disproportionate concentration of migrant workers at the lower end of the labour market also raises concerns for the longer-term development of the regional economy. A reliance on migrants to fill certain 'migrant jobs' at the lower end of a segmented labour market,

characterised by relatively low wages and under-utilisation of migrants' skills, implies a 'low road' model to competitiveness. Use of flexible and hard working migrant workers can help employers to keep costs down, but may also rest on a constant influx of willing workers to fill low skilled and low paid jobs. Such a model may not be sustainable in the longer-term and does not contribute very much to raising GVA. This is in contrast to a 'high road' model, drawing upon the skills and experience of migrant workers to address skill shortages and so enhance both skill supply and demand at regional level.

On the basis of the sectoral, occupational and sub-regional analyses conducted for this report it is evident that both migrant workers and UK-born workers have suffered job losses in recession. Sectors such as Manufacturing and Construction, as well as some of the less skilled occupations where migrant workers are concentrated, have been hard hit by recession. Yet overall migrant workers have proved resilient in moving into employment opportunities in other parts of the economy – particularly those characterised by higher labour turnover. This indicates that migrant workers may be less 'risk averse' than others in taking up employment opportunities – especially those where prospects are uncertain. As such, migrant workers continue to play an important lubricating role in the regional labour market.

As the East Midlands regional economy emerges from recession, employment is projected to return to growth over the period to 2020. Looking ahead, changes in the sectoral and occupational distribution of employment have implications for the changing demand for migrant workers but it is difficult to identify with certainty future patterns of migrant labour utilisation. At face value it may appear likely that the demand for migrant labour will only grow slowly. The long-term shift of employment from manufacturing to the services sector and from jobs requiring low level skills and qualifications to higher level skills and qualifications is projected to continue. Given the current industrial and occupational distribution of migrant labour (and especially of more recent migrants) this may act to reduce the demand for migrant labour. On the other hand, the projected increase in employment in industries with high labour turnover may sustain demand for migrant workers. If the industrial and occupational pattern of demand for migrant labour changes – and there is evidence that migrant workers have proved resilient and flexible in taking up available opportunities - it is likely that the overall demand for migrant labour will increase more quickly. So while managed migration is likely to be of continuing importance in attracting highly skilled labour and in meeting shortages in skilled occupations, it is likely that other migrant workers will continue to play a key role in those areas of employment typified by high turnover.

Elsewhere the term 'adaptive capacity'[126] has been used to consider the capacity of a region's economy, labour market, institutions, communities and service providers to build their capability to adapt positively changes in migration (i.e. changing volumes, patterns of flows, and migrant characteristics, preferences and behaviour, etc), as well as other economic, demographic, social and other factors.[127] Essentially adaptive capacity is about being receptive to change and sufficiently flexible to respond to the challenges and opportunities that it brings. Uncertainty about the future increases the importance of employers, service providers and institutions in the region (and constituent sub-regions) enhancing their capability to cope with a range of alternative possible futures.

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[126] Martin R. (2005) 'Thinking about Regional Competitiveness: Critical Issues', Background 'Think-Piece' Paper commissioned by the East Midlands Development Agency.

[127] Green A.E., Owen D., Jones P. with Owen C., Francis J. and Proud R. (2008) *Migrant Workers in the South East Regional Economy*, Report prepared for the South East England Development Agency and partners, Guildford.

ANNEXES

Annex 1:   Data sources on migration

- While international migration involves change of country of residence, there are several ways of defining who is a migrant.

- National and international statistical organisations define an international migrant as someone who has moved to another country and stayed there for more than 12 months.

- In the UK migrants may be described by their country of birth or nationality and may be further distinguished by date of entry to the UK.

- The various data sources available may count migrants where they live, as they enter or leave the country or via a registration scheme.

- No single data source provides a comprehensive picture of migration. It is therefore necessary to bring together data from a range of sources which measure different aspects of migration, define migration in different ways and cover different sections of the population.

- Censuses and surveys provide detailed data on migrants resident in the UK but provide no information on emigration.

- Administrative data sources provide information on in-migration for different population groups (particularly in the working age population) but provide no information on emigration.

- Only estimates of emigration and net immigration are available, derived from a small sample survey of migration flows.

This section considers definitional issues concerning who is counted as a 'migrant' and introduces key concepts used in migration analyses. It goes on to provide an introduction to migration data sources and to outline some of the strengths and weaknesses of key data sources.

Definitional issues

'Migration' is a term that is in widespread use, but is one that is inconsistently defined. Hence, there are several different definitions of 'migrant'. The United Nations (UN) definition of an international 'migrant' is someone who changes his or her country of usual residence for at least a year. However, from a labour market perspective there is also considerable interest in workers who might come to the UK for a shorter period and so who are not encompassed within the UN definition.[128]

Key concepts that have been used in migrant definitions are 'country of birth', 'nationality' (according to citizenship) and 'date of arrival in the UK' (i.e. how recently an individual arrived[129]). The ONS defines migrant workers to the UK by country of birth (on the basis that this cannot change over time, whereas nationality can change[130]). According to the Annual

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[128] The UN definition of a 'short-term migrant' is a person who moves to a country other than that of his or her usual residence for a period of at least three months but less than a year (12 months) except in cases where movement to that country is for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimage.

[129] 'Date of arrival' raises the issue of whether an individual should remain categorised as a migrant as their length of stay increases.

[130] Where an individual holds more than one passport, nationality is determined by the individual.

Population Survey (APS) in 2008 the estimated proportion of the resident population of the East Midlands born outside the UK was 8.6 per cent (up from 6.2 per cent in 2004) while the estimated proportion with non-British nationality was 5.1 per cent; the respective shares for Great Britain were 11.2 per cent and 6.9 per cent. This illustrates that the estimated number of migrants changes in accordance with the definition used. Different data sources use different definitions, so raising issues of comparability across sources. In accordance with the 2007 study of Migrant Workers in the East Midlands labour market 'country of birth' (together with year of arrival in the UK) is used as the preferred definition (where possible) in this report. It is this definition that is used in analyses using Labour Force Survey (LFS) data.

Migration concepts

Three specific concepts, which were referred to in section 3, are of particular relevance for interpreting migration data:

- *Stocks* – measure the number of people resident in an area.
- *Flows* – measure how many people are moving from one place to another; (these flows can be international [e.g. from outside the UK to the UK or from the UK to a destination outside the UK], or internal [e.g. from London to the East Midlands or from one place in the East Midlands to another in the East Midlands]).
- *Registrations* – measure the number of people applying for or being granted permission to work or stay in the UK.

Different data sources cover different concepts.

Introduction to migration data sources

At the outset it is important to note that no single data source provides comprehensive information on migrants at national, regional or local levels. Moreover, unlike some other EU countries, the UK has no population registration system. Inadequacies in data sources have been recognised by Government and the Office for National Statistics (ONS) is working towards improvements in the timeliness and robustness of migration and population statistics through the 'Improving migration and population statistics' (IMPS) programme.

Currently, it is necessary for users to refer to a variety of sources to gain as full a picture as possible; (note that it is not straightforward to aggregate across data sets because the same individuals may appear in different data sets). Official data from censuses and surveys and from government administrative sources (such as the National Insurance numbers) are key sources of information on regional and local migration because a standard methodology is adopted to provide a consistent overview across local areas. This enables comparisons to be made between local areas.

Strengths and weaknesses of key migration data sources

This sub-section summarises the strengths and weaknesses of the key migration data sources used in this report. Hence, not all data sources providing information on migrants are covered here.[131]

A broad distinction is made between censuses and survey sources on the one hand, and administrative data on registrations on the other.[132]

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[131]   Examples of sources not included are the International Passenger Survey which measures flows of people entering and leaving the UK; the ONS estimates of Total International Migration (TIM) which estimates long-term immigration and emigration at a national level and the Census of Population, which provides the most comprehensive source of data on the characteristics of the population at small area level, but only for snapshots ten years apart.

Censuses and surveys are key sources of population data. Census and survey sources only find international migrants who have stayed long enough to participate in the census or survey, and both tend to be poor at including the most mobile populations. They cannot identify migrants who have left the UK.

- The decennial *Census of Population* is the most comprehensive source of data on the characteristics of the population. It strives to achieve complete coverage of the UK population and it can yield detailed socio-economic information for small geographical areas. However, since the latest data is for 2001 this source is not used here; (however, the 2011 Census of Population should in due course provide a valuable updated snapshot of stocks of migrants at the micro area level and their characteristics).

- The **Labour Force Survey (LFS)** is a household survey undertaken on a residence basis. It is a key data source for generating data on migrants and their characteristics, enabling identification of migrants on the basis of country of birth, nationality and time of arrival in the UK. The LFS is a key source for examining migrants (especially labour migrants) to (but not from) the UK at national and regional levels and for examining their distribution and characteristics vis-à-vis other workers. Hence, it is an appropriate source for generating measures of 'migrant density' of sectors and occupations (see section 7). Note that it is necessary to 'pool' data across surveys in order to generate sufficiently large samples to enable more detailed disaggregations. The LFS does not cover communal establishments (except for NHS housing and students in halls of residence); this means that coverage of workers in sectors such as agriculture is likely to be limited. Members of the armed forces are only covered if they live in private accommodation. Prior to 2008 those born outside the UK who had not been resident in the UK for 6 months were excluded from the sample,[133] but since this time all residents born outside the UK are included in the sample population provided that they consider the sampled address to be their main residence. Nevertheless, it remains the case that coverage of short-term migrants is weaker than that of long-term migrants. Analyses for smaller sub-groups of the population are less reliable than those for larger sub-groups. It is necessary to 'pool' data across surveys in order to generate sufficiently large samples to enable more detailed disaggregations.

  The *Annual Population Survey (APS)* is a 'boosted' version of the LFS which can yield similar data for (at least larger) local authority areas on a rolling annual basis. This source may be used to provide information on the estimated non-UK born population and the estimated non-British nationality population as proportions of the resident population.

Administrative sources provide up-to-date information at local level on some migrants as they register to comply with particular regulations. Most of the administrative data sources only record registration onto a scheme and do not identify when a person leaves the UK (i.e. there is no information on out-flows). These sources are useful in providing a profile of migrants and hence are used in section 5.

- ***National Insurance numbers (NINos) allocated to adult overseas nationals entering the UK*** provide information on all non-UK nationals working legally;[134] the data source, compiled by the Department for Work and Pensions, provides no information on illegal working. Information is recorded on age, gender and nationality on an annual basis at local authority level (predominantly on a residence basis).[135] The number of NINos allocated to overseas nationals in a local authority area should provide a good indication

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132 For further details see: Green A.E., Owen D.W. and Adam D. (2008) *A Resource Guide on Local Migration Statistics*, Report prepared for the Local Government Association, London. http://www.lga.gov.uk/lga/aio/1308026
133 This means that there is small inconsistency in coverage of migrants by the LFS/APS.
134 NINos are required by all non-UK nationals for employment (including self-employment), benefit and tax purposes in the UK.
135 NINo data reflect location at registration; this may not be where a migrant settles subsequently.

of the number of overseas persons aged 16 years and over (from all parts of the world[136]) starting to work. Note that the statistics refer to date of NINo registration, not to date of arrival in the UK; (in some cases there may be a delay between date of arrival in the UK and date of registration). However, this data source provides no information on out-migration.

- **The Worker Registration Scheme (WRS)** covers citizens of the A8 countries (i.e. the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia) which became Member States of the EU in May 2004 who register to work[137] as employees for at least a month in the UK. Self-employed workers are not required to register and an unknown number of migrant workers do not register.[138] The WRS provides data on a quarterly basis on nationality, age, gender, wage rate, sector (using a non-standard industrial classification), occupation (information of the largest occupations in the area using a non-standard occupational classification), hours worked, whether work is temporary or permanent, planned duration of stay and dependants. The data are available on a quarterly basis at local authority level. These data are used for profiling migrants in section 4. In summary, the WRS information provides a broad measure of in-migration of A8 nationals working as employees in the UK. The numbers recorded are likely to represent an under-estimate of total in-flows of A8 migrant workers because the self-employed and those who choose not to register and who are working illegally are not covered. Individuals are not required to deregister: some of those included within the WRS count will have left the employment for which they registered and some are likely to have left the UK. Hence the data cannot be used to make assumptions about how many people are working in an area at any one time.

- **A2 migrants** (from Bulgaria and Romania) are not covered by the WRS. Some statistics are also published on A2 workers from Bulgaria and Romania. Until May 2009 these were published in a quarterly report entitled *Bulgarian and Romanian Accession Statistics*, but since that time the statistics are included in a quarterly report published by the Home Office and ONS entitled *Control of Immigration: Quarterly Statistical Summary, United Kingdom.*

- The **Seasonal Agricultural Workers Scheme (SAWS)** allows workers from outside the EEA to enter the UK for up to six months to undertake seasonal agricultural work for farmers and growers. From January 2008 the scheme was exclusively for citizens of Bulgaria and Romania. In 2007 reference was made to local data from SAWS obtained via a Freedom of Information request. A request for local data for this project was rejected but following further negotiations some regional level information has been supplied (this is presented in Annex 3, along with some commentary on migration from Bulgaria and Romania).

- As noted in section 2, prior to the introduction of the **PBS**, migrant workers from outside the EEA were covered by *work permits*. The previous report made use of information on the number of currently active work permit applications granted in each local authority district and the *year* in which they were made obtained via a Freedom of Information request. The variables that were supplied for work permits were gender, age, sector (using a non-standard industrial classification), occupation (using a non-standard occupational classification) and nationality. Some similar information has been supplied on **work permit approvals** to 2008 for this report. It was hoped to access PBS data for use in this project, but despite extensive enquiries[139] no such data from this source was

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[136] The fact that this data source covers all parts of the world is significant because some of the other registration sources cover some countries only.

[137] There is a charge to register. This was initially due to end in April 2009, but charges were subsequently extended.

[138] The numbers of individuals not registering may vary between regions and local areas.

[139] Enquiries were made to the Local Government Association, to the Migration Advisory Committee and via the ONS Regional Statistician to IMPS staff at ONS.

forthcoming. There is no means of providing detailed statistical outputs from the PBS. Currently, the UK Border Agency (UKBA) is only able to produce top level figures, which involves manually pulling together data across a range of systems. This leaves a gap in the available data.

Conclusion

No single data source provides a comprehensive picture of international migration. It is therefore necessary to bring together data from a range of sources which measure different aspects of migration, define migration in different ways and cover different sections of the population.

The data presented in this report is derived either from surveys of the entire population, from which migrants are identified by their country of birth or nationality, or by administrative data derived from the process of registering to be able to work. Unfortunately, none of these sources record a migrant leaving the country, and thus while it is possible to produce a detailed picture of in-migration and of the characteristics of migrants who have stayed long enough to be surveyed, little is known about migrants who have left again (or indeed British-born people who emigrate). Only estimates of emigration and net immigration are available, derived from a small sample survey of migration flows.

Annex 2:   International student migration   *(supporting section 2)*

Universities UK found that the number of international students in the UK almost doubled between 2000 and 2006, with a particular increase in the numbers coming from outside the EU. In 2007/08, 229,640 students came from outside the EU, compared with 117,290 in 1998/99.[140] In 2007, 25 per cent of immigrants in Britain were students, compared to 20 per cent in 2002[141]. The UK Government introduced new measures to encourage international student migration in 1999. This was seen as a way of providing revenue for higher education and proposed expansion in UK student numbers without increasing taxes. In recognition of skills shortages in engineering and the sciences, an increased focus on the retention of international students in the UK after they graduated became evident in policy making from 2004 onwards[142].

China is the most significant sending country for the UK, followed by India and the USA. Analysis of the Futuretrack[143] dataset shows that amongst 2006 international student applicants studying at Higher Education Institutions in the East Midlands, 62 per cent are from outside the EU. The subjects most frequently studied by international students are business and administration (19.8 per cent) and engineering and technologies (15.4 per cent). Students from outside the EU were particularly likely to be studying engineering and technology subjects, with 21.2 per cent doing so, compared to only 6.3 per cent of non-UK EU students. The range of subjects studied by non-UK EU students is slightly more diverse, with relatively high proportions studying social sciences (14.5 per cent) and creative arts and design (10.9 per cent).

In 2009, a Points-Based System (PBS) was introduced (as outlined in section 2), with points based on holding an offer from a recognised educational institution (a Highly Trusted Sponsor) and being able to demonstrate that the applicant was able to pay their course fees and living expenses while in the UK. The Home Office stated that the PBS enabled them to respond quickly to changing circumstances, and when necessary to raise the bar students had to meet to come to the UK. Problems with the PBS resulted in delays in awarding visas to students in 2009, and further plans to tighten rules on student migration, announced in February 2010 are expected to severely reduce the numbers of students coming from outside the EU. Nationals from the EU do not need to apply under the PBS in order to study in the UK.

International students can make an important contribution to regional economies and the UK economy. They contribute around £4bn a year in fees according to the UK Council for International Student Affairs (UKCISA), which HESA suggests represents more than 8 per cent of the total income of UK universities.[144] In 2007, the Home Office stated that international students boosted the UK economy by almost £8.5bn a year when considering not only their course fees, but also their spending on living expenses, suggesting that each

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[140]   BBC News (2009) 'UK rise in international students 24th September 2009'. *BBC News* http://news.bbc.co.uk/go/pr/fr/-/1/hi/education/8271287.stm

[141]   Morris, N. and Russell, B. 'Overseas students boost UK economy by £8bn a year'. *The Independent*. 16th November 2007.

[142]   Findlay, A.M. and Stam, A. (2006) *International student migration to the UK: Training for the global economy or simply another form of global talent recruitment?* Paper prepared for a meeting on 'International competition for S&E students and workers', Institute for the Study of International Migration, Georgetown University, Washington, 30-31, March 2006, pp 6-7.

[143]   Futuretrack is a survey conducted by the Warwick Institute for Employment Research (IER) and funded by HECSU tracking 2006 UCAS applicants.

[144]   Williams, R. and Shepherd, J. (2009) Thousands of overseas students unable to enter UK'. *The Guardian* 14th October 2009.

foreign student was worth more than £15,000 per year to the UK in fees and living expenses.[145]

Around half of all international students undertake paid work at some point when they are in the UK, although UKCISA[146] report that employers' lack of understanding of the rules on employing international students means that they often find it hard to find employment. Under the Tier 4 (General) category, international students are allowed to work part-time during term time and full-time during vacations, but they must not fill a full-time permanent vacancy. Recent changes in the rules concerning employment of international students are likely to affect the impact international students have on the economy of the East Midlands. International students who applied for a visa on or before 2nd March 2010 are permitted to work for 20 hours per week during term-time, but those who applied after 3rd March 2010 who are studying for a course that is below UK degree level and not a Foundation degree are limited to working 10 hours per week. Students studying for less than 6 months are not allowed to bring dependents, and those who are studying on courses below degree level for more than 6 months are allowed to bring dependents, but their dependents are not allowed to work unless they qualify in their own right. The new system also raised the minimum English-language requirement.

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[145] See http://www.independent.co.uk/news/uk/home-news/overseas-students-boost-uk-economy-by-pound8bn-a-year-400587.html

[146] UKCISA (2004) *International Students in UK universities and colleges: Broadening our Horizons – report of the UKCISA survey, 2004.*

Annex 3: Bulgarian and Romanian migration – including information from SAWS *(supporting discussion in section 2 and Annex 1)*

As outlined in section 2, Bulgaria and Romania (the 'A2' countries) joined the EU in January 2007. Unlike the A8 countries of Eastern Europe, the UK Government maintained substantial controls on their access to the UK labour market.[147]

Trends in migration of Bulgarian and Romanian people can be identified through analysis of data on work permits for the Sector-Based Schemes, and applications and awards of Accession Worker Cards and Seasonal Agricultural Work Cards. This information was obtained for the East Midlands Government Office Region as a whole via a Freedom of Information request to the UK Border Agency.

Table A3.1:   Work Permit - Accession Worker Cards (A2) Applications Approved by Nationality 1 January 2007 - 31 December 2009, for the East Midlands

	2007	2008	2009	Total
Applications				
Bulgaria	80	30	20	135
Romania	135	75	70	280
Total	*220*	*105*	*90*	*415*
Approvals				
Bulgaria	30	25	15	75
Romania	60	45	50	155
Total	*90*	*70*	*70*	*230*
Approvals per 100 applications				
Bulgaria	37.5	83.3	75.0	55.6
Romania	44.4	60.0	71.4	55.4
Total	*40.9*	*66.7*	*77.8*	*55.4*

Source: FOI request to UKBA
Note: All figures are rounded to the nearest 5; therefore the sum of values presented does not always match the 'Total'.

The number of applications for Accession Worker Cards by people from the A2 countries wishing to work in the East Midlands is quite small – only 415 in total over the period 2007 to 2009 (see Table A3.1). The number of applications declined from 220 in 2007 to 105 in 2008 and 90 in 2009, more rapidly for Bulgarians than Romanians. The number of approvals fell more slowly, from 90 in 2007 to 70 in 2009. Overall, approvals represent just over half the number of applications. Approvals as a percentage of applications have increased from 2007 to 2009, so that in 2009 approvals represented 77.8 per cent of applications. The increase was faster for Bulgarians than Romanians.

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[147]   The Accession (Immigration and Worker Authorisation) Regulations 2006

Table A3.2: East Midlands Seasonal Agricultural Work Cards Approved by Nationality for Planned Start Dates between 1 January 2007 and 31 December 2009 for the East Midlands

Nationality	2007	2008	2009	Total
Bulgaria	365	530	710	1,600
Romania	220	440	695	1,350
Total	*580*	*970*	*1,400*	*2,950*

Source: FOI request to UKBA

Note: All figures are rounded to the nearest 5; therefore the sum of values presented does not always match the 'Total'.

The main route of entry to work in the East Midlands is the Seasonal Agricultural Worker Scheme (SAWS). The number of work cards approved for A2 nationals under this scheme nearly trebled, from 580 in 2007 to 1400 in 2009. The increase was faster for Bulgarians than Romanians. The SAWS scheme is for temporary work, and hence a large percentage of those admitted under the scheme will have left the UK.

Table A3.3: Work Permit (Sector Based Scheme) Applications Approved by Nationality 1 January 2007 - 31 December 2009 for the East Midlands

Nationality	2007	2008	Total
Bulgaria	30	10	40
Romania	5	15	20
Total	*35*	*25*	*60*

Source: FOI request to UKBA

The number of A2 nationals obtaining work permits to work as part of a Sector Based Scheme was very small – only 60 in total before the work permit system ended in December 2008. Bulgarians were more likely than Romanians to apply for a SBS work permit in 2007, but this pattern was reversed within a smaller total in 2008.

Because of the small numbers of A2 nationals applying for work permits or work cards, it was not possible to obtain data for areas within the region.

Annex 4:   ONS Total International Migration estimates – data for the East Midlands *(supporting section 4)*

The Total International Migration (TIM) estimates use the UN definition of an international migrant as someone who has moved between countries and remained in the destination country for at least one year. Thus the trends revealed by this data set may not be consistent with other sources which do not take the duration of migration into account. International immigration and emigration more or less cancelled each other out until 2000, when net immigration started to increase, reaching a peak after 2004. The numbers of immigrants more than trebled during this period, while the number of emigrants increased more slowly (see Figure A4.1).

Figure A4.1:   ONS estimates of Total International Migration to/from the East Midlands, 1991-2007

Total International Migration
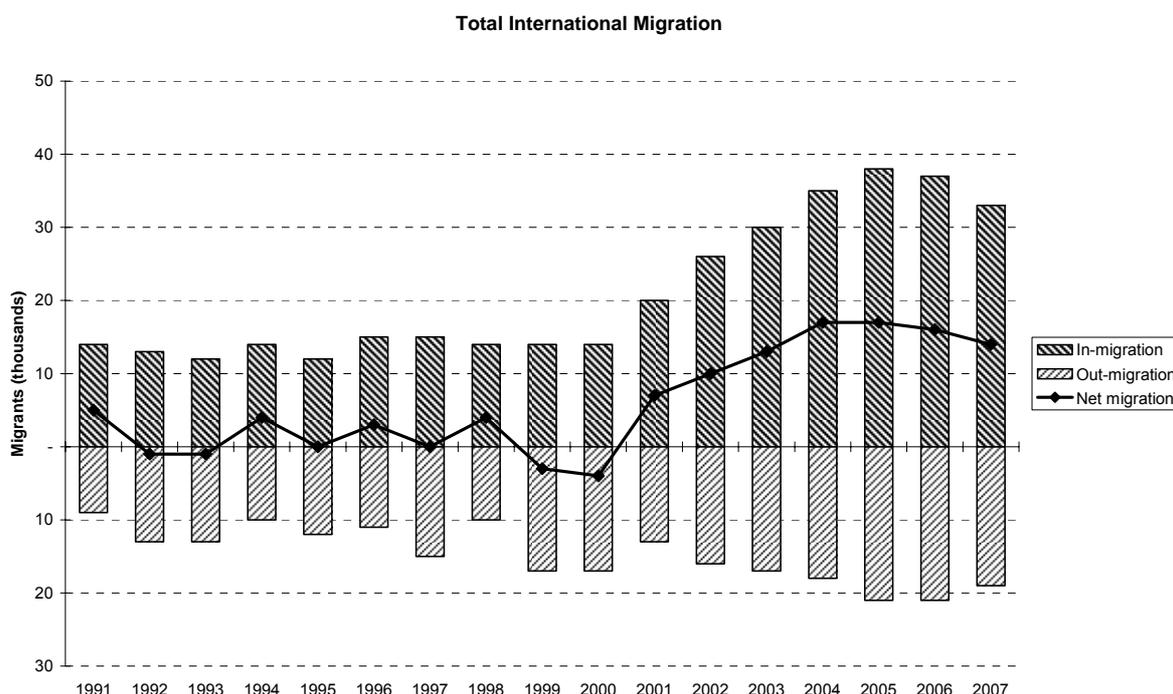
Source: ONS TIM estimates

The population of the East Midlands is estimated by ONS to have increased by 5.8 per cent between 2001 and 2008 (Table A4.1). The largest influence on the increase in population for the region was net internal migration (i.e. the difference between people migrating to the region from other regions and nations of the UK and people leaving for other parts of the UK), but net international migration had an influence almost as strong and natural change (the difference between the number of births and deaths) also increased the region's population.

At the local authority area scale, there were marked differences in the influence of these three factors upon population change. All local authority areas gained population due to natural increase, most rapidly in the more rural parts of the region. The major cities (Derby, Leicester, Nottingham and Northampton lost population to other areas of the UK, rates of population increase due to net internal migration were relatively low in the hinterlands of the major cities, while population increase was fastest in the rural areas, especially in Lincolnshire and more remote areas such as East Lindsey.

126

Table A4.1: ONS estimates of population change and Total International Migration for local authority areas in the East Midlands, 2001-8

Area	2001 Mid-year estimate	Population change 2001-8	% population change 2001-8	% natural change 2001-8	% change due to internal migration	% change due to inter-national migration
Derby UA	230.7	8.5	3.7	2.5	-1.8	2.9
Leicester UA	282.8	11.9	4.2	4.7	-8.3	7.6
Nottingham UA	268.9	23.5	8.7	2.9	-5.0	10.6
Rutland UA	34.6	4.6	13.3	0.6	7.5	4.3
Amber Valley	116.6	4.5	3.9	-0.2	4.5	-0.3
Bolsover	71.9	2.4	3.3	-0.4	3.8	-0.1
Chesterfield	98.8	2.0	2.0	-0.7	2.9	-0.3
Derbyshire Dales	69.4	1.3	1.9	-1.9	3.6	0.0
Erewash	110.1	1.2	1.1	0.5	0.5	-0.1
High Peak	89.4	3.8	4.3	0.6	3.2	0.3
North East Derbyshire	96.9	1.3	1.3	-1.7	3.1	0.0
South Derbyshire	81.7	11.0	13.5	2.2	10.2	0.7
Blaby	90.4	3.0	3.3	2.0	1.1	-0.6
Charnwood	153.6	13.5	8.8	1.2	3.9	3.6
Harborough	76.8	6.0	7.8	1.4	6.9	-0.7
Hinckley and Bosworth	100.2	5.0	5.0	0.8	3.9	0.5
Melton	47.9	1.4	2.9	0.4	2.1	0.8
North West Leicestershire	85.7	5.1	6.0	1.2	5.0	-0.2
Oadby and Wigston	55.8	1.4	2.5	0.0	1.8	0.4
Boston	55.8	2.5	4.5	-0.5	3.4	1.4
East Lindsey	130.7	10.3	7.9	-3.3	10.9	0.4
Lincoln	85.6	2.8	3.3	1.3	-0.4	1.6
North Kesteven	94.4	11.7	12.4	-0.6	11.3	1.1
South Holland	76.7	6.7	8.7	-1.8	9.8	1.0
South Kesteven	124.9	7.1	5.7	0.5	4.0	1.4
West Lindsey	79.6	9.3	11.7	-1.4	12.4	0.6
Corby	53.4	2.4	4.5	2.2	2.1	0.6
Daventry	72.0	7.7	10.7	2.2	5.1	3.1
East Northamptonshire	76.8	9.4	12.2	1.7	9.9	0.9
Kettering	82.3	8.4	10.2	2.4	7.2	1.0
Northampton	194.4	10.8	5.6	3.8	-2.7	4.3
South Northamptonshire	79.5	11.5	14.5	2.4	8.4	3.4
Wellingborough	72.5	3.9	5.4	2.2	0.8	1.7
Ashfield	111.5	5.0	4.5	0.5	4.0	-0.2
Bassetlaw	107.8	4.4	4.1	-0.4	3.4	0.5
Broxtowe	107.5	4.5	4.2	0.0	-0.9	4.9
Gedling	111.8	0.3	0.3	0.1	0.4	-0.3
Mansfield	98.1	2.5	2.5	0.5	1.9	0.1
Newark and Sherwood	106.4	6.9	6.5	-0.2	6.3	0.2
Rushcliffe	105.8	4.0	3.8	0.8	2.3	0.6
East Midlands	*4,189.7*	*243.5*	*5.8*	*1.1*	*2.4*	*2.2*

Source: ONS estimates of population at June 30th each year, Total International Migration and of the components of population change.

N.B.: The migration and natural change estimates are the sum of annual estimates of the components of year-on-year population change.

Net international immigration had its greatest influence on population change between 2001 and 2008 in the larger cities – notably Nottingham, Leicester and Northampton and in some of the neighbouring local authority districts, such as Charnwood, which have substantial ethnic minority populations. Its influence was also most strongly felt in southern and eastern Lincolnshire and Northamptonshire. In contrast, there was a net loss of international migrants in southern Leicestershire and in northern Derbyshire and Nottinghamshire (Figure A4.2).

Figure A4.2:   The impact of net international migration, 2001-8
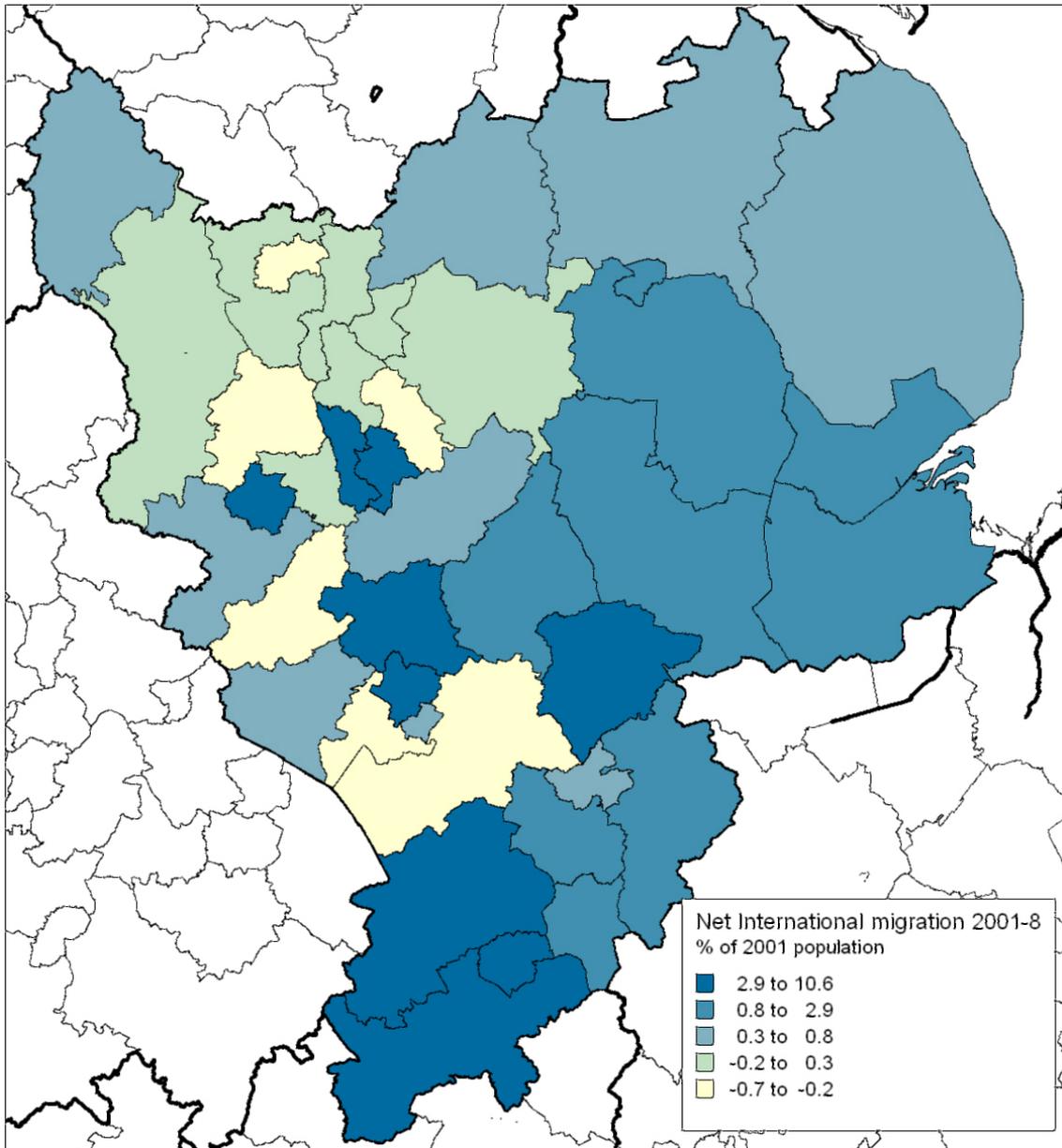
Source: Total International Migration and of the components of population change, ONS.

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Annex 5:   NINo allocations to overseas nationals and people in employment, 2004-8 *(supporting section 4)*

Local authority area	Overseas NINo allocations							Overseas NINo allocations as a percentage of 16-59 year olds in employment					
	2004	2005	2006	2007	2008	2009	2004-9	2004	2005	2006	2007	2008	2004-9
Derby	1370	2760	2500	3660	3520	1550	15360	1.4	2.8	2.4	3.5	3.3	3.0
Leicester	4810	7530	7120	7350	5730	2640	35180	4.2	6.4	5.6	5.8	4.8	5.8
Rutland	70	110	110	120	90	50	550	0.4	0.7	0.7	0.7	0.5	0.6
Nottingham	2880	4510	4680	6220	5050	2550	25890	2.7	3.7	3.7	5.0	3.9	4.2
Amber Valley	90	180	230	280	180	90	1050	0.2	0.3	0.4	0.5	0.3	0.4
Bolsover	60	120	230	230	160	90	890	0.2	0.4	0.7	0.7	0.5	0.6
Chesterfield	180	220	240	330	210	90	1270	0.4	0.5	0.5	0.7	0.4	0.6
Derbyshire Dales	90	210	200	270	150	80	1000	0.3	0.6	0.7	0.9	0.5	0.6
Erewash	120	210	230	300	200	70	1130	0.2	0.4	0.4	0.5	0.4	0.4
High Peak	100	160	200	290	190	100	1040	0.2	0.4	0.4	0.6	0.4	0.5
NE Derbyshire	80	110	110	110	120	60	590	0.2	0.3	0.2	0.3	0.3	0.3
South Derbyshire	100	160	180	230	170	80	920	0.2	0.3	0.4	0.5	0.4	0.4
Blaby	130	230	290	270	230	100	1250	0.3	0.5	0.6	0.6	0.5	0.5
Charnwood	700	1090	1050	1180	930	460	5410	0.9	1.3	1.3	1.4	1.1	1.3
Harborough	130	220	250	230	200	70	1100	0.3	0.5	0.6	0.6	0.5	0.6
Hinckley and Bosworth	140	270	330	320	290	110	1460	0.3	0.5	0.6	0.6	0.6	0.6
Melton	110	240	200	200	150	50	950	0.4	1.0	0.8	0.8	0.6	0.8
NW Leicestershire	140	450	360	420	350	110	1830	0.3	1.0	0.8	1.0	0.8	0.8
Oadby and Wigston	130	190	160	170	140	70	860	0.5	0.8	0.6	0.6	0.5	0.7
Boston	970	2240	2120	2240	2020	1200	10790	3.9	8.4	8.0	9.0	7.3	8.2
East Lindsey	270	710	860	700	400	260	3200	0.5	1.2	1.5	1.2	0.7	1.1
Lincoln	780	1330	1230	1390	900	400	6030	2.1	3.2	2.9	3.2	2.3	3.0
North Kesteven	270	320	320	630	410	130	2080	0.6	0.7	0.7	1.4	0.8	0.9
South Holland	970	1900	1540	1680	1380	790	8260	2.7	5.2	4.1	4.6	3.8	4.5
South Kesteven	410	950	1090	1100	710	290	4550	0.7	1.6	1.8	1.8	1.1	1.5
West Lindsey	100	170	220	220	140	110	960	0.3	0.4	0.5	0.5	0.3	0.5
Corby	250	1170	1090	1060	880	380	4830	1.0	4.6	4.3	3.9	3.3	3.7
Daventry	160	530	410	530	350	140	2120	0.4	1.4	1.0	1.4	0.9	1.1
E. Northamptonshire	110	320	300	230	210	100	1270	0.3	0.8	0.7	0.6	0.5	0.6

Annex 5: NINo allocations to overseas nationals and people in employment, 2004-8 (continued)

Local authority area	Overseas NINo allocations							Overseas NINo allocations as a percentage of 16-59 year olds in employment					
	2004	2005	2006	2007	2008	2009	2004-9	2004	2005	2006	2007	2008	2004-9
Kettering	300	540	740	720	590	260	3150	0.7	1.4	1.7	1.5	1.4	1.5
Northampton	1940	4710	4140	4400	3320	1600	20110	2.0	4.9	4.2	4.2	3.1	4.0
S Northamptonshire	170	250	250	260	200	80	1210	0.4	0.5	0.5	0.6	0.4	0.5
Wellingborough	280	790	990	940	670	260	3930	0.8	2.1	2.7	2.5	1.8	2.1
Ashfield	120	220	380	460	240	90	1510	0.2	0.4	0.7	0.9	0.4	0.6
Bassetlaw	270	530	520	560	410	170	2460	0.5	1.1	1.1	1.1	0.8	1.0
Broxtowe	390	600	720	850	590	300	3450	0.8	1.1	1.5	1.6	1.1	1.3
Gedling	170	260	290	320	200	90	1330	0.3	0.5	0.5	0.6	0.4	0.5
Mansfield	120	430	820	790	590	250	3000	0.3	1.1	1.9	1.7	1.2	1.4
Newark & Sherwood	200	390	460	640	480	260	2430	0.4	0.7	0.9	1.3	1.0	1.0
Rushcliffe	220	360	330	380	280	110	1680	0.4	0.7	0.6	0.7	0.5	0.6
East Midlands	19900	37690	37490	42280	33030	15690	186080	1.0	1.9	1.8	2.1	1.6	1.8

Source: NINo allocations data, DWP; APS.

Annex 6:   20 largest nationalities in overseas NINo allocations for the East Midlands by calendar year, 2002 to 2009 (percentages) *(supporting section 4)*

Nationality 2002		Nationality 2003		Nationality 2004		Nationality 2005		Nationality 2006		Nationality 2007		Nationality 2008		Nationality 2009	
India	14.0	India	14.6	India	13.3	Poland	32.5	Poland	43.1	Poland	43.5	Poland	34.5	Poland	22.6
Portugal	5.4	Zimbabwe	7.6	Poland	11.7	India	9.1	India	8.1	India	7.4	India	8.7	India	9.5
Iraq	5.2	Iraq	6.1	Portugal	5.9	Lithuania	5.8	Slovak Rep	5.4	Slovak Rep	6.5	Slovak Rep	8.1	Latvia	7.8
South Africa	4.7	Portugal	6.1	South Africa	4.9	Latvia	5.3	Lithuania	5.0	Lithuania	3.5	Lithuania	3.4	Lithuania	5.6
Pakistan	4.7	South Africa	4.6	PR China	3.8	Slovak Rep	4.7	Latvia	3.8	Latvia	2.6	Latvia	2.8	Slovak Rep	4.8
Zimbabwe	4.6	Pakistan	3.8	Pakistan	3.7	South Africa	2.8	South Africa	1.9	Pakistan	2.3	Romania	2.5	Pakistan	3.1
Somalia	3.2	PR China	3.5	Zimbabwe	3.6	Portugal	2.4	Pakistan	1.9	PR China	2.0	Pakistan	2.5	Hungary	2.8
Afghanistan	3.2	Philippines	2.6	Lithuania	2.7	PR China	2.3	Czech Rep	1.8	Romania	1.8	PR China	2.3	PR China	2.6
Philippines	3.1	Somalia	2.3	Netherlands	1.9	Czech Rep	2.1	PR China	1.7	Czech Rep	1.8	Czech Rep	2.2	Portugal	2.5
PR China	3.0	Australia	2.0	France	1.9	Pakistan	2.1	Hungary	1.6	Hungary	1.7	Hungary	2.2	Zimbabwe	2.4
Australia	2.6	Jamaica	2.0	Latvia	1.8	Hungary	1.5	Portugal	1.5	Portugal	1.6	Portugal	2.0	Romania	2.2
France	2.3	France	1.8	Philippines	1.8	France	1.5	France	1.3	France	1.3	France	1.8	Czech Rep	2.0
Germany	1.5	Netherlands	1.6	Ghana	1.6	Nigeria	1.2	Germany	1.2	Nigeria	1.2	Nigeria	1.5	Nigeria	2.0
Netherlands	1.5	Germany	1.6	Germany	1.5	Germany	1.2	Philippines	1.1	Germany	1.2	Germany	1.5	France	1.4
Bangladesh	1.3	Ghana	1.6	Nigeria	1.4	Zimbabwe	1.2	Nigeria	1.0	South Africa	1.0	Bulgaria	1.3	Philippines	1.4
USA	1.3	Spain	1.5	Slovak Rep	1.3	Netherlands	1.1	Australia	1.0	Australia	0.9	Philippines	1.0	Germany	1.1
Iran	1.3	Ireland	1.3	Malaysia	1.3	Ghana	1.0	Netherlands	0.8	Bulgaria	0.9	Italy	0.8	Spain	1.1
Nigeria	1.2	Nigeria	1.3	Somalia	1.3	Philippines	1.0	Zimbabwe	0.8	Philippines	0.9	South Africa	0.8	Iraq	0.9
Sri Lanka	1.1	Malaysia	1.3	Australia	1.3	Australia	0.9	USA	0.7	USA	0.8	Australia	0.8	South Africa	0.8
Jamaica	1.1	USA	1.2	Jamaica	1.2	Spain	0.8	Italy	0.7	Italy	0.7	USA	0.8	Australia	0.8

Source: NINo allocations data, DWP

Note: 2009 data covers the period from January to June only.

Annex 7: **'Top 3' countries for NINo allocations by local authority area in the East Midlands, 2008** *(supporting section 4)*

Local authority	Total	Largest country	No.	%	2nd largest	No.	%	3rd largest	No.	%
Derby	3520	Slovak Rep	1200	34.1	Poland	760	21.6	Czech Rep	240	6.8
Leicester	5730	Poland	1420	24.8	India	1320	23.0	Slovak Rep	510	8.9
Nottingham	5050	Poland	1520	30.1	India	480	9.5	Pakistan	300	5.9
Rutland	90	Poland	20	22.2	France	10	11.1			
Amber Valley	180	Poland	90	50.0	India	10	5.6			
Bolsover	160	Poland	100	62.5	Slovak Rep	10	6.3			
Chesterfield	210	Poland	60	28.6	Slovak Rep	20	9.5			
Derbyshire Dales	150	Poland	70	46.7	France	10	6.7			
Erewash	200	Poland	90	45.0	France	10	5.0			
High Peak	190	Poland	70	36.8	Germany	10	5.3			
North East Derbyshire	120	Poland	30	25.0	Slovak Rep	10	8.3			
South Derbyshire	170	Poland	50	29.4	India	20	11.8	Germany	10	5.9
Blaby	230	Poland	70	30.4	India	50	21.7	Germany	10	4.3
Charnwood	930	Poland	160	17.2	PR China	140	15.1	India	100	10.8
Harborough	200	Poland	50	25.0	Slovak Rep	30	15.0	Germany	10	5.0
Hinckley and Bosworth	290	Poland	70	24.1	Rep of Estonia	50	17.2	India	40	13.8
Melton	150	Poland	90	60.0	France	10	6.7			
North West Leicestershire	350	Poland	130	37.1	Bulgaria	50	14.3	Romania	40	11.4
Oadby and Wigston	140	India	30	21.4	Slovak Rep	20	14.3			
Boston	2020	Poland	1060	52.5	Lithuania	330	16.3	Latvia	230	11.4
East Lindsey	400	Poland	160	40.0	Hungary	60	15.0	Lithuania	30	7.5
Lincoln	900	Poland	460	51.1	Lithuania	60	6.7	Latvia	40	4.4
North Kesteven	410	Poland	190	46.3	Bulgaria	40	9.8	Lithuania	30	7.3
South Holland	1380	Poland	680	49.3	Lithuania	170	12.3	Latvia	100	7.2
South Kesteven	710	Poland	260	36.6	Hungary	90	12.7	Lithuania	60	8.5
West Lindsey	140	Poland	40	28.6	Hungary	10	7.1			
Corby	880	Poland	390	44.3	Slovak Rep	130	14.8	Romania	70	8.0
Daventry	350	Poland	150	42.9	Slovak Rep	30	8.6	Czech Rep	20	5.7
East Northamptonshire	210	Poland	50	23.8	Romania	20	9.5	France	10	4.8
Kettering	590	Poland	240	40.7	Slovak Rep	70	11.9	India	30	5.1

Annex 7:   'Top 3' countries for NINo allocations by local authority area in the East Midlands, 2008 (*continued*)

Local authority	Total	Largest country	No.	%	2nd largest	No.	%	3rd largest	No.	%
Northampton	3320	Poland	1260	38.0	Romania	310	9.3	India	220	6.6
South Northamptonshire	200	Poland	50	25.0	India	20	10.0	France	10	5.0
Wellingborough	670	Poland	370	55.2	Slovak Rep	40	6.0			
Ashfield	240	Poland	120	50.0	Slovak Rep	20	8.3	France	10	4.2
Bassetlaw	410	Poland	240	58.5	Bulgaria	20	4.9			
Broxtowe	590	Poland	70	11.9	Slovak Rep	60	10.2			
Gedling	200	Poland	60	30.0	India	20	10.0	France	10	5.0
Mansfield	590	Poland	390	66.1	Latvia	50	8.5	Slovak Rep	30	5.1
Newark and Sherwood	480	Poland	260	54.2	Lithuania	40	8.3	France	20	4.2
Rushcliffe	280	India	50	17.9	Poland	40	14.3	Australia	20	7.1
East Midlands	33030	Poland	11410	34.5	India	2880	8.7	Slovak Rep	2680	8.1

Source: NINo allocations data, DWP

Annex 8:   Details of methodology for identifying migrants and merging LFS datasets for analysis of migrant density of employment *(supporting section 6)*

LFS data used in analyses

The Labour Force Survey (LFS) is based on a sample survey of households in the UK. The LFS is organised on a rolling cohort basis. An individual who enters the survey is tracked for five successive quarters and then leaves. Therefore each quarter one fifth of the LFS sample leaves the survey and the sample is replenished by incorporating a new wave of people. Based on this design, and to avoid double counting of individuals, we merge every 5th quarterly LFS since 2007Q1. This ensures that everybody entering the LFS since 2006Q1, i.e. 'wave 5' individuals entering a year earlier, are included in the analysis. The following LFS quarterly datasets are merged:
- 2007Q1 quarterly LFS (i.e. includes everybody entering since 2006Q1);
- 2008Q2;
- 2009Q3 (the last available quarterly LFS at the time of writing).

Definition of Migrants

For the purposes of the LFS analysis migrant workers are defined using the variables:
- CRYO (country of origin)
- CAMEYR (year of arrival to UK; where applicable)

Using these variables, a migrant is defined as a person born outside of the UK[148]. The analysis is then restricted to more recent migrants. Three definitions are utilised, based on those who arrived in the UK after a particular point in time. The following groups are defined:
- Pre-1992 migrants (i.e. those arriving in the UK before 1992)
- 1992-2003 migrants (i.e. those arriving in the UK after 1991 but before 2004)
- Post-2003 migrants (i.e. those arriving in the UK during or after 2004)

This latter group is defined with respect to the timing of the expansion of the EU and the freedom of movement of labour for migrants from so called A8 countries. The majority of migrants into the East Midlands region after 2003 were from these countries.

Sample numbers

Based on the merged LFS sample described above we are able to analyse density of employment based on the sample numbers shown in Table A8.1. These relate to the number of migrants who are in employment in the East Midlands region and the UK at the time of the survey. As well as the raw sample numbers the table also presents the aggregated estimate of the actual population numbers based on an application of the LFS weights.[149]

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[148]   i.e. CRYO >= 6. Note that migrants include those born in the Republic of Ireland.
[149]   The LFS weights are used for re-grossing purposes and are designed such that the quarterly LFS fully weighted reconciles back to the population base, on various dimensions, by Government Office region.

Table A8.1   Numbers of working migrants in LFS

Definition	East Midlands		United Kingdom	
	Sample	**Weighted Population**	**Sample**	**Weighted Population**
Migrants				
Pre-1992	459	78,000	7,573	1,421,000
1992-2003	298	54,000	5,660	1,183,000
Post- 2003	312	58,000	4,483	959,000
Total Migrants	*1,069*	***190,000***	*17,716*	*3,562,000*
Total Workforce	**11,781**	**2,025,000**	**159,599**	**28,974,000**

Notes: Weighted population estimates are rounded to the nearest thousand. The East Midlands region is based on information taken from the LFS for Government Office Region of place of work (GORWKR).

Annex 9   Migrant employment by industry division (SIC2007)   *(supporting section 6)*

Industry division (% of total employment by cohort)	UK-born	Migrant Cohort		
		Pre-1992	1992-2003	Post-2003
01 Crop, Animal Production, Hunting	1.3	0.9	0.3	3.8^
10 Manufacture of Food Products	1.5	2.3^	6.3^	12.7^
13 Manufacture of Textiles	0.5	0.9^	1.5^	0.0
14 Manufacture of Wearing Apparel	0.4	2.1^	2.1^	1.5^
16 Manufacture Wood and Wood Products	0.4	0.4	0.3	0.0
17 Manufacture Paper & Paper Products	0.4	0.5^	1.5^	0.0
18 Printing and Recorded Media	0.7	0.0	0.4	0.4
20 Manufacture of Chemicals	0.6	0.0	0.0	1.9^
21 Manufacture of Pharmaceuticals	0.4	0.7^	0.3	0.0
22 Manufacture Rubber Plastic Products	0.9	1.5^	0.0	3.3^
23 Manuf. Non-Metallic Mineral Products	0.5	0.4	0.0	0.3
24 Manufacture of Basic Metals	0.5	0.5	0.0	0.0
25 Manuf. Fab Metal Prods, Ex Machinery	1.4	1.7^	0.0	1.8^
26 Manuf. Computer, Electronic & Optical	0.6	0.8^	0.0	0.3
27 Manufacture of Electrical Equipment	0.4	0.4	0.3	0.6^
28 Manufacture of Machinery N.E.C.	1.8	2.3^	2.0^	3.1^
29 Manufacture of Vehicles and Trailers	1.1	0.6	0.7	2.2^
30 Manufacture of Other Transport	1.5	0.5	1.2	0.8
31 Manufacture of Furniture	0.6	0.4	0.7^	0.3
32 Other Manufacturing	0.3	0.4^	0.0	0.0
35 Electricity, Gas and Air Conditioner Supply	0.6	0.3	1.2^	0.0
38 Waste Collection, Treatment, Disposal	0.7	0.3	0.4	1.1^
41 Construction of Buildings	1.1	1.5^	0.0	0.7
42 Civil Engineering	0.4	0.0	0.3	0.0
43 Specialised Construction Activities	7.4	3.5	2.8	3.0
45 Wholesale Retail Trade Repair Vehicles	2.4	1.5	0.4	1.0
46 Wholesale Trade, Except Vehicles	3.2	4.0^	2.0	6.0^
47 Retail Trade, Except Vehicles	11.1	7.6	11.6^	5.8
49 Land Transport Inc Via Pipelines	2.2	3.4^	3.4^	1.5
52 Warehousing & Support for Transport	2.1	1.4	4.6^	11.2^
53 Postal and Courier Activities	1.1	1.9^	0.8	1.5^
55 Accommodation	0.9	0.4	0.6	2.8^
56 Food and Beverage Service Activities	3.2	5.6^	10.0^	2.7
58 Publishing Activities	0.4	0.0	0.0	0.0
61 Telecommunications	0.5	0.6^	0.0	0.6^
62 Computer Programming and Consultancy	1.1	2.1^	2.7^	0.9
64 Financial Exc. Insurance and Pensions	1.6	1.8^	0.3	0.0
66 Auxiliary to Financial and Insurance	0.7	1.0^	1.4^	0.0
68 Real Estate Activities	0.8	0.7	0.4	0.5
69 Legal and Accounting Activities	1.7	0.9	0.3	0.0

70 Head Offices; Management Consultancy	0.7	0.4	0.3	0.0
71 Architectural and Engineering Activities	1.2	2.0^	2.0^	1.3^
73 Advertising and Market Research	0.4	0.2	0.0	0.0
74 Other Prof, Scientific and Technical	0.4	0.2	0.2	0.0
77 Rental and Leasing Activities	0.4	0.6^	0.0	0.3
78 Employment Activities	0.4	1.1^	2.9^	0.7^
79 Travel, Tour Operator, Reservation	0.3	0.2	0.6^	0.4
80 Security & Investigation Activities	0.5	0.2	2.0^	0.7^
81 Services to Buildings and Landscape	1.4	0.9	1.5^	2.4^
82 Office Admin, Support and Other	0.8	1.5^	1.0^	2.2^
84 Public Admin, Defence, Social Security	6.1	6.7^	1.8	2.3
85 Education	9.9	7.7	7.4	3.4
86 Human Health Activities	6.5	10.8^	11.3^	5.2
87 Residential Care Activities	2.1	3.0^	3.0^	2.0
88 Social Work Without Accommodation	3.4	3.1	2.5	1.5
90 Creative, Arts and Entertainment	0.3	0.0	0.0	0.0
91 Libraries, Archives, Museums	0.3	0.2	0.0	0.0
93 Sports, Amusement, Recreation	1.3	0.9	0.5	0.3
94 Activities Membership Organisations	0.6	0.4	0.5	0.3
96 Other Personal Service Activities	1.4	1.8^	0.3	2.3
97 Domestic Personnel	0.4	0.0	0.0	0.0
All Industries	**100**	**100**	**100**	**100**

Source: Merged LFS data 2007-2009

Note: *(a)* ^ indicates that employment density for migrant cohort greater than that of UK-born workers; *(b)* Industry divisions with LFS re-weighted employment in the East Midlands region of less than 5,000 are treated as being non-reportable and are therefore excluded from the analysis.

Industry division	Migrant Cohort		
	Pre-1992	**1992-2003**	**Post-2003**
10 Manufacture of Food Products	1.47	4.10	8.24
14 Manufacture of Wearing Apparel	5.17	5.05	3.76
28 Manufacture of Machinery N.E.C.	1.28	1.12	1.76
52 Warehousing & Support For Transport	0.68	2.21	5.33
71 Architectural and Engineering Activities	1.68	1.72	1.09
78 Employment Activities	2.57	6.66	1.59
79 Travel, Tour Operator, Reservation	0.79	2.14	1.28
80 Security & Investigation Activities	0.36	3.72	1.28
81 Services to Buildings and Landscape	0.64	1.06	1.71
82 Office Administration, Support and Other	1.95	1.27	2.82
Relative Density (All of the above)	**1.34**	**2.40**	**3.47**
Employment as % of total (All of the above)	**14.0%**	**25.0%**	**36.2%**

Source: Merged LFS data 2007-2009

Annex 11: Migrant employment by industry sector (SIC2003)   *(supporting section 6)*

Industry sector (% of total employment by cohort)	UK born	Migrant Cohort		
		Pre-1992	1992-2003	Post-2003
A: Agriculture, Hunting & Forestry	1.8	1.1	1.0	4.8 ^
D: Manufacturing *(MD)*	15.7	17.1	17.6 ^	29.8 ^
E: Electricity Gas & Water Supply	0.9	0.5	1.2 ^	0.0
F: Construction	8.4	4.4	3.1	3.7
G: Wholesale, Retail & Motor Trade	16.9	13.7	14.3	13.1
H: Hotels & Restaurants *(MD)*	4.1	6.0 ^	10.7 ^	5.5 ^
I: Transport, Storage & Communication *(MD)*	6.4	7.7 ^	9.4 ^	15.1 ^
J: Financial Intermediation	2.5	2.7 ^	1.6	0.0
K: Real Estate, Renting & Business Activities	9.8	11.5 ^	12.9 ^	8.4
L: Public Administration & Defence	6.1	6.7 ^	1.8	2.3
M: Education	9.8	7.4	7.4	3.4
N: Health & Social Work	12.1	17.1 ^	17.1 ^	8.7
O: Other Community, Social & Personal	4.9	3.9	1.8	5.2 ^
P: Private Households With Employed Persons	0.4	0.0	0.0	0.0
Q: Extra-Territorial Organisations, Bodies	0.1	0.0	0.0	0.0
All Industries	**100**	**100**	**100**	**100**

Source: Merged LFS data 2007-2009

Note: *(a)* ^ indicates that employment density for migrant cohort greater than that of UK-born workers; *(b)* *(MD)* indicates that employment density for migrant cohort greater than that of UK-born workers; *(c)* Industries with LFS re-weighted employment in the East Midlands region of less than 5,000 are treated as being non-reportable and are therefore excluded from the analysis.

Annex 12   Migrant employment by industry division (SIC2003) *(supporting section 6)*

Industry division (% of total employment by cohort)	UK born	Migrant Cohort		
		Pre- 1992	1992- 2003	Post- 2003
01: Agriculture, Hunting, etc	1.8	1.1	1.0	4.8^
15: Food, Beverage Manufacture *(MD)*	1.7	2.3^	6.3^	13.0^
17: Textile Manufacture	0.6	0.9^	1.9^	0.4
18: Clothing, Fur Manufacture *(MD)*	0.3	2.1^	1.7^	1.2^
20: Wood, Straw, Cork, Wood Prods (Not Furniture)	0.4	0.4	0.3	0.0
21: Pulp, Paper, Paper Products Manufacture	0.5	0.5	1.5^	0.0
22: Printing, Publishing, Recorded Media	1.1	0.0	0.4	0.4
24: Chemicals, Chemical Products Manufacture.	1.0	0.7	0.3	1.9^
25: Rubber, Plastic Products Manufacture	0.9	1.5^	0.0	3.3^
26: Other Non-Metallic Products Manufacture	0.5	0.4	0.0	0.3
27: Basic Metals Manufacture	0.5	0.5	0.0	0.0
28: Fabric-Metal Prod (Not Mach, Eqt) Manuf.	1.4	1.7^	0.0	1.8^
29: Machinery Equipment Manufacture *(MD)*	1.9	2.3^	2.0^	3.5^
31: Electrical Machinery Equipment Manufacture	0.5	1.1^	0.6^	0.2
33: Medical, Precision, Optical Equipment Manuf.	0.4	0.4	0.0	0.0
34: Motor Vehicles, Trailer, etc Manufacture	1.1	0.6	0.7	2.2^
35: Other Transport Equipment Manufacture	1.5	0.5	1.2	0.8
36: Furniture Etc Manufacture	0.8	0.6	0.7	0.3
40: Electricity, Gas, Steam etc Supply	0.6	0.3	1.2^	0.0
45: Construction	8.4	4.4	3.1	3.7
50: Sales of Motor Vehicles, Parts, Fuel etc	2.5	1.5	1.2	1.0
51: Wholesale,Commiss. Trade (Fee,Contract)	3.2	4.0^	2.0	6.0^
52: Retail Trade (Not Motor Vehicle) Repairs	11.2	8.2	11.1	6.0
55: Hotels, Restaurants *(MD)*	4.1	6.0^	10.7^	5.5^
60:Transport By Land, Pipeline	2.2	3.4^	3.4^	1.5
63: Aux Transport Activities,Travel Agents *(Md)*	2.4	1.7	5.3^	11.6^
64: Post, Telecommunications	1.6	2.5^	0.8	2.0^
65: Financial Intermediaries (Not Insur., Pension)	1.6	1.8^	0.3	0.0
67: Other Financial (Not Insurance, Pensions)	0.7	1.0^	1.4^	0.0
70: Real Estate Activities	1.3	1.2	0.4	0.5
71: Personal, Household, Mach, Eqt Rental(No Op)	0.4	0.6^	0.0	0.3
72: Computer Related Activities	1.1	2.4^	2.7^	0.9
74: Other Business Activities	6.9	7.2^	9.5^	6.2
75: Public Admin, Defence, Social Security	6.1	6.7^	1.8	2.3
80: Education	9.8	7.4	7.4	3.4
85: Health, Social Work	12.1	17.1^	17.1^	8.7
90: Sanitation, Sewage, Refuse Disposal Etc	0.5	0.3	0.4	1.1^
91: Activities of Membership Organisations	0.6	0.4	0.5	0.3
92: Recreational, Cultural, Sporting Activities	2.3	1.7	0.5	1.5
93: Other Service Activities	1.4	1.5^	0.3	2.3^
95: Private Households with Employed Persons	0.4	0.0	0.0	0.0

Source: Merged LFS data 2007-2009.
Note: *(a)* ^ indicates that employment density for migrant cohort greater than that of UK-born workers; *(b)* (*MD*) indicates that employment density for migrant cohort greater than that of UK-born workers; *(c)* Industry divisions with LFS re-weighted employment in the East Midlands region of less than 5,000 are treated as being non-reportable and are therefore excluded from the analysis.

Annex 13   Migrant employment by SOC2000 minor group *(supporting section 6)*

SOC Minor group (% of total employment by cohort)	UK born	Migrant Cohort		
		Pre-1992	1992-2003	Post-2003
111 Corporate Managers & Senior Officials	0.3	0.2	0.2	0.0
112 Production Managers	3.0	2.1	0.3	0.0
113 Functional Managers	4.2	5.6^	2.6	1.5
114 Quality And Customer Care Managers	0.6	0.2	0.3	0.0
115 Financial Instit and Office Manager	1.1	2.6^	0.4	0.0
116 Managers In Distrib, Storage and Retail	2.3	2.7^	0.8	1.0
117 Protective Service Officers	0.3	0.2	0.3	0.8^
118 Health and Social Services Managers	1.0	0.9	0.0	0.0
122 Managers In Hospitality and Leisure	1.0	3.2^	1.7^	0.9
123 Managers In Other Service Industries	1.7	1.5	1.4	0.0
211 Science Professionals	0.3	0.8^	1.5^	0.3
212 Engineering Professionals	1.6	1.6	1.6	0.7
213 Info & Communication Technology	0.9	1.0^	1.6^	1.4^
221 Health Professionals	0.7	2.3^	3.5^	1.5^
231 Teaching Professionals	4.7	4.2	3.0	1.2
241 Legal Professionals	0.4	0.2	0.3	0.0
242 Business & Statistical Professionals	1.2	1.9^	0.0	0.0
243 Architects, Town Planners, Surveyor	0.6	0.9^	0.7^	0.4
244 Public Service Professionals	0.5	0.6^	1.0^	0.3
311 Science and Engineering Technicians	0.9	0.9	2.0^	0.2
313 IT Service Delivery Occupations	0.5	0.5	1.0^	0.0
321 Health Associate Professionals	2.1	3.3^	5.1^	0.8
322 Therapists	0.3	0.2	0.3	0.0
323 Social Welfare Assoc Professionals	0.9	0.6	0.3	0.3
331 Protective Service Occupations	1.0	0.7	0.0	0.0
341 Artistic ad Literary Occupations	0.4	0.6^	0.2	0.6^
342 Design Associate Professionals	0.5	0.6^	0.3	0.0
343 Media Associate Professionals	0.4	0.0	0.0	0.0
344 Sports and Fitness Occupations	0.3	0.3	0.0	0.0
353 Business & Finance Assoc Professionals	1.3	0.7	0.6	0.0
354 Sales & Related Assoc Professionals	1.4	1.2	1.4	0.3
356 Public Service and Other Assoc Prof	1.4	1.8^	0.9	0.0
411 Administrative: Government & Related	1.5	1.9^	0.0	0.0
412 Administrative Occupations: Finance	2.6	2.5	1.6	0.4
413 Administrative Occupations: Records	1.8	0.8	2.0^	0.8
415 Administrative Occupations: General	2.7	2.3	0.3	1.8
421 Secretarial and Related Occupations	2.4	2.2	1.4	1.3
511 Agricultural Trades	1.1	0.4	0.7	0.7
521 Metal Forming, Welding and Related	0.6	0.5	0.0	1.4^
522 Metal Machining, Fitting, Instr Making	1.6	1.9^	0.6	1.9^
523 Vehicle Trades	1.2	1.0	0.0	0.6

141

524 Electrical Trades	1.7	0.9	0.4	1.2
531 Construction Trades	3.3	1.5	0.7	1.0
532 Building Trades	1.0	0.3	0.7	1.0
541 Textiles and Garment Trades	0.3	1.1^	0.0	0.5^
543 Food Preparation Trades	0.8	2.1^	2.4^	2.0^
549 Skilled Trades N.E.C	0.5	0.4	0.4	0.0
611 Healthcare & Related Personal Service	3.7	4.9^	6.3^	4.7^
612 Childcare & Related Personal Services	2.9	2.4	2.1	1.0
621 Leisure & Travel Service Occupation	0.4	0.2	0.4	0.7^
622 Hairdressers and Related Occupation	0.8	0.9^	0.3	0.7
623 Housekeeping Occupations	0.4	0.9^	0.0	0.0
711 Sales Assistants and Retail Cashier	5.7	2.9	7.1^	4.3
712 Sales Related Occupations	0.7	0.2	0.0	0.0
721 Customer Service Occupations	1.6	2.2^	0.4	1.0
811 Process Operatives	1.4	2.9^	6.1^	12.7^
812 Plant and Machine Operatives	0.8	0.5	1.4^	1.5^
813 Assemblers and Routine Operatives	1.4	3.4^	2.9^	3.5^
814 Construction Operatives	0.6	0.2	0.0	0.0
821 Transport Drivers and Operatives	3.7	4.2^	3.9^	1.5
822 Mobile Machine Drivers & Operatives	0.7	0.9^	1.5^	1.2^
911 Elementary Agricultural Occupations	0.5	0.0	0.0	2.3^
912 Elementary Construction Occupations	0.9	0.2	0.8	0.8
913 Elementary Process Plant Occupation	1.0	1.3^	4.4^	14.5^
914 Elementary Goods Storage Occupation	2.1	0.7	5.1^	11.6^
921 Elementary Administration Occupations	0.9	0.7	0.8	0.6
922 Elementary Personal Service Occupations	3.2	2.4	5.7^	2.2
923 Elementary Cleaning Occupations	2.7	1.8	4.0^	6.3^
924 Elementary Security Occupations	1.0	0.8	1.6^	0.3
925 Elementary Sales Occupations	0.7	0.4	0.0	1.4^
All occupations	**100**	**100**	**100**	**100**

Source: Merged LFS data 2007-2009

Note: *(a)* ^ indicates that employment density for migrant cohort greater than that of UK-born workers; *(b)* Occupations with LFS re-weighted employment in the East Midlands region of less than 5,000 are treated as being non-reportable and are therefore excluded from the analysis.

Annex 14   Migrant dense SOC minor groups with relative densities
(supporting section 6)

SOC Minor group	Migrant Cohort		
	Pre-1992	1992-2003	Post-2003
211 Science Professionals	2.78	5.52	1.26
213 Information & Communication Technology Professionals	1.18	1.78	1.59
221 Health Professionals	3.49	5.22	2.16
543 Food Preparation Trades	2.64	2.91	2.44
611 Healthcare & Related Personal Service Occupations	1.31	1.70	1.27
811 Process Operatives	2.11	4.43	9.20
812 Plant And Machine Operatives	0.62	1.87	1.92
813 Assemblers and Routine Operatives	2.42	2.04	2.44
822 Mobile Machine Drivers, Operatives	1.26	2.07	1.64
913 Elementary Process Plant Occupations	1.25	4.31	14.21
914 Elementary Goods Storage Occupations	0.34	2.47	5.59
923 Elementary Cleaning Occupations	0.67	1.50	2.32
Relative Density (All of the above)	**1.38**	**2.48**	**3.72**
Employment as % of total (All of the above)	**16.4%**	**22.7%**	**40.7%**

Source: Merged LFS data 2007-2009

Annex 15   Industry division of last job *(supporting section 6)*

Industry division (% of employment by Industry)	2007Q1	2008Q2	2009Q3	MD
01 Crop, Animal Production, Hunting	0.0	2.0	1.7	
10 Manufacture of Food Products	1.4	0.7	1.0	MD
13 Manufacture of Textiles	0.7	0.7	0.4	
14 Manufacture of Wearing Apparel	0.6	1.3	0.0	MD
15 Manufacture of Leather And Related	0.6	0.0	0.0	
16 Manufacture Wood and Wood Products	0.7	0.6	0.5	
17 Manufacture Paper & Paper Products	1.7	0.0	0.0	
18 Printing And Recorded Media	0.5	1.3	2.5*	
20 Manufacture of Chemicals	1.3	0.9	0.0	
21 Manufacture of Pharmaceuticals	0.0	1.6	0.6	
22 Manufacture Rubber Plastic Products	0.0	3.9	0.5	
23 Manufacture Non-Metallic Mineral Products	0.0	1.6	0.0	
24 Manufacture of Basic Metals	0.9	0.7	0.9	
25 Manufacture Fab Metal Prods, Ex Machinery	1.3	1.4	1.5*	
26 Manufacture Computer, Electronic & Optical	0.9	0.5	1.8*	
28 Manufacture of Machinery N.E.C.	5.1	2.2	2.4	MD
29 Manufacture Vehicles And Trailers	0.5	1.9	1.8	
30 Manufacture of Other Transport	0.6	0.6	0.0	
31 Manufacture of Furniture	1.7	0.0	2.8*	
32 Other Manufacturing	0.0	0.7	0.0	
35 Electricity, Gas and Air Conditioner Supply	0.6	1.5	0.9	
38 Waste Collection, Treatment, Disposal	1.5	1.3	0.4	
41 Construction of Buildings	0.0	0.6	2.9*	
42 Civil Engineering	0.0	0.0	2.6*	
43 Specialised Construction Activities	11.1	6.5	9.8	
45 Wholesale Retail Trade Repair Vehicles	1.1	0.6	2.4*	
46 Wholesale Trade, Except Vehicles	1.2	3.7	1.6	
47 Retail Trade, Except Vehicles	13.7	10.4	12.4	
49 Land Transport Inc Via Pipelines	1.7	2.5	4.0*	
52 Warehousing & Support For Transport	2.8	3.8	0.8	MD
53 Postal and Courier Activities	0.0	1.2	0.9	
55 Accommodation	1.3	1.6	2.1*	
56 Food and Beverage Service Activities	10.8	8.4	6.5	
58 Publishing Activities	0.0	0.5	0.4	
61 Telecommunications	1.9	1.0	0.8	
62 Computer Programming and Consultancy	1.4	0.0	0.9	
64 Financial Ex Insurance and Pensions	1.6	0.9	1.2	
66 Auxiliary to Financial and Insurance	2.2	1.3	0.6	
68 Real Estate Activities	0.6	0.0	0.9*	
69 Legal and Accounting Activities	0.7	0.6	0.0	
70 Head Offices; Management Consultancy	0.0	0.0	0.4*	
71 Architectural and Engineering Activities	1.4	0.9	0.8	MD

73 Advertising and Market Research	0.8	0.0	0.0	
74 Other Professional, Scientific and Technical	0.0	0.0	1.3*	
77 Rental and Leasing Activities	0.0	0.7	0.6	
78 Employment Activities	1.5	1.8	0.5	MD
80 Security & Investigation Activities	1.9	0.0	0.9	MD
81 Services to Buildings and Landscape	3.5	3.4	2.8	MD
82 Office Admin, Support and Other	2.1	1.3	3.4*	MD
84 Public Admin, Defence, Social Security	0.7	0.6	2.6*	
85 Education	3.5	6.3	5.7	
86 Human Health Activities	1.9	4.3	3.2	
87 Residential Care Activities	2.6	3.5	1.3	
88 Social Work Without Accommodation	1.3	3.9	1.8	
90 Creative, Arts and Entertainment	0.0	0.0	0.4*	
91 Libraries, Archives, Museums	0.7	0.0	0.0	
93 Sports, Amusement, Recreation	2.0	1.5	1.3	
96 Other Personal Service Activities	1.4	0.0	0.9	
MD division	**20.3**	**15.3**	**12.5**	
Other division	**79.8**	**84.7**	**87.5***	

Source: Merged LFS data 2007-2009

Note: *(a)* The analysis is restricted to UK-born workers currently unemployed, resident in the East Midlands region. Industries with LFS re-weighted employment in the East Midlands region of less than 5,000 are therefore excluded from the analysis. *(b)* * indicates a figure for 2009 which higher than both of the previous surveys; *(c)* MD indicates a migrant dense industry.

Annex 16   Occupation of last job (SOC minor group) *(supporting section 6)*

Occupation (% of employment by Occupation)	2007Q1	2008Q2	2009Q3	MD
112 Production Managers	1.7	2.0	2.9*	
113 Functional Managers	1.2	3.2	1.8	
114 Quality And Customer Care Managers	0.0	0.0	0.4*	
115 Financial Instit. and Office Managers	0.0	1.3	0.7	
116 Managers in Distribution, Storage and Retail	0.0	0.0	1.2*	
117 Protective Service Officers	0.6	0.0	0.0	
118 Health and Social Services Managers	0.0	0.7	0.0	
122 Managers in Hospitality and Leisure	1.1	0.0	1.5*	
123 Managers In Other Service Industries	1.3	0.0	1.1	
211 Science Professionals	1.3	0.9	0.3	MD
212 Engineering Professionals	2.2	1.5	0.4	
213 Information & Communication Technology	0.0	0.0	0.5	MD
231 Teaching Professionals	1.7	0.7	1.1	
242 Business & Statistical Professional	0.0	0.0	0.4*	
244 Public Service Professionals	0.0	0.0	0.4*	
311 Science and Engineering Technicians	0.6	0.6	1.2*	
313 IT Service Delivery Occupations	1.3	0.0	0.0	
321 Health Associate Professionals	0.0	0.0	0.4*	
322 Therapists	0.7	0.0	0.0	
323 Social Welfare Associate Professionals	0.0	0.0	1.8*	
331 Protective Service Occupations	0.6	0.0	0.6	
341 Artistic and Literary Occupations	0.7	0.7	2.0*	
342 Design Associate Professionals	0.0	1.1	1.1	
343 Media Associate Professionals	0.0	1.3	0.0	
344 Sports And Fitness Occupations	0.7	0.0	0.0	
354 Sales & Related Assoc Professionals	2.6	0.0	1.2	
356 Public Service and Other Assoc Prof	0.0	1.3	0.8	
411 Administrative: Government & Related	0.7	0.0	0.6	
412 Administrative Occupations: Finance	1.3	0.0	3.7*	
413 Administrative Occupations: Records	3.2	0.9	1.9	
415 Administrative Occupations: General	1.7	0.0	2.1*	
421 Secretarial and Related Occupations	3.1	1.4	2.6	
511 Agricultural Trades	2.0	1.3	1.4	
521 Metal Forming, Welding and Related	0.5	0.0	0.9*	
522 Metal Machining, Fitting, Instrument Making	1.5	1.5	2.6*	
523 Vehicle Trades	1.1	0.6	0.4	
524 Electrical Trades	0.0	1.5	0.9	
531 Construction Trades	2.9	3.7	4.2*	
532 Building Trades	1.9	0.8	0.4	
541 Textiles and Garment Trades	0.0	0.0	1.5*	
543 Food Preparation Trades	2.9	0.6	0.5	MD
611 Healthcare & Related Personal Service	1.9	4.7	2.3	MD

612 Childcare & Related Personal Services	0.7	3.6	2.5	
622 Hairdressers and Related Occupations	0.7	0.0	0.9*	
623 Housekeeping Occupations	0.0	0.5	0.0	
711 Sales Assistants and Retail Cashiers	8.2	8.8	8.3	
712 Sales Related Occupations	0.7	0.0	1.8*	
721 Customer Service Occupations	3.6	2.1	0.9	
811 Process Operatives	2.2	2.3	0.9	MD
812 Plant and Machine Operatives	2.1	0.6	0.0	MD
813 Assemblers and Routine Operatives	2.4	0.0	3.4*	MD
814 Construction Operatives	0.0	0.0	0.6*	
821 Transport Drivers And Operatives	1.8	4.3	3.2	
822 Mobile Machine Drivers & Operatives	2.2	4.6	0.4	MD
911 Elementary Agricultural Occupations	0.0	0.7	0.5	
912 Elementary Construction Occupations	3.2	2.5	5.4*	
913 Elementary Process Plant Occupation	6.4	9.1	5.2	MD
914 Elementary Goods Storage Occupation	3.8	4.9	2.0	MD
921 Elementary Administration Occupations	2.5	2.8	1.3	
922 Elementary Personal Service Occupations	9.5	12.5	6.7	
923 Elementary Cleaning Occupations	4.1	5.9	3.9	MD
924 Elementary Security Occupations	1.3	0.6	2.0*	
925 Elementary Sales Occupations	1.1	0.9	1.2*	
MD division	**29.3**	**33.5**	**19.4**	
Other division	**70.7**	**66.5**	**80.6***	

Source: Merged LFS data 2007-2009

Note: *(a)* The analysis is restricted to UK-born workers currently unemployed, resident in the East Midlands region. Industries with LFS re-weighted employment in the East Midlands region of less than 5,000 are therefore excluded from the analysis. *(b)* * indicates a figure for 2009 which higher than both of the previous surveys; *(c)* MD indicates a migrant dense industry.

Annex 17   Methodology for estimating migrant contribution to GVA
(supporting section 8)

The starting point for the analysis is a table of GVA estimates by industry for each year for the East Midlands region. The 'base' estimate is obtained in the simplest fashion by multiplying the percentage of employment of migrants in each industry, $\mu(i)$, by the GVA produced by that industry, *GVA(i)*, and then summing across all industries in the East Midlands to produce a monetary value of migrant contribution, as expressed in equation *(1)*.

A percentage contribution to gross value added, *pGVA*, is then calculated by dividing by the total value of GVA at the regional level, as shown in equation *(2)*. This process is repeated each year.

$$MGVA = \sum_{i=1}^{14} GVA(i) * \mu(i) \qquad\qquad \textbf{(1)}$$

$$pMGVA = \frac{MGVA}{GVA} \qquad\qquad \textbf{(2)}$$

Since the base estimates take into account only industry of employment and not the occupations of migrant workers, the wage-adjusted estimates provide a more accurate estimate. If, as already documented, migrant employment is concentrated in low skilled jobs then applying the percentage of employment by industry, as above, will not necessarily reflect migrant 'productivity', in terms of how much they are adding to the value of production.

As GVA data is not available by occupation, wage-adjusted estimates are applied to deal with this issue. Wages are correlated with productivity (via marginal value of output) and, moreover, at an aggregate level, the total 'wage bill' accounts for over 80 per cent of GVA. The monetary value of migrant contribution, MGVA, is therefore adjusted based on the ratio of mean migrant wages to mean wages for all workers by industry, $\rho(i)$, as shown in equation *(3)*. In simple terms, if migrant workers are paid less than UK-born workers reflecting their 'productivity', this will then lower the MGVA figure. As previously $\mu(i)$ represents the percentage of employment of migrants in industry *i* and *GVA(i)* represents industry GVA. Note that:

$$MGVA = \sum_{i=1}^{14} GVA(i) * \mu(i) * \rho(i) \qquad\qquad \textbf{(3)}$$

where $\rho(i)$ is the ratio of mean wages of migrant workers, $\overline{w}(migrants)$, and overall industry wages, $\overline{w}(all)$. i.e.

$$\rho(i) = \frac{\overline{w}(migrants)}{\overline{w}(all)} \qquad\qquad \textbf{(4)}$$

Finally, the LFS reflated estimate deals with the potentially important issue of under-counting of migrant workers in the LFS. Previous discussion has raised the issue that the LFS may under-count migrant workers, relative to their 'true' numbers in the workforce. This may be due to migrants being transitory or due to the type of accommodation they live in (e.g.

communal residences). We proceed as previously in adjusting the figures to reflect the degree of under-counting in the LFS. This is done by applying a rescaling value to all of the estimates to wage-adjusted estimates to correct for under-counting. Using this figure we reflate our estimates upward by a factor of *20 per cent*. This approach follows Rendall *et al.* (2003)[150] who estimate that the LFS undercounts migrants by 15–25 per cent. Although this adjustment is rather crude it is the best available given lack of detailed knowledge regarding instances of under-counting, for example by industry or occupation.

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[150] Rendall M.S., Tomassini C. and Elliot D.J. (2003) Estimation of Annual International Migration from the Labour Force Surveys of the United Kingdom and the Continental European Union', *Statistical Journal of the United Nations ECE 20*, 219-34.

Annex 18   Job turnover and migrant employment by industry division
(supporting section 9)
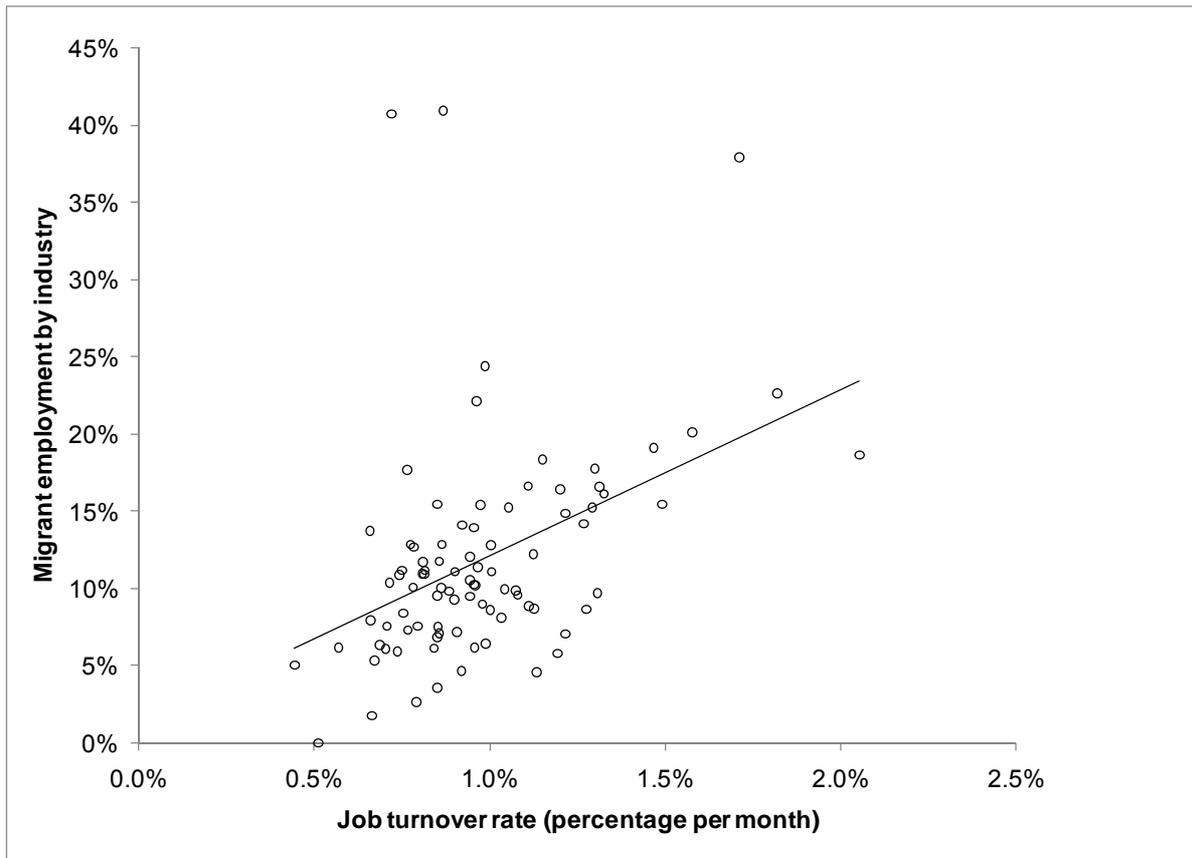
Source: Merged LFS dataset
Note: The analysis is conducted for the UK and applies to all migrant workers. The percentage job turnover rate is calculated based on the reciprocal of the mean number of months in a particular job as observed by the variable EMPMON (number of months continual employment in same job) in the LFS.

Annex 19   Highest qualifications of migrant workers *(supporting section 9)*

Source: Merged LFS dataset
Note: The analysis is conducted for the UK and applies to all migrant workers.