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Impacts of migration on UK native employment: An analytical review of the evidence

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Foreword

The impacts of migration on the UK are complex and wide-ranging, affecting economic, social and cultural aspects of life in the UK. This evidence review does not cover any of the social or cultural aspects. It focuses narrowly on one of the potential economic effects - the impact on the employment of existing UK residents.

In advising government on the likely impact of changes to migration policy on the employment outcomes of UK workers, government analysts must take a view, albeit one that reflects the spectrum of possible impacts. This paper presents a comprehensive overview of the current evidence base, together with the conclusions reached by government analysts on the basis of that evidence. The conclusions will inform future assessments of the impacts of migration policy on the employment outcomes of UK workers.

Assessing the impact of migration on the employment outcomes of UK workers is a hugely challenging analytical issue. It is difficult to isolate the effects of migration from the other factors that simultaneously affect labour market outcomes. Even if one is confident that the effect of migration has been isolated, it is hard to be sure that what is measured is a causal estimate of the impact of migration on labour market outcomes, and not the reverse. Moreover, assessing aggregate national impacts may mask impacts that vary markedly across localities.

Therefore, limitations in data and research methods, together with the likelihood that the effects of migration vary across time and place mean that studies differ in their conclusions. This increases the challenge of reaching a consensus view based on the evidence; there will generally be conflicting opinions.

Despite the challenges involved, we believe that our conclusions are based on a pragmatic assessment of the evidence, and that the analysis sheds some light on the reasons why there has been a range of findings in the literature. We would value feedback from the academic and researcher community on this analysis and encourage further research in this area. Indeed, further research and new data are likely to augment the findings of this report over time.

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Executive Summary

This report reviews the evidence around the impacts of migration on the employment of existing UK native workers. The purpose of this review, carried out by government analysts, has been to consider comprehensively the evidence in this area and to reconcile the wide-ranging conclusions from the economic literature, in order to set out the agreed cross-government view. Importantly, it is recognised that the impacts of migration on the labour market depend on a range of factors that vary over time, and therefore the impact of migration on the labour market cannot be condensed to a 'one size fits all' answer.

It is difficult to predict the impacts of future migration on native employment with any great degree of certainty. However, government analysts nonetheless must make an informed judgement based on existing evidence in order to provide robust advice on government policy. To this end, the conclusions below summarise our view of the evidence to date, which we will employ in making that judgement in the future, according to the economic and wider context.

- Overall, our assessment is that there is relatively little evidence that migration has caused statistically significant displacement of UK natives from the labour market in periods when the economy has been strong. However, in line with some recent studies, there is evidence for some labour market displacement in recent years when the economy was in recession.
- Displacement effects are also more likely to be identified in periods when net migration volumes are high, rather than when volumes are low – so analyses that focus on data prior to the 2000s are less likely to find any impacts. In addition, where displacement effects are observed, these tend to be concentrated on low skilled natives.
- This suggests that the labour market adjusts to increased net migration when economic conditions are good. But during a recession, and when net migration volumes are high as in recent years, it appears that the labour market adjusts at a slower rate and some short-term impacts are observed.
- To date there has been little evidence in the literature of a statistically significant impact from EU migration on native employment outcomes, although significant EU migration is still a relatively recent phenomenon and this does not imply that impacts do not occur in some circumstances.
- The evidence also suggests that where there has been a displacement effect from a particular cohort of migrants, this dissipates over time – that is, any displacement impacts from one set of new arrivals gradually decline as the labour market adjusts, as predicted by economic theory.

The following key areas of interest are covered in this report.

Theoretical labour market impacts of migration

Mainstream economic theory does not predict long-term negative impacts from positive net migration on average native labour market outcomes – over a period of time the labour market is expected to adjust to increased labour supply and return to equilibrium levels of employment and wages. However, this requires an adjustment in the short term, the length of which is an empirical question. This adjustment may be achieved through lower wages, reduction in hours worked, and/or some increase in involuntary unemployment until the labour market has fully adjusted. Dynamic benefits (innovation, knowledge transfer, productivity gains, etc.) may mean that migration has positive impacts on native labour market outcomes, but these are difficult to measure.

Short-term impacts are likely to vary both in *magnitude* and in *duration* depending on a number of factors including: economic conditions; labour market institutions and policies; and how the skill mix of migrants compares with that of the resident population. Whilst the magnitude and duration of these short-term effects is a matter for empirical study, the data are often unable to address reliably these questions. Theory also predicts distributional impacts – migration will have positive impacts on some groups in the resident population, but negative impacts on others.

Migration trends

Net migration into the UK has been historically high in recent decades. Net migration was negative from the late 1960s to the early 1980s, when it became positive but low and stable until the late 1990s, when migration policy for non-EEA¹ nationals became less restrictive. Net migration increased further in 2004 following the accession of Eastern European countries (A8) to the EU. Since 2004 net migration has remained high, but has recently fallen back partially as a result of changes to migration policy.

Labour market outcomes for migrants and natives

The large increase in net migration, which began in the late 1990s, took place during a strong period of sustained economic growth. This came to an end with the 2008 recession. In our descriptive labour market analysis we examine labour market outcomes for UK nationals born in the UK, UK nationals born abroad,² EEA migrants and non-EEA migrants. Over the early part of the period of sustained positive net migration, labour market outcomes improved for UK nationals born in the UK – employment rates increased steadily up to 2005 and then remained at a relatively high level until the 2008 recession. Employment rates for UK nationals born in the UK are greater than for non-EEA migrants and for UK nationals born abroad, but in

¹ EEA = European Economic Area. The EEA includes the Member States of the EU, plus Iceland, Liechtenstein and Norway. Switzerland is not in the EEA but is counted in this group for our research, as Swiss nationals have free movement rights within the EU.

² 'UK nationals born abroad' is a diverse group made up of UK nationals born abroad with British parents and/or grandparents, as well as settled migrants who have obtained British citizenship.

recent years have been slightly lower than for EEA migrants, as the composition of this group changed following the 2004 enlargement of the EU (the A8 accession). Inactivity rates for non-EEA and EEA migrants have been falling for almost 20 years. Such observations show that there are differing impacts across migrant categories.

Data and methodological issues

Accurate estimation of the impacts of migration depends crucially on both the methodological approach employed and the availability of robust and timely data. Unfortunately data on migration have certain imperfections, which render conclusions of studies on the impact of migration open to debate. There are a number of alternative sources of data that can be used to assess the impact of net migration on the labour market; each with particular strengths and weaknesses. Our assessment is that the Labour Force Survey (LFS) is currently the most complete data source for measuring the impacts of migration on the UK labour market. This is because it allows analysis to include a consideration of individual migrant characteristics, and to examine net changes in migrant stocks rather than gross flows. However, studies that use other data sources may also provide a useful reference.

In assessing the impact of migration on the labour market, researchers attempt to indirectly construct a counterfactual of ‘What would the labour market outcomes for natives have been in the absence of net migration?’. This amounts to splitting the UK labour market into groups, each of which has experienced different degrees of net migration. By comparing how labour market outcomes across these groups vary with changes in net migration in these groups, and controlling for other factors, it is possible to estimate the labour market impacts of migration.

Review of the literature

This report considers a broad range of literature examining the impact of migration on the UK labour market, as well as the most relevant international studies. Until recently, the bulk of the UK literature did not identify statistically significant impacts of migration on the employment rates of natives (for example, Dustmann *et al.*, 2005; Lemos and Portes, 2008). The Migration Advisory Committee (2012) study provides a more recent example suggesting a statistically significant displacement effect, particularly linked to non-EU migration. But similarly recent research by Lucchino *et al.* (2012) failed to identify any statistically significant impacts of net migration on claimant count rates. Differences in findings between studies can be partly explained by factors such as the time period studied and the data or definitions used.

It seems likely that the magnitude and duration of short-term impacts of migration on the labour market vary according to context and economic conditions (Peri, 2010; Migration Advisory Committee, 2012). Further testing of the Migration Advisory Committee (2012) analysis shows that the findings were particularly driven by data from 2009 and 2010, when there was a downturn in the labour market. However, it

was not possible to test further for impacts from other significant labour market changes, such as the labour supply effects of the 2004 EU accession.

The literature consistently suggests that any displacement effect is likely to be greatest for the low skilled – studies that distinguish between impacts on high-skilled and low-skilled workers more frequently find displacement effects on low-skilled workers, sometimes when there is no apparent displacement effect in aggregate.

1. Introduction

Background

In recent decades, migration has become an increasingly important phenomenon across the developed world, including in the UK. Historically high levels of net migration have resulted in substantial interest from academics and policy makers alike in robust studies that statistically examine the impact of net migration on outcomes in the labour market for existing citizens. However, this is a challenging area of analysis, with studies using a variety of methodologies and data sources to come to a range of conclusions about the direction and scale of the impact of migration on UK citizens in the labour market.

Until recently, much of the economics literature, both in the UK and other countries, suggested that – to quote one example now a decade old – the *“impact of immigrants on wages and employment in local labour markets is, if at all, modest”* (Dustmann *et al.*, 2003, p 16). In 2008 the Government response to a House of Lords Committee on Economic Affairs³ stated that *“Government and independent research continues to find no significant evidence of negative employment effects from immigration”* (House of Lords, 2008a).

More recently, the Government commissioned the independent Migration Advisory Committee (MAC) to look again at the impacts of migration on the UK economy. The MAC’s January 2012 report, entitled [Analysis of the Impacts of Migration](#), presented a comprehensive overview of the evidence on the impacts of migration including economic, public service, fiscal, social and labour market impacts. The report included valuable new research on the impact of immigration on employment rates of UK natives, including a tentative finding that there was evidence that *“a rise in the stock of non-EU migrants is associated with a [statistically significant] reduction in native employment rates”* over the period 1995–2010, and particularly in periods when the output gap is negative (Migration Advisory Committee, 2012, p 121).

Aims

The evidence on the topic of labour market impacts of migration has been controversial and contested. One recent example is the MAC analysis (*ibid.*), whilst another example is the findings of Lucchino *et al.* (2012), published by the National Institute for Economic and Social Research, which did not identify any impact of net migration on the claimant count rate, even during the recession.

The purpose of this paper is to review the existing evidence on labour market displacement of net migration on UK citizens in order to provide a more coherent understanding of the different findings in this research area. Economists from the Home Office (HO), the Department for Business, Innovation and Skills (BIS) and the

Department for Work and Pensions (DWP) have worked together to understand and interpret the existing research.

The purpose and focus of this review means that there are many impacts of migration that are not considered here. This review is not an assessment of the full economic and social impacts of net migration, either in the short term or the long term. It focuses specifically on an examination of impacts of migration on employment outcomes, and so does not include an assessment of other possible labour market impacts of net migration, for example on wages, hours, and productivity. Neither does it attempt to address issues of fiscal impact. It considers the impacts of migration at an aggregate national level, though does not consider the localised impacts of migration, which may vary depending on the nature of the local job market and other factors.

Structure

The review was conducted in several discrete strands, as outlined in Box 1.1.

Box 1.1: Project work strands

- *Economic theory* - we examined the labour market impacts of migration, as predicted by economic theory.
- *Migration policy and volumes* - we examined the policy context in the UK over the last couple of decades by reviewing changes in migration policy and the volumes of migratory flows.
- *Outcomes in the UK labour market for natives and migrants* - we considered the trends in labour market outcomes for natives and migrants over the same period.
- *Methodological and data issues* - we considered the methodological and data issues that researchers face in this area.
- *Literature review and further data analysis* - we conducted a literature review of the most relevant research in this area. With the support of the MAC we also did some further tests on the data set used.
- *Conclusions* – based on the balance of the evidence reviewed, we drew conclusions around the impacts of migration on UK native employment rates.

Process

The review was carried out by economists from BIS and the Home Office. This work was overseen by a steering group involving senior analysts from these departments, with the Department for Work and Pensions (DWP), HM Treasury (HMT) and the Cabinet Office also represented. The review was presented to and discussed by Chief Economists from BIS, DWP and the Home Office, as well as senior analysts from HMT in September 2012. The Chair of the independent MAC also attended this meeting. The conclusions outlined in this report were discussed and agreed at that meeting.

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2. Theoretical labour market impacts of migration

Summary

- Economic theory predicts differing short-term and long-term impacts of migration.
- Mainstream economic theory does not predict long-term negative impacts on native labour market outcomes under certain assumptions and suggests that the dynamic benefits may improve labour market outcomes for natives in the long term.
- Theory also predicts a range of short-term impacts, which are likely to vary in magnitude depending on a number of factors, including economic conditions, labour market institutions and policies, and how the skill mix of migrants compares with that of the resident population.
- The length of time it takes for the labour market to adjust (to move from the short term to the long term as described above) is an empirical question.
- There are distributional impacts – theory predicts that migration will have positive impacts on some groups in the resident population, but negative impacts on other groups.
- The UK may be better placed to adapt to immigrant inflows than some other countries due to the flexibility of the UK labour market.

Conventional economic theory suggests that the impact of migration on the labour market is likely to depend on a number of factors: the skills mix of the immigrant inflows compared with that of the native population; and the characteristics of the host country – including the flexibility of both labour and capital and the ability of the labour and product markets to adjust in the short and longer term.

In this chapter, we focus on immigration that leads to an increase in labour supply. It is important to note, however, that not all migration is directly (or indirectly) work-related. For example, an increase in student or family migration is likely to have a smaller impact on labour supply than an equivalent increase in work-related immigration (although some student and family migration will contribute to the labour market under current Immigration Rules).

Immigrant inflows affect the skills composition of the labour market if the skills composition of migrants differs, on average, from that of the resident population. This leads to disequilibrium in the labour market for different labour types at existing levels of wages, employment and output.⁴

Economic theory defines an immigration surplus, resulting from the inflow of labour, as the *“gain in national income accruing to natives as a result of immigration”* (Borjas, 2006, p 12). When (work-related) immigration occurs, altering the skills composition of the labour market, economic theory predicts that national income

⁴ This is unless the supply of migrants changes the skills composition such that it matches the skills composition demanded.

will increase. This rise in national income is distributed between immigrants (who receive wages) and *some* natives (who receive higher wages and additional income from factors of production, including physical and human capital). Natives may also benefit from a wider variety of goods and services and lower goods prices. Clearly the theory is predicated on the immigrants being employed and the absence of bottlenecks that might inhibit a smooth market adjustment.

This presumption of an immigration surplus, however, does not mean that all individuals within the host country are equally affected. Instead, economic theory suggests that natives who have skills that are substitutes to the skill composition of the incoming immigrant population may be negatively impacted, at least for a period of time, while those with skills that are complements to those of the immigrant population will tend to be positively affected. While immigration implies a growth in the national income of a country, in practice, as the House of Lords report in 2008 concluded, it is also necessary to consider the effects on national income (gross domestic product – GDP) *per capita*, as this is a more appropriate measure of living standards of the native population than the overall level of GDP. The Migration Advisory Committee (MAC) report (2012) took this one step further and suggested that when assessing the benefits from immigration, it was necessary to look at the benefits to the existing resident population, that is, to exclude those accrued by the migrants themselves.

It is also important to distinguish between the short-term and long-term effects. To restore equilibrium in the labour market, short-term changes in the labour supply will lead to changes in employment and wages for different skill types. In the long term, the theory suggests that the economy will adjust through changes in capital stock, technologies and industry structures, resulting in more vacancies being created. As a result, economic theory implies that in the long term there would be no permanent disequilibrium, with respect to the impact from immigration on employment or wages. We consider the theoretical arguments for these impacts in more detail below.

Long-term impacts

In the long term, standard economic theory predicts that capital and technology will adjust to immigration and changes in the economic situation, and that labour is fully mobile. In practice, the assumption of perfectly competitive markets with perfectly mobile labour and capital may not hold, and this model therefore may not accurately describe what happens in all cases. Empirical analysis is used to ascertain whether the evidence supports the theoretical model.

Economic theory suggests that in the longer term, migration may have no effect on employment and wages, as changes in the volume and composition of labour supply will over time be absorbed by changes in the structure of the economy, for example,

the output mix⁵ between industries. If markets are competitive and labour is perfectly mobile across industries, then changes in relative factor supplies⁶ (skilled and unskilled labour, capital) will not have a long-term effect on relative wages. Instead, adjustment happens through changes in the output mix and relative scale between industries. For example, if there is a large increase in a country's supply of skilled labour, skilled wages are likely to fall and the economy will become relatively more competitive in the production of goods that are skilled-labour intensive. Production of such goods will expand, raising the demand for skilled labour and lifting the wage back towards its equilibrium level. The shift away from manufacturing and towards services in the UK is an example of how an economy might adapt to the changing skills composition of the population. Of course, there may be many other possible explanations for this shift. It is also true that these economic adjustments can take a considerable length of time and come with other social consequences.

In addition, the economy may adjust through changes in technology, resulting in the development and utilisation of technology that makes more use of the available labour supply in the economy. For example, employers may respond to an increase in low-skilled labour supply by switching from a capital-intensive production model to a more labour-intensive approach that makes less use of mechanised production methods.⁷ Immigration can act to support or inhibit such adjustments. This argument was highlighted in evidence provided to the House of Lords Committee “[The wine industry] is highly labour intensive in California and highly mechanised in Australia, the reason being that it is very easy to get unskilled workers in California but not in Australia” (House of Lords, 2008b, p 117b).

Immigration – particularly of skilled migrants – may lead to benefits through a dynamic impact on growth, technology and innovation, for example, by introducing additional knowledge and innovation, resulting in increased average wages and employment in the long term. However, the ready availability of migrant labour may in some cases also reduce incentives to develop the productivity of existing workers, and the dynamic benefits while often discussed in the literature are difficult to measure accurately.

It is also argued that immigration may increase labour market efficiency. Borjas (2001) argues that immigration “greases the wheels of the labor [sic] market” as immigrants may be more responsive and mobile than the native population and therefore more likely to move to areas with the best economic opportunities. This

⁵ The *output mix* refers to the combination of output attainable across industries given the available resources and technologies.

⁶ *Factor supplies* refer to the availability of scarce resources in an economy at different factor prices. These resources are labour, capital and land. In this context, *changes in relative factor supplies* refer to the increase in skilled or unskilled labour as result of immigration, relative to the amount of capital available.

⁷ This could be explained in two possible ways: industries may choose to adopt different production technologies in response to changes in labour supply (demand side); or profit-maximising innovators may choose to develop new production technologies that are complementary to the new immigrant inflows (supply side).

means that they may self-select into areas where they are most likely to find employment. Greater flexibility through a relative lack of ties or social investment may also provide immigrant labour with a competitive advantage, although conversely the attraction of migrants to existing diaspora may also inhibit their flexibility and responsiveness.

Short-term impacts

Most analyses of the short-term impacts of migration are not well placed to assess effects across markets and over time, focusing instead on static models, and thus ignoring interactions between different markets. These models suggest that there may be negative short-term impacts of migration on labour market outcomes for natives.

In the short term, it is typically assumed that labour and capital are not fully adjustable. Immigration is therefore modelled as an increase in labour supply. Using a simple supply and demand model, immigration will tend to lower the wages of workers who are considered to be ‘substitutes’ to the immigrants (that is, essentially those who compete for the same jobs) and increase wages for those native workers whose skills complement the skills of immigrants. Immigration will also raise the profits of those who own capital and employers who benefit from the increased supply of labour. As noted above, under these theoretical assumptions the economy is said to benefit from an immigration surplus, which accrues to natives. This *“immigration surplus is positive as long as the skills composition of the immigrant flow differs from that of native workers”* (Borjas, 1995, pp 3–22). However, it is clear that there are distributional effects with some natives benefiting (complementary workers, capital owners, employers), and others (substitutes) losing out.

In addition, wages tend to be ‘sticky’ in the short term, meaning that as labour supply increases, wages may not fall in nominal terms as predicted by economic theory. This could mean that employment does not immediately increase by as much as expected, resulting in an increase in involuntary unemployment – and for some individuals, this may mean an extended spell of unemployment. Moreover, at the bottom of the wage distribution the national minimum wage acts as a floor below which wages cannot fall.⁸ Therefore, some employment effects may be expected in the short term. In the longer term, according to this theory, the increase in labour supply should lead to increases in aggregate demand through increases in demand for goods and services, potentially resulting in increases in demand for both unskilled and skilled labour.

Factors affecting the duration of short-term impacts

The duration and severity of the adjustment to a new stable equilibrium will be affected by the flexibility and capacity of the economy to expand and adjust output. The state of the economy is also likely to be a key factor affecting the ability of the

⁸ Assuming full compliance with the national minimum wage.

economy to adjust to changes in labour supply. When there is little slack in the labour market and demand is strong, employers may readily recruit in response to an increase in available labour supply, using the available labour to expand production. In weaker economic conditions, employers would only be expected to increase employment over time in response to an increased labour supply as wages fall. However, weak demand may mean the employer is less likely to seek to expand production immediately.

Over the long term, flexible labour markets are expected to adapt to changes in the economy and accommodate the varying preferences and circumstances of people and businesses in the market. This flexibility relates to firms' ability to make changes to their workforce in terms of the number of workers they employ, the hours worked and the wages paid to their workers, and depends significantly on the level of employment regulations. The UK labour market remains highly ranked in terms of its flexibility and efficiency (World Economic Forum, 2012), with relatively low levels of employment protection legislation (OECD, 2013), more similar to the USA and Canada, than to most EU states. The flexibility of the UK labour market implies that the UK might be more able than other countries to adapt swiftly to labour supply shocks that result from immigration.⁹ However, the same lower level of regulation could allow migrants to undercut native workers by agreeing to work for a lower wage.

As suggested by the above discussion, there are a large number of complexities that need to be taken into account when considering the effects of migration on the labour market. The overall impacts may depend on factors such as: the wider dynamic impacts of migrants; the state of the economy; and labour market structures, including the benefits, training and skills systems. Whilst economic theory clearly differentiates between short-term and long-term impacts, it is not clear for how long 'short-term' impacts may be expected to persist, and whether they are likely to be significant in magnitude. In addition, as described above, the speed of the labour market's adjustment may vary over time according to economic context and other factors. Therefore the persistence and magnitude of short-term impacts is a matter for empirical study. The literature review in Chapter 6 considers the empirical evidence in recent decades.

⁹ For example, Angrist and Kugler (2003) and Longhi *et al.* (2011) find that the effect of immigration on a host country labour market may vary depending on the labour market institutions.

3. Migration policy and trends

Summary

- Migration policy for non-EEA¹⁰ nationals became less restrictive in the late 1990s.
- Net migration was negative from the late 1960s to the early 1980s, then became positive but low and stable until levels rose sharply from 1998, and increased further in 2004 due to the accession of eight Eastern European countries (A8¹¹) to the EU.
- Net migration remained high for most of the post-2004 period, but has started to fall back since 2010 as a result of the policies introduced by the Coalition Government.
- Other factors affecting trends include the introduction of a Points-Based System (PBS) in 2008, and the onset of economic recession in the same year.
- Being a Member State of the EU, there are no restrictions on EEA nationals working in the UK.
- The UK was one of three EU countries not to impose restrictions on labour market access for nationals of the A8 countries in 2004. Restrictions on migrants from the A2¹² countries were implemented in 2007, but were lifted from 1 January 2014.

Migration policy – historical context

European Economic Area context

Nationals of all member countries of the EEA have the right to live and work in any of the Member States of the EU. Therefore as a member of the EU the UK cannot restrict EEA nationals from coming to the UK for employment reasons. However, when a country first becomes a member of the EU, other Member States can impose restrictions via a transition period for up to seven years.

Following the enlargement of the EU in May 2004, labour immigrants from the new EU Member States (known as the accession or A8 countries) were allowed immediate access to the UK labour market. The UK was only one of three countries (along with Ireland and Sweden) that did not impose a transition period for migrants from the A8 countries. This is in contrast to the labour market access restrictions placed in 2007 upon migrants from the more recent accession (A2) countries. These restrictions on A2 nationals came to an end from 1 January 2014.

¹⁰ EEA = European Economic Area. The EEA includes Member States of the EU, plus Iceland, Liechtenstein and Norway. Switzerland is not in the EEA but is counted in this group for our research, as Swiss nationals have free movement rights within the EU.

¹¹ A8 countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

¹² A2 countries are Bulgaria and Romania.

Non-European Economic Area context

In the early 1990s flows of non-EEA workers were managed by the Work Permit System (WPS).¹³ However, in the late 1990s and early 2000s, UK migration policy became less restrictive for non-EEA migrants in a variety of ways. The various changes introduced resulted in a significant increase in non-EEA migration. In the late 2000s the rollout of the PBS changed the rules for non-EEA migration again, introducing a transparent and objective system to facilitate the flow of high-skilled and skilled workers.¹⁴

Following the formation of the Coalition Government in 2010, the immigration system was revised again in order to reduce net migration, ensuring that migrants to the UK are ‘the brightest and the best’ and to reduce the possibility of abuse in the system. A brief summary of the immigration system, as it applies to non-EEA nationals, is given below in Table 3.1.

Route	Type of immigration	Key changes (since 2010)
Tier 1	Work (high-value migrants) <i>Investors, entrepreneurs and exceptionally talented people can apply to enter or stay in the UK without a job offer if they meet the relevant criteria.</i>	<ul style="list-style-type: none"> • Closure of Tier 1 General. • Closure of Tier 1 Post-Study Work Route (PSWR) for most graduates, replaced by more selective arrangements for switching into Tier 2, a Tier 1 Graduate Entrepreneur route and a Tier 4 Doctorate Extension Scheme for successful PhD students. • Introduction of accelerated settlement for Investors and Entrepreneurs, and a new route for Exceptional Talent.
Tier 2	Work (skilled workers) <i>Migrants will need to have been offered a skilled job in the UK, with a prospective employer willing to sponsor them.</i>	<ul style="list-style-type: none"> • Introduced an annual limit of 20,700 for Tier 2 General (but no limit on intra-company transfers). • Cooling off period after leave expires for all Tier 2 migrants except the

¹³ Work permits were issued to employers as permission to employ nominated non-EEA workers in the UK.

¹⁴ Policy and legislative changes affecting migration to the UK: Timeline, available at: <https://www.gov.uk/government/publications/user-guide-to-home-office-immigration-statistics--9>

		<p>highest earners.</p> <ul style="list-style-type: none"> • Removed Resident Labour Market Test¹⁵ for jobs paying in excess of £71,000. • Minimum required salary for information communications technology (ICT) workers, which varies depending on length of leave to remain. • Minimum skills level increased from NQF 3 to NQF 6.¹⁶
Tier 3	<p>Work (low skilled)</p> <p><i>Intended to cater for limited numbers of low-skilled workers in particular sectors.</i></p>	<ul style="list-style-type: none"> • Suspended (as it has been since the introduction of the PBS).
Tier 4	<p>Study</p> <p><i>For students who wish to come and study in the UK.</i></p>	<ul style="list-style-type: none"> • Requiring degree-level students to achieve English at level B2.¹⁷ • Revised permissions to work. • Revised entitlements to sponsor dependants to post-graduate level. • All education providers to have achieved Highly Trusted Sponsor status and meet new accreditation arrangements. • Introduced time limits on study. • Introduced a genuine student test.
Tier 5	<p>Work (Temporary Workers and Youth Mobility)</p> <p><i>If an employer in the UK is willing to sponsor the migrant, or if the migrant is a national of a country that participates in the Youth Mobility Scheme, they may be eligible to come and work in the UK for a short period.</i></p>	<ul style="list-style-type: none"> • Extended to include Taiwan (from January 2012), South Korea (from July 2012), Hong Kong (from January 2014), and increased allocation of places for Australia (from January 2014). • Restricted leave for Government Authorised Exchange (GAE) work experience schemes to 12 months. • Introducing clearer provision and restricting leave to six months for contractual service suppliers and independent professionals working under international agreements. • Restrictions on the right to bring overseas domestic workers to the UK.
Family	<p>Family</p> <p><i>For family members of British citizens and</i></p>	<ul style="list-style-type: none"> • Introducing a new minimum income threshold of £18,600 for sponsoring

¹⁵ This is the process that an employer must follow before employing a person who is not a permanent resident of the UK, if the employer is first required to show that no resident worker could be found to take the job.

¹⁶ NQF is National Qualifications Framework. Level 3 is roughly equivalent to A Level qualifications, Level 4 to Certificate of Higher Education, and Level 6 to a Bachelor degree.

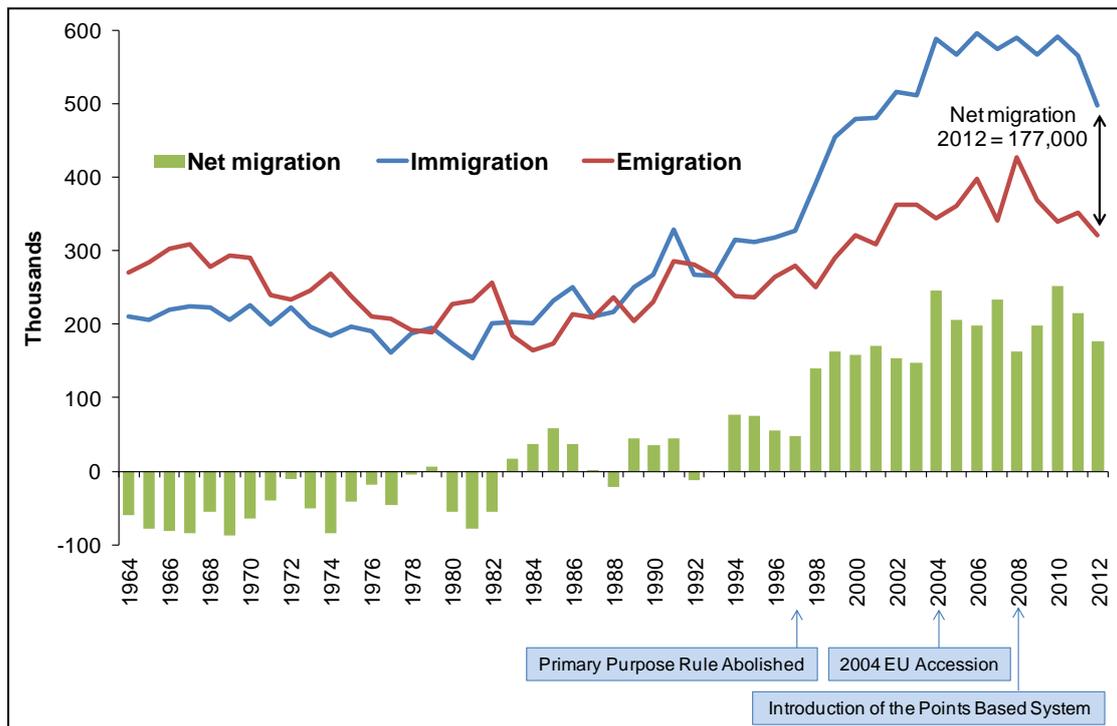
¹⁷ This level is as named by the Common European Framework of Reference for Languages.

	<p><i>settled persons.</i></p>	<p>the settlement in the UK of a partner.</p> <ul style="list-style-type: none"> • Abolishing immediate settlement for migrant partners where a couple have lived together overseas for four or more years and requiring five years probation, and extending pre-settlement probation from two to five years for all partners. • Requiring English language at B1 level for all applicants for settlement from October 2013. • For adult/elderly dependants, closing the route to in-country switching and requiring all overseas applicants to demonstrate that they require long-term personal care that can only be provided by a relative in the UK. • Publishing a list of factors associated with genuine/non-genuine relationships, and tackling abuse of the family route, including measures to tackle sham marriages. • Restricting the full right of appeal for family visitors.
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Migration trends

The key source of data on migration flows is the Office for National Statistics (ONS) Long-Term International Migration (LTIM) release. Derived from the International Passenger Survey (IPS), LTIM measures net migration as the difference between inflow and outflow, for the number of people who change their country of usual residence for at least one year – including those within the EU and British citizens. This accords with the standard international definition of migration.

Figure 3.1: Long-term international migration into and out of the UK, all citizens, 1964–2012

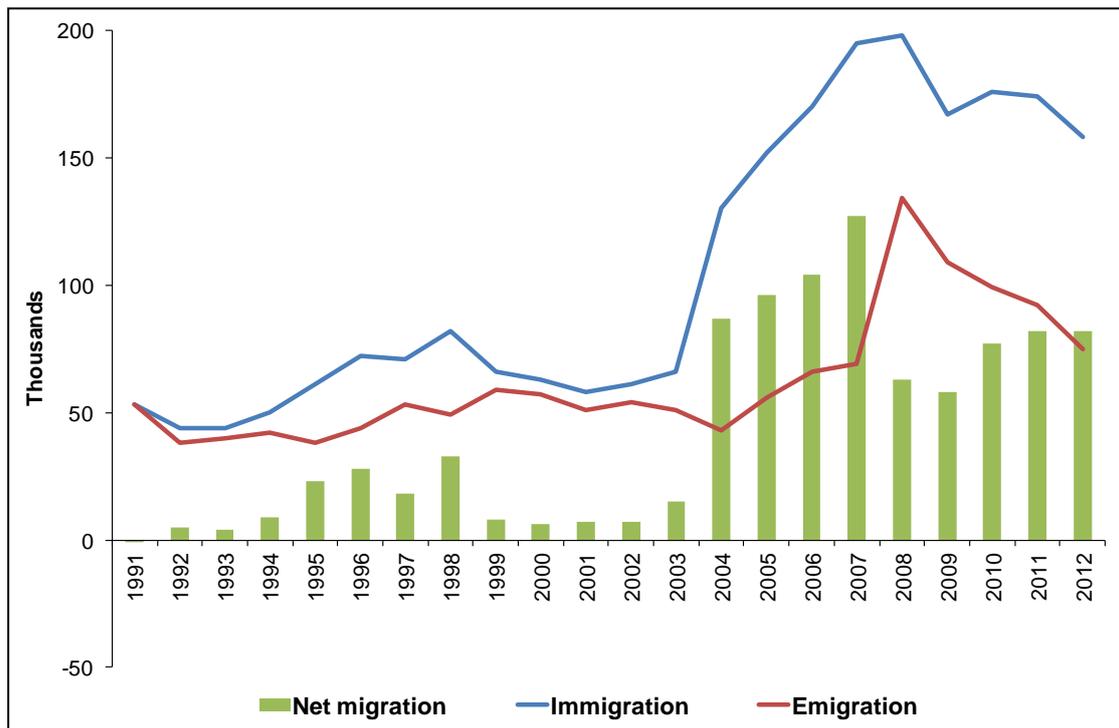


Source: Office for National Statistics – Long-Term International Migration release

Figure 3.1 shows that net migration was low (below 100,000) for most of the 1990s and the preceding decades. Indeed, there was negative net migration of between 50,000 and 100,000 per annum during the late 1960s, and net migration remained largely negative through to the early 1980s, after which it turned mainly positive. Since 1998 net migration has remained high in historic terms, with an average of 210,000 between 2004 and 2012. In 2008, net migration dropped to 163,000 – coinciding with the beginning of the economic recession. Although the following years saw considerably lower economic growth than previously, net migration began to rise back to 2004 peak levels by 2010, before falling to 177,000 in 2012.

Over the last two decades, there were two clear step changes in net migration – one in 1998 and the other in 2004. The rise in net migration in 1998 corresponds with the relaxation of UK immigration policy, and the sharp rise in 2004 is mainly attributable to the accession to EU membership of the A8 states. Figure 3.2 below looks at all EU citizens.

Figure 3.2: Long-term international migration into and out of the UK, EU citizens, 1991–2012

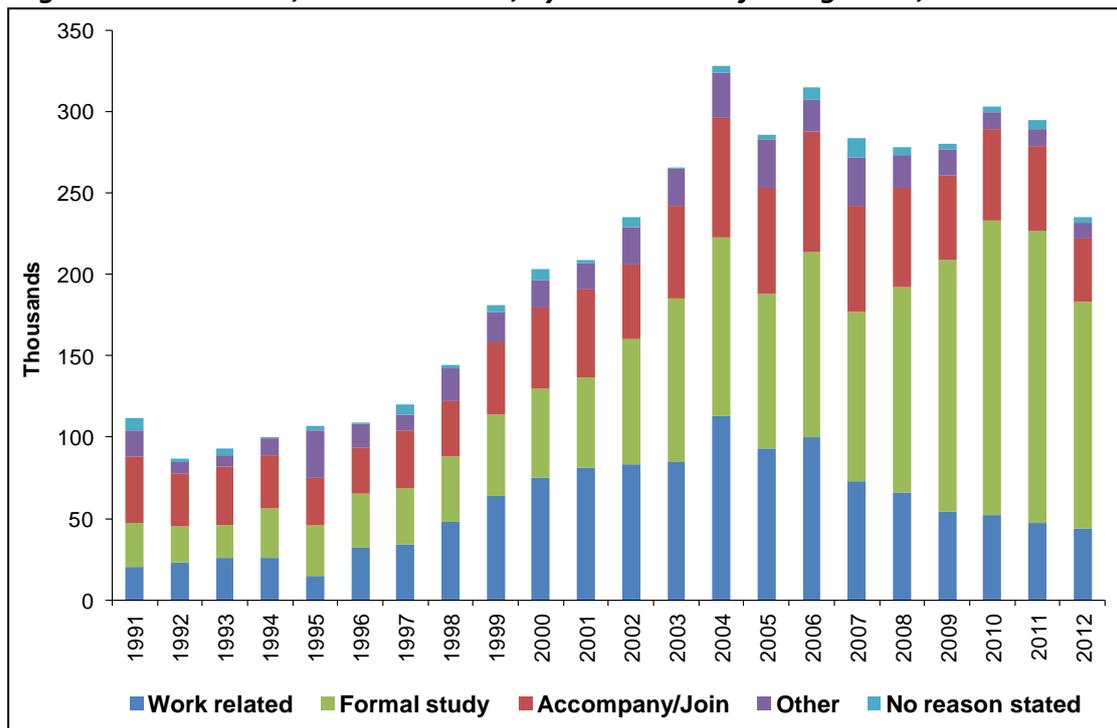


Source: Office for National Statistics – Long-Term International Migration release

LTIM data show that over 50 per cent of long-term migration inflows in 2012 were from non-EU citizens,¹⁸ and between 2000 and 2009, non-EU migrants represented 60 per cent of the total inflow, compared with 22 per cent who came from the EU (the remaining 17% being UK citizens).

¹⁸ In 2012, 31 per cent of long-term migration inflows came from EU citizens and 16 per cent from British citizens.

Figure 3.3: International Passenger Survey estimates of long-term international migration into the UK, non-EU citizens, by main reason for migration, 1991–2012



Source: Office for National Statistics – International Passenger Survey

Figure 3.3 shows the IPS estimates of LTIM into the UK by non-EU citizens and main reason for migration. In 2012 the largest group by main reason for migration were students; around 59 per cent of non-EU long-term migrants came to the UK to study, 19 per cent to work and 17 per cent to accompany/join someone. In comparison, in 2001 more non-EU citizens came to the UK to work (39%) than to study (27%). This will have implications for the impact of migration on the labour market. The substantial growth in international student numbers in the UK in the last decade has been consistent with the growth in the global international student market; however, the particularly rapid growth in student numbers after 2007 led to concerns that there were significant levels of abuse of the student visa system (Home Office, 2012; National Audit Office, 2012).

Analysis of IPS data shows that the period of the 2008–09 recession coincided with a fall in emigration that was sharper than the fall in immigration; therefore there was a small rise in net migration. This was partly reversed as the recession ended – immigration levels began to rise again but emigration did not, thus there was a further steep rise in net migration. Around one-half of the rise in net migration could be accounted for by falling British emigration as economic conditions led to fewer British citizens looking for work abroad. The other significant contributor (both during and after the recession) was the inflow of foreign citizens. Within this inflow, the number of European arrivals peaked before the recession, then fell rapidly during the recession, but began to grow again once the recession ended. The proportion of European immigrants arriving for work purposes (around 20%) was much greater than non-EU immigrants (under 10%) in the year ending December

2012,¹⁹ with a much larger proportion coming to study. Overall, immigration for work-related reasons fell by almost one-fifth during the recession (Simmons, forthcoming).

Home Office Immigration Statistics include the number of visas issued, applicable only to those subject to immigration control – therefore excluding EEA nationals. Visa numbers are a measure of inflows, and the length of time a visa applicant intends on staying in the UK may vary from months to years (or permanently). The high-level trend, based on the number of entry clearance visas issued (excluding visitors and transit), the impact of policy changes (for example, those in Table 3.1 above) and other factors, can be seen in Table 3.2.

Table 3.2: Entry clearance visas issued for main applicants, 2005–12

	2005	2006	2007	2008	2009	2010	2011	2012
Tier 1 (Entrepreneurs, Investors and Exceptional talent) and pre-PBS equivalent	7,486	8,946	11,551	17,427	18,851	16,003	8,656	6,272
<i>Annual change</i>		19.5%	29.1%	50.9%	8.2%	-15.1%	-45.9%	-27.5%
Tier 2 (Highly skilled) and pre-PBS equivalent	66,214	72,921	65,419	55,837	36,287	39,922	38,088	39,172
<i>Annual change</i>		10.1%	-10.3%	-14.6%	-35.0%	10.0%	-4.6%	2.8%
Tier 4 (Student) and pre-PBS equivalent	175,576	190,219	193,775	207,774	273,205	253,786	237,471	193,083
<i>Annual change</i>		8.3%	1.9%	7.2%	31.5%	-7.1%	-6.4%	-18.7%
Tier 5 (Temporary Worker and Youth Mobility Scheme) and pre-PBS equivalent	64,651	53,260	45,121	40,998	36,318	36,539	36,627	36,926
<i>Annual change</i>		-17.6%	-15.3%	-9.1%	-11.4%	0.6%	0.2%	0.8%
Family	66,324	70,119	64,389	53,544	49,472	53,713	45,723	40,925
<i>Annual change</i>		5.7%	-8.2%	-16.8%	-7.6%	8.6%	-14.9%	-10.5%

Source: Home Office

¹⁹ IPS inflows for all citizens and all reasons in year ending December 2012 was 462,000. During the same period, around 95,000 EU citizens and 44,000 non-EU citizens came to the UK for work-related reasons.

Tier 1 visas issued declined by almost one-half between 2010 and 2011. This was a result of the specific policy changes to remove unsponsored general migration from this route, and convert the Tier into a route only for investors, entrepreneurs and the exceptionally talented. For the broader Tier 2 skilled work route, lower numbers also reflect the dampening of demand due to the economic conditions. The largest increase in visa numbers was for Tier 4 visas up to 2010, since when they have reduced primarily as a result of the Government's crackdown on bogus colleges, affecting the non-higher education sectors rather than the universities. Family visas issued have fallen in every year but one from 2007 to 2012, in part due to stricter government controls, but also due to a reduction in the inflow of non-EU migrants.

Home Office analysis has shown the relative changes in employment levels, for UK nationals and foreign nationals (Home Office, 2013 and Home Office, 2014). The analysis shows that UK nationals accounted for 68 per cent of the growth in employment between Q1 2000 and Q1 2004, prior to the main EU accession. Following the 2004 accession, from 2005 until 2008, growth in employment for UK nationals slowed, whilst employment growth for foreign nationals remained strong (Home Office, 2013). Over the period from Q1 2004 to Q1 2008 (just before the onset of recession), foreign nationals accounted for 78 per cent of the total rise in employment (Home Office, 2014). The data then show that with the recession, between 2008 and 2010, there was low and negative employment growth for both UK and foreign nationals, but over most of the latest period, up to the end of Q3 2013, the majority of employment growth (92 per cent) was accounted for by UK nationals.

A range of factors affect the distribution of changes in levels of employment between UK and non-UK nationals, including demographic factors such as the size of the working-age population, wider policy factors (for example, design of the benefits system), and economic factors affecting labour supply, as well as the level of net migration and immigration policy.

The next chapter builds on this picture by further exploring the outcomes in the UK labour market for natives and migrants.

4. Outcomes in the UK labour market for natives and migrants

Summary

- The large increase in net migration that began in the late 1990s took place during a strong period of sustained economic growth, which came to an end with the 2008 recession.
- Over the early part of the period of sustained positive net migration, labour market outcomes improved for the UK (native born) population – employment rates increased steadily up to 2005 and then remained at a relatively high level until the 2008 recession.
- Employment rates for the UK (native born) population have been higher than for non-European Economic Area (EEA²⁰) migrants and for the UK (foreign born) population, but in recent years have been lower than for EEA migrants, as the employment rates for this group changed following the 2004 enlargement of the EU (the A8²¹ accession).
- Inactivity rates for non-EEA and EEA migrants have been falling for almost 20 years.

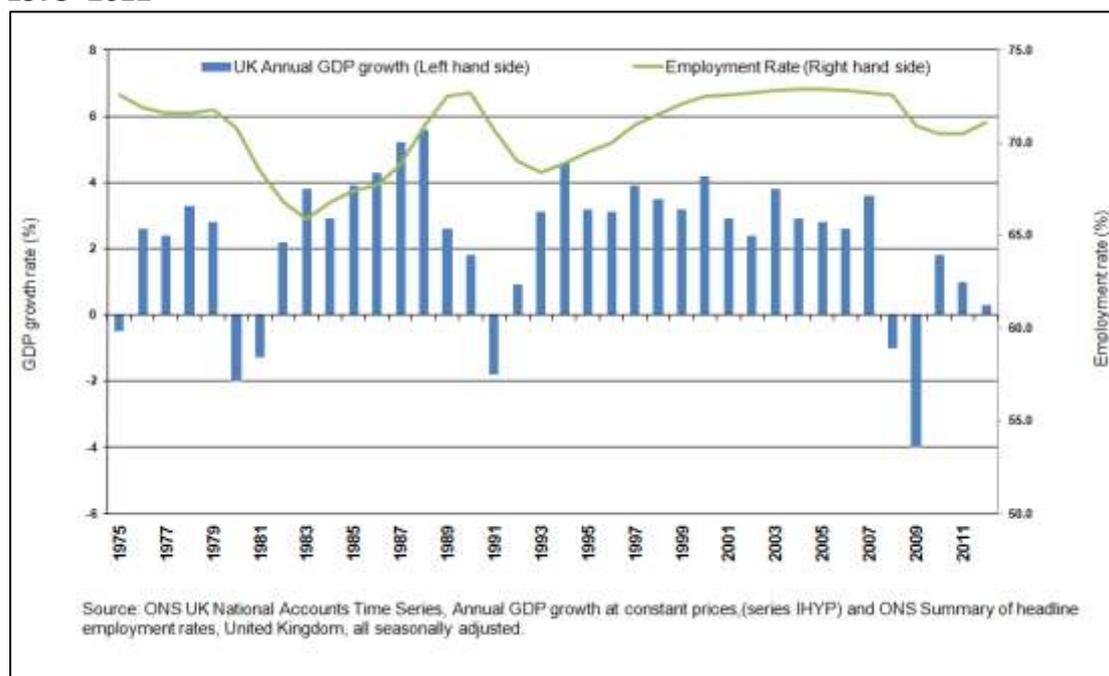
Economic context

The rapid increase in immigration described in the previous chapter, beginning in the late 1990s, took place during a period of sustained economic growth in the UK. Between 1992 and 2007, annual growth in gross domestic product (GDP) averaged just over 3 per cent per annum. There was then a substantial recession in 2008 and 2009, with growth resuming in 2010, but remaining low in 2011 and 2012. This is highlighted in Figure 4.1, which also shows employment rates for the whole labour market.

²⁰ EEA = European Economic Area. The EEA includes Member States of the EU, plus Iceland, Liechtenstein and Norway. Switzerland is not in the EEA but is counted in this group for our research, as Swiss nationals have free movement rights within the EU.

²¹ A8 countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

Figure 4.1: Annual UK gross domestic product growth rates and employment rates, 1975–2012



Source: Office for National Statistics – UK National Accounts Time Series, Annual GDP growth at constant prices, (series IHYP) and ONS Summary of headline employment rates, UK, all seasonally adjusted.

Population trends

The Labour Force Survey (LFS), whilst not designed to measure changes in migration, still provides a rich source of data on working patterns of natives and immigrants. The LFS allows migrants to be identified by both their country of birth and their nationality. Box 4.1 (below) explains the definitions for the different migrant groupings used in the labour market analysis presented in this chapter.

Box 4.1 – Definitions of migrant groups

This analysis of labour market outcomes divides the UK population into four main groups, according to their reported nationality **and** country of birth.

1. **UK (native born)** – UK nationals born in the UK.
2. **UK (foreign born)** – UK nationals born outside the UK. This group includes settled migrants who have acquired UK citizenship, as well as individuals born abroad with parents of UK nationality, who have subsequently returned to the UK.
3. **EEA migrants** – individuals not born in the UK, but with either EEA nationality or born in the EEA (or both).
4. **Non-EEA migrants** – individuals born outside the EEA and with non-EEA nationality.

Note that in many empirical studies of migration, country of birth alone has been used to define migrants. In such studies, groups 2, 3 and 4 above would typically be defined as migrants. However, in practice many of those born abroad will have arrived in the UK some time ago²² and have since obtained British citizenship and so enjoy the same residence rights and access to the labour market as UK born individuals.²³ Differences in employment rates and other factors for those residents who were born abroad will largely reflect long-term integration outcomes. In order to understand the relationship between more recent migration and the labour market it is necessary to consider migrants according to their current nationality.

LFS data on the UK's migrant population tells a similar story to the official net migration statistics presented in the previous chapter, although there can be differences over shorter periods and the LFS is not designed specifically to measure international migration, unlike the International Passenger Survey (IPS)-based net migration statistics. The non-EEA migrant population began to rise in the late 1990s, followed later by an increase in the EEA migrant population after the enlargement of the EU in 2004.²⁴ Figure 4.2 shows the change in population levels for each group of interest, using LFS quarterly data.

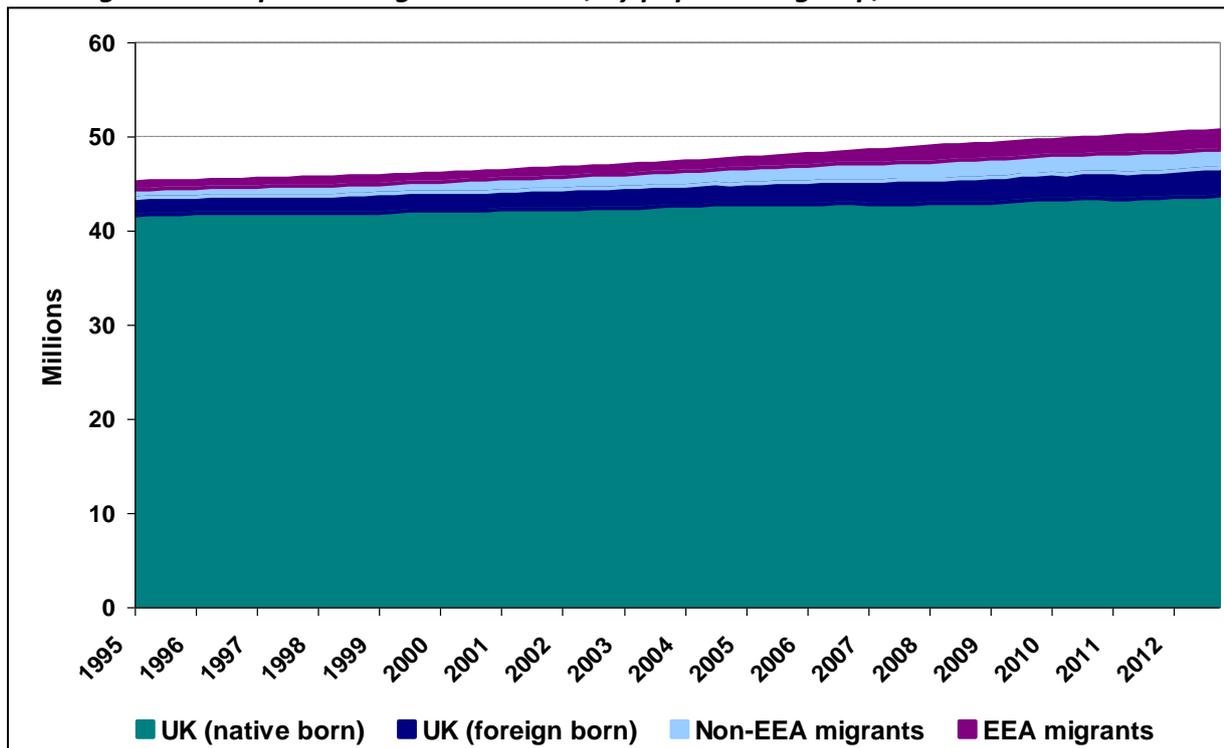
²² "Half of non-UK born residents (50 per cent, 3.7 million) reported having last come to live in the UK before 2001." 2011 Census of England and Wales. Available at:

http://www.ons.gov.uk/ons/dcp171776_310441.pdf

²³ "Of those usual residents born outside the UK ... 46 per cent (3.4 million) had a UK passport." 2011 Census of England and Wales. Available at: http://www.ons.gov.uk/ons/dcp171776_310441.pdf

²⁴ This analysis does not consider in detail the breakdown of the migrant population compared with the UK native population in terms of occupation or skill level. However, it is important to note that there are some significant differences. For example, Rienzo (2012) states that the LFS shows that migrant workers are, on average, slightly younger than native workers. Nearly 39 per cent of migrant workers were aged between 25 and 35 years old in 2011, while less than 24 per cent of UK born workers were in that age group.

Figure 4.2: Population aged 16 or over, by population group, 1995–2012

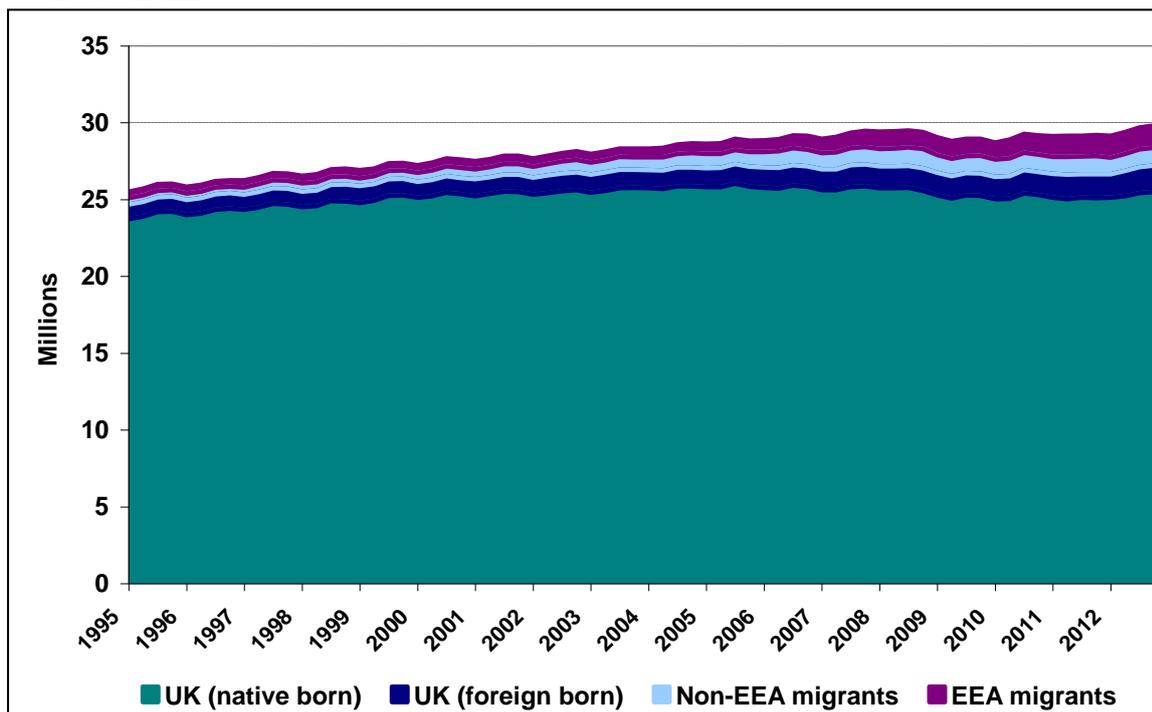


Source: Labour Force Survey

Employment

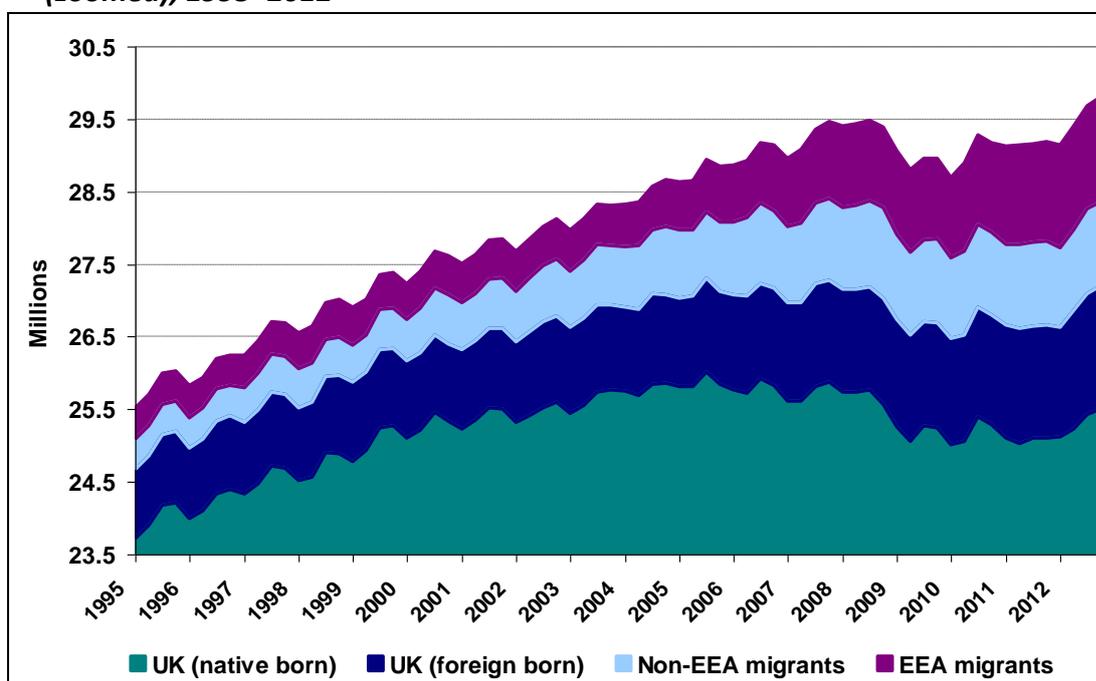
Figures 4.3a and 4.3b shows employment trends for these groups over the same period.

Figure 4.3a: Employment levels, people aged 16 or over, by population group, 1995–2012



Source: Labour Force Survey

Figure 4.3b: Employment levels, people aged 16 or over, by population group (zoomed), 1995–2012



Source: Labour Force Survey

It is clear from Figures 4.3a and 4.3b that for the ten years after 1995, there was a period of growth in employment levels for the UK (native born) population, and although the growth ended in the middle of the last decade, employment levels remained relatively high until the onset of the recession in 2008. Meanwhile, the

changes in immigration were reflected in the labour market – employment levels increased significantly amongst migrant groups – first for non-EEA migrants in the late 1990s, and subsequently for EEA migrants following the enlargement of the EU in 2004. However, with the weakening of the economy in 2008, employment levels fell for most groups, although after falling initially employment of the UK (foreign born) and EEA migrants continued to rise.

Table 4.1: Numbers in employment, by population group, Q4 1996–Q4 2012

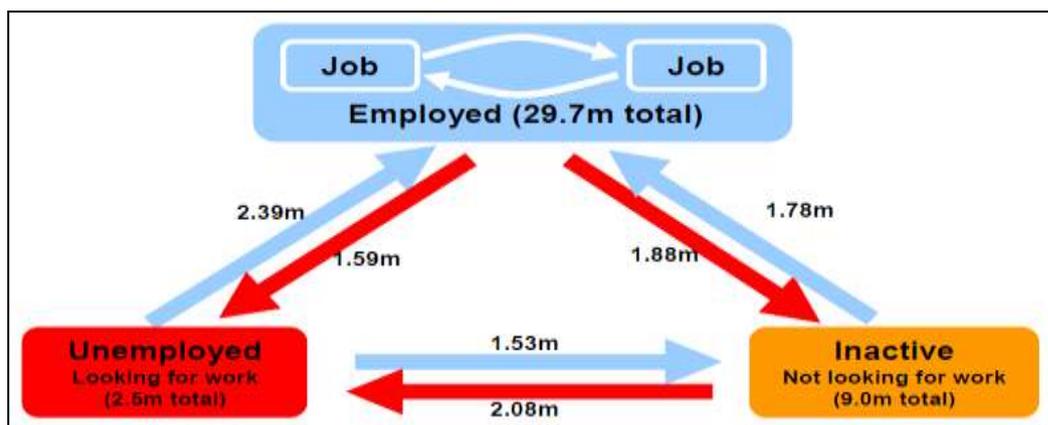
	Employment levels (people aged 16 or over), millions			
	UK (native born)	UK (foreign born)	EEA migrant	Non-EEA migrant
Q4 1996	24.40	1.01	0.42	0.43
Q4 2000	25.34	1.06	0.54	0.66
Q4 2004	25.86	1.22	0.65	0.93
Q4 2008	25.57	1.47	1.11	1.24
Q4 2012	25.50	1.70	1.45	1.16
Change since Q4 1996	+1.10	+0.69	+1.03	+0.73

Source: Labour Force Survey

Box 4.2 – Labour market definitions

The labour market comprises all those over the age of 16 up to the age of 64, and also those over 64 if they are either working or looking for work. In the labour market statistics individuals are categorised according to whether they are employed, unemployed or economically inactive in a particular time period – between time periods individuals may move between these categories.

Figure 4.4: Flows of people in the labour market, Q1–Q4 2012



Estimates are of gross flows between each state in 2012. Stocks quoted in parentheses are from March 2013. Note that net flows into each state do not necessarily correspond to net annual changes. The size of the labour market changes due to people entering/leaving the labour market.

Source: Office for National Statistics – *Labour Market Flows, experimental statistics and ONS Monthly Labour Market Statistics*

The analysis in this chapter divides individuals in the labour market into three groups, according to their labour market status:

1. employed – includes employees, self-employed, unpaid family workers and people on government-supported training programmes.
2. unemployed – includes those who are not employed but are actively seeking work; and
3. inactive – people who are not employment and not actively seeking work.

Labour market outcomes for these groups are presented in terms of either levels or rates. Levels are the number of people in a certain labour market category. Rates represent the proportion of people in labour market category as a percentage of a total. The way in which these rates are calculated is outlined below:

$$\text{Employment rate [16–64]} = \frac{\text{working-age employed}}{\text{working-age population}}$$

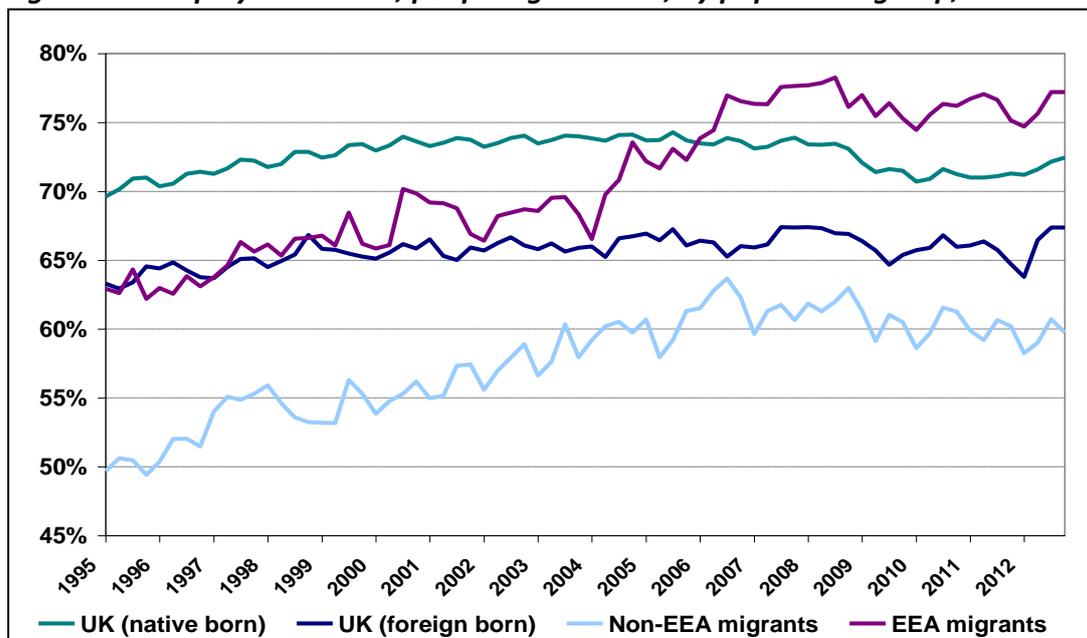
$$\text{Unemployment rate [16+]} = \frac{\text{unemployed}}{[\text{employed} + \text{unemployed}]}$$

$$\text{Inactivity rate [16–64]} = \frac{\text{working-age inactive}}{\text{Working-age population}}$$

For employment and inactivity rates, the total used here is the full working-age population (people aged 16–64).²⁵ Therefore an employment rate of 70 per cent indicates that 70 per cent of the working-age population is in employment. Unemployment rates are calculated slightly differently – as the proportion of the active labour force (rather than the entire working-age population) that is unemployed.

Figure 4.5 shows trends in the employment rates across population groups from 1995 to 2012. For much of the early part of the period of substantial immigration beginning in the late 1990s, employment rates rose for all groups. However, employment rates for the UK (native born) and UK (foreign born) groups rose more slowly than those for foreign nationals.

Figure 4.5: Employment rates, people aged 16–64, by population group, 1995–2012



Source: Labour Force Survey

Employment rates for the UK (native born) population remain substantially higher than for non-EEA migrants and the UK (foreign born) population. Many non-EEA migrants come to the UK to accompany another migrant or as a family member of a UK national or settled person, and for some migrant groups employment rates have been relatively low.²⁶ However, the employment rates for the UK (native born) group have been surpassed in recent years by high employment rates for EEA

²⁵ The number of migrants in employment aged 65 or over is relatively small – roughly 30,000 in Q4 2012.

²⁶ See Table 8 of the monthly ONS *Labour Market Statistics* bulletin for a comparison of employment rates across different migrant nationality subgroups. Available at: http://www.ons.gov.uk/ons/dcp171778_332467.pdf for the November 2013 release.

migrants – a large proportion of EEA migration has been work-related since the enlargement of the EU in 2004.

Table 4.2: Employment rates, by population group, Q4 2012

Population group	Employment rates (people aged 16–64), Q4 2012
UK (native born)	72.4%
UK (foreign born)	67.4%
EEA migrant	77.2%
Non-EEA migrant	59.7%

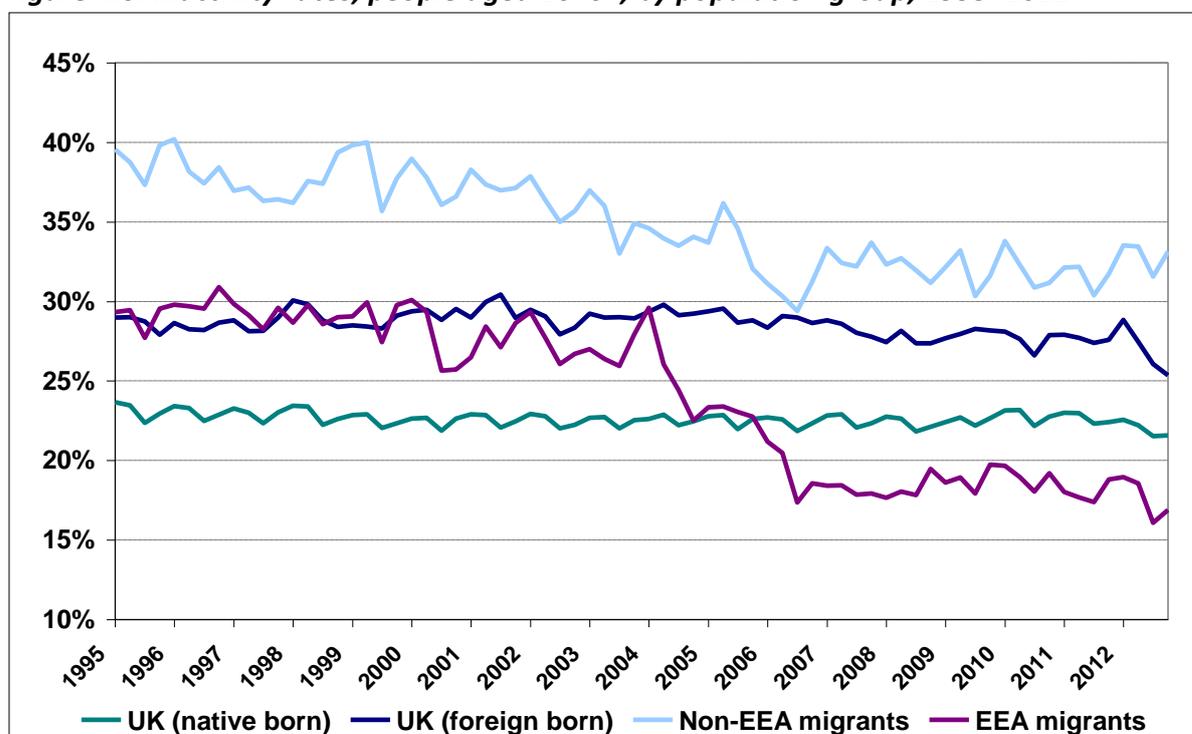
Source: Labour Force Survey

Figure 4.5 also reveals a structural change in the labour outcomes of migrants. Over the period that the numbers of migrants were increasing considerably (see Figure 4.2) the *proportion* of migrants in employment was also increasing, for both EEA and non-EEA migrants. This may reflect both the impact of EU enlargement, as A8 migrants were much more likely to be coming primarily to work compared with previous waves of migrants, but also the long period of economic growth up to the 2008 recession.

Inactivity

Trends in inactivity rates over the same period are seen in Figure 4.6 below:

Figure 4.6: Inactivity rates, people aged 16–64, by population group, 1995–2012



Source: Labour Force Survey

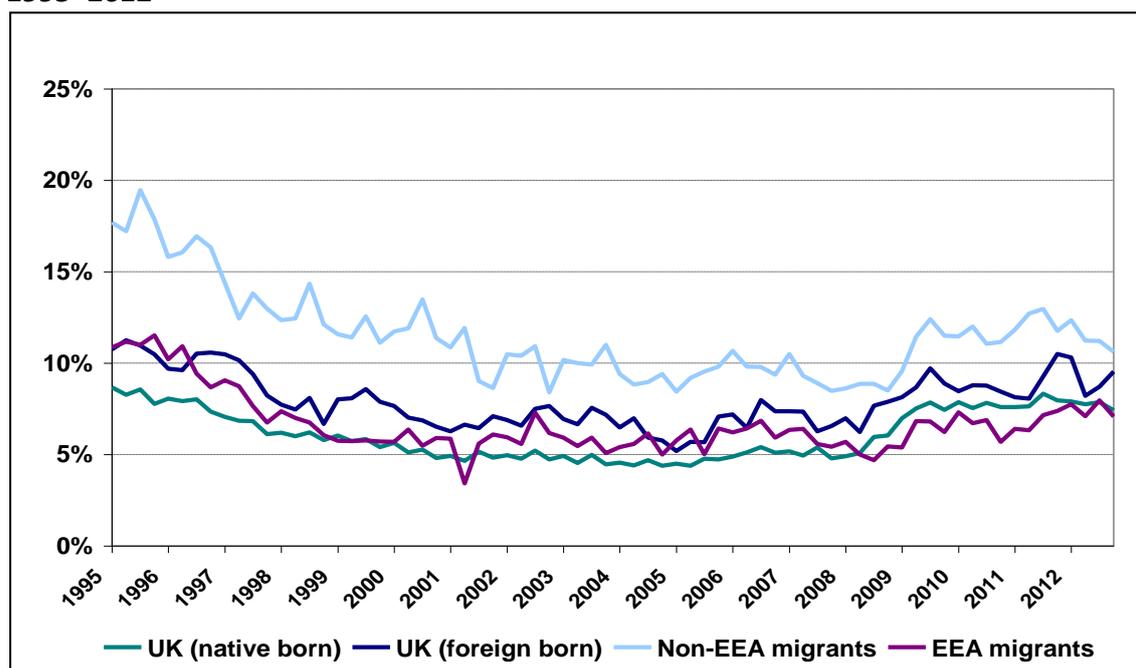
While the most striking decline in inactivity was amongst EEA migrants (again, reflecting the changed composition of that group following the 2004 enlargement of the EU), inactivity rates amongst non-EEA migrants were also declining appreciably over the period up to 2006. Inactivity rates amongst UK nationals (both native born and foreign born) have, in contrast, remained largely flat over the last two decades.

Given the substantial increase in inflows over this period, the decrease in inactivity rates amongst migrant groups is likely to be due to a higher proportion of the new migrants (particularly those from the new accession states) coming to the UK specifically to work. It may also be due in part to increased participation in the labour market by migrants already in the UK.

Unemployment

Turning now to unemployment rates, Figure 4.7 shows that whilst there was a slight reduction in the unemployment rates of the UK (native born) population from 1995 to 2005, there were larger decreases amongst the migrant groups, albeit these all started off from worse positions. Unemployment rates increased in all the groups in response to the 2008/09 recession, with the unemployment rate for EEA migrants remaining below that of the UK (native born) population.

Figure 4.7: Unemployment rates, people aged 16 or over, by population group, 1995–2012



Source: Labour Force Survey

5. Methodological issues

Summary

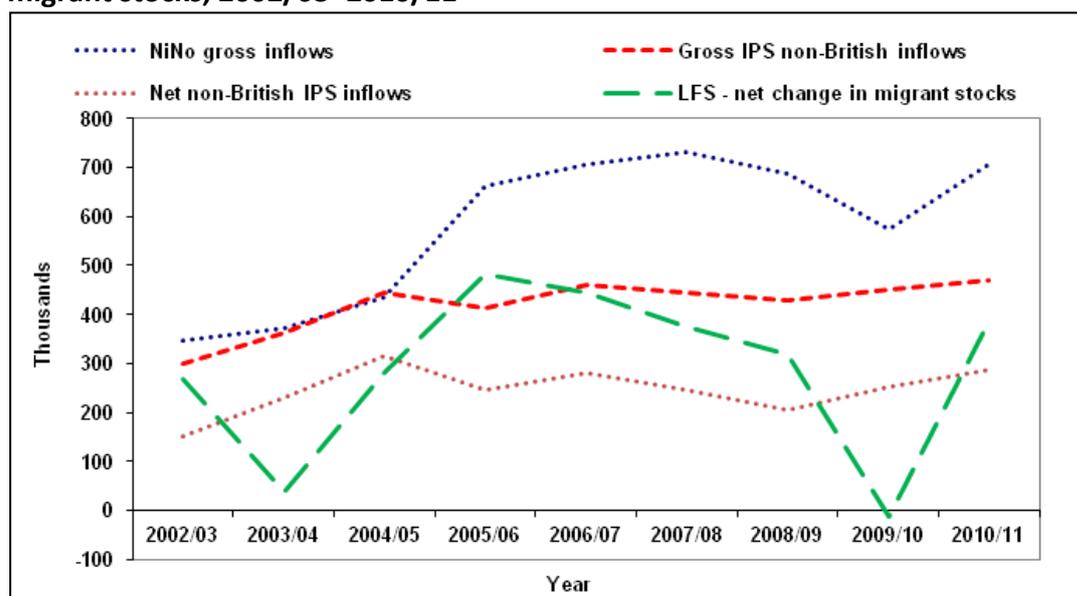
- The ability to measure accurately the impacts of migration depends crucially on both the methodological approach chosen and the availability of robust and timely data.
- Empirical studies of the impact of migration rely on imperfect data, and their conclusions will therefore be open to debate.
- The International Passenger Survey (IPS) is still the best available measure of migration trends but cannot identify specific labour market impacts.
- Although the Labour Force Survey (LFS) has some significant limitations, we consider it to be the most complete data source for measuring the impacts of migration on the UK labour market.
- Other data sources, such as National Insurance Number (NINo) registrations have some advantages over the LFS, but also significant weaknesses that limit their usefulness. Where possible, results using different data sources should be triangulated to provide as full a picture as possible.
- There are two main competing empirical methodologies – spatial correlation and skill-cell correlation. Each attempts to isolate the impact of migration (stripping out other factors) on a certain region (spatial) or skill-group (skill-cell). Both have weaknesses but offer complementary insights

While economic theory provides a starting point for considering the impact of migration, in reality, theory alone is insufficient and the effect of migration needs to be tested with real-world data and evidence. In recent decades, empirical economists have developed techniques to assess the impact of migration on native workers. However, the impacts are difficult to measure and each approach has particular strengths and weaknesses. Some of the main methodological challenges faced in this area are outlined below.

Data

Whilst the best measure of long-term migration *flows* to and from the UK is the IPS, the main source used in economic research is the LFS, because it collects data on migrant *stocks* in the UK and their labour market *characteristics*. Changes in LFS stocks are not easily comparable with IPS net flows, and there are differences in coverage and sample resulting in significant variation in the short term. Although necessary to investigate labour market outcomes, the choice of the LFS as a method for analysing migration flows – like other data sets – does involve some significant weaknesses.

Figure 5.1: Comparison of National Insurance Number gross inflows, International Passenger Survey gross and net inflows, and Labour Force Survey net changes in migrant stocks, 2002/03–2010/11



Source: Department for Work and Pensions – NINOs; Office for National Statistics – International Passenger Survey, Labour Force Survey

The LFS is a sample survey and therefore the estimates derived from it will be subject to some statistical variability, particularly when disaggregated, for example, to regional level or across migrant types. Studies often need to pool multiple quarters of data, and spatial analysis is only robust at the broad regional level rather than at the more local level. This could mean that analysis using the LFS may overlook local labour market impacts that may to some extent cancel each other out at the broader regional level. However, the appropriate level of regional aggregation for analysis of the impacts of migration is an active area of debate, as we discuss further in the following chapter.

A further issue with the LFS is that it does not cover communal establishments and is likely to under-sample from the migrant population. In addition, until recently (2008) the LFS did not include short-term migrants as it excluded individuals who have been resident in the UK for less than six months. However, in principle that should bring it slightly closer to the IPS-based long-term international migration measure, which looks at persons who have changed their normal place of residence with an intention to remain for 12 months or more (that is, the standard UN definition of migration).

In some studies, administrative data on NiNo allocations to overseas nationals and Worker Registration Scheme (WRS) registrations have also been used as a proxy for migrant inflows. These administrative data sources are free from the sample size issues faced by a sample survey, such as the LFS, meaning that analysis can be done at the local authority level rather than at the much broader regional level. However, they include many short-term temporary workers, do not account for internal migration once in the UK, and as a gross measure of inflows, do not ‘de-register’ departing migrants and so are unable to establish net impacts (which leads to

problems if the number of de-registrations is actually large). Administrative sources also tend to lack additional information on important observable labour market characteristics, such as skill level, occupations or wages, and which need to be measured through surveys. Individual information on migrant characteristics allows more detailed analysis, for example, considering separately the impact of high-skilled migrants on the labour market compared with low-skilled migrants.

However, recent improvements to administrative data sources, such as linking across data sets, should allow richer analysis on administrative data in the future and reduce some of the drawbacks highlighted above. Furthermore, longitudinal data sets – the regular collection of data over time of the same group of subjects – also present new sources worth considering when conducting analysis of the impacts of migration on the labour market. Examples include the Department for Work and Pension’s (DWP’s) Work and Pensions Longitudinal Survey and the Lifetime Labour Market Database.

The differences between these data sources are substantial.²⁷ It is possible, therefore, that studies that differ in their choice of data may reach different conclusions as a result. Most studies of labour market impacts have used the LFS. Despite some of the weaknesses in the LFS, it allows analysis to include a consideration of individual migrant characteristics and to examine net changes in migrant stocks rather than gross flows. Our assessment is that the LFS is currently the most complete data source for examining the impacts of migration on the UK labour market. However, the other data sources do have some strengths and any review of the evidence should seek to triangulate results from all the available data sources in order to draw the best conclusions. Recent improvements to administrative data sources may present further opportunities for research in this area.

Migrant definitions

The definition of a migrant is in itself a difficult issue for studies examining the labour market impact of migration. Studies using the LFS have tended to use *country of birth* – migrants are defined as those born outside the UK. The focus of much migration research until recently was on migrant integration and this has tended to lead researchers to favour a country of birth variable, partly because it is often the only one available but also because it may reflect long-term patterns of migration. However, this is not the most appropriate metric for analyses concerned with migration policy. Other studies using administrative data sources (such as NINOs) may use *nationality* or country of birth to define migrants, depending on what is collected in those systems.

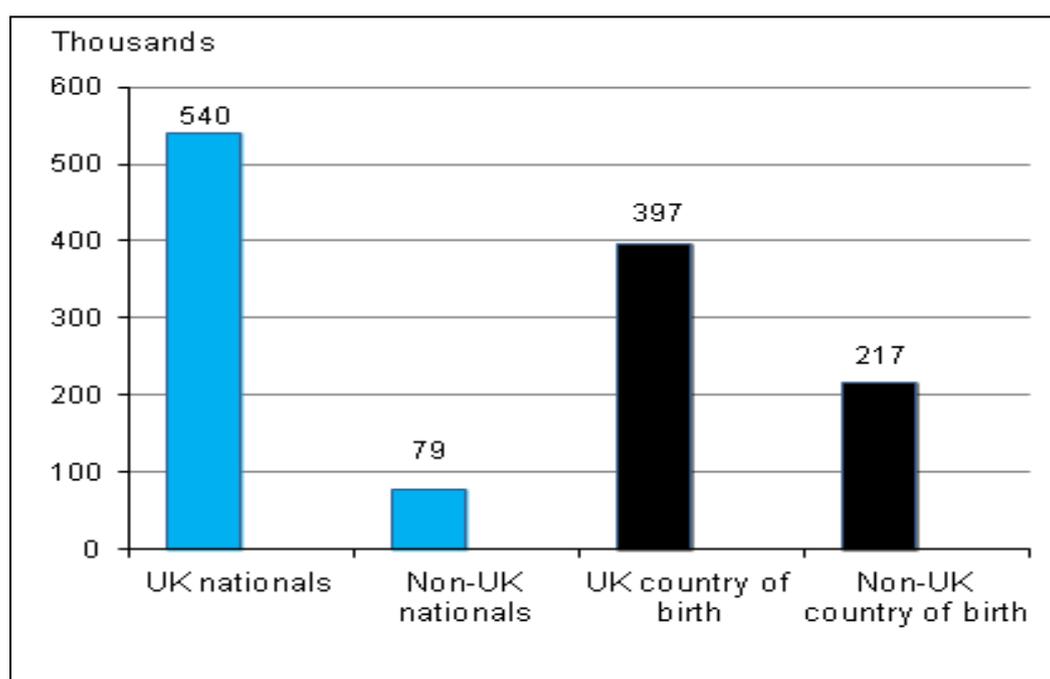
There are substantial differences in the migrant populations defined by these approaches. For example, defining migrants by those born outside the UK includes both people born abroad to British parents, as well as long-established migrants who have since acquired British citizenship to become British nationals. The 2011 Census found that around one-half (46%) of those normal residents of England and Wales

²⁷ See Annex 3 for a full comparison of these data sources.

who were born abroad had British citizenship by the time of the Census (Office for National Statistics, 2013). Using a definition based on a person's country of birth will therefore include individuals who came to the UK as migrants but are now UK citizens.

To illustrate the scale of the differences produced by these competing definitions, the ONS labour market statistics²⁸ show that defined by country of birth there are 4.3 million migrants in employment in the UK, whereas defined by nationality there are only 2.6 million. Moreover, Figure 5.2 below shows changes in employment levels for UK natives and migrants at the national level, using both definitions. Using the nationality definition, only around 13 per cent of employment growth over the past year has been amongst migrants. However, using the definition of people according to their country of birth, approximately 35 per cent of the employment increase over the past year (2012) was amongst those who were born abroad. However, if 46 per cent of residents born abroad are now British citizens an analysis based on this variable will, in effect, include many British citizens in its definition of a migrant.

Figure 5.2: Changes in levels of employment, by nationality and country of birth, not seasonally adjusted, October to December 2011–October to December 2012



Source: Office for National Statistics – Labour Market Statistics, April 2013

Given the differences between these groups, it is clear that where studies that vary in their definition of a migrant produce different results, some of the discrepancy may be due to how migrants have been defined in their analysis.

²⁸ [Labour Market Statistics, ONS, April 2013](#)

Choice of econometric approach

Empirical research attempts to estimate the causal impact of immigration on the labour market outcomes of natives. The key problem is the ability to compare the economic outcomes of the resident population after immigration has taken place with the counterfactual outcome that would have been observed had migration not taken place. While the first is observed, the second is not and therefore needs to be constructed using economic assumptions. Two competing methodological approaches have been developed – spatial correlation and skill-cell correlation. There are strengths and weaknesses to each approach.

The spatial correlation approach involves slicing the labour market into regions that differ in the intensity of immigration experienced. It is then possible to compare how native labour market outcomes vary in response to differing levels of migrant inflows, controlling for region-specific characteristics (regional factors that are constant over time) and common time effects (which affect all regions equally in a particular time period, such as an increase in oil prices). However, this approach can suffer from endogeneity bias²⁹ as migrants are likely to be drawn into regions where there have been positive shocks to regional employment and provide the best economic prospects. Moreover, it is not clear what level of regional disaggregation is appropriate in order to identify regional labour markets. If the level of regional disaggregation is too fine, the region may not approximate to a labour market and impacts may spill over into other regions. But if the region used is too large, it may contain multiple labour markets and so overall regional impacts may mask a range of different local impacts within the region. The ability of studies to subdivide data into different geographies will also be affected by the data source, and may be limited for a sample survey such as the LFS.

Skill-cell studies instead divide the labour market into groups according to skill, and exploit variations in migrant inflows across skill groups to determine the impact of migration. Both education and labour market experience are important components of human capital. As a result, skill groups are often defined as education-experience cells, meaning that individuals within each cell have the same number of years of education and labour market experience. This approach then assumes that workers within cells are perfect substitutes, competing only with others in their respective cells. The impact of immigration is identified using variations in inflows into each cell, reducing the problem of self-selection into regions and out-migration of natives. However, there is mixed evidence on the extent to which migrants and residents are actually perfect substitutes within skill-cells. Difficulties recognising overseas qualifications and evidence suggesting that migrants are often over-qualified for their jobs means that it is difficult to identify correctly a migrant's true skill-cell based on observable characteristics. Furthermore, some migrants with higher skills or education may still take lower-skilled jobs for short-term reasons, for example, to

²⁹ A variable is said to be endogenous when there is a correlation between the parameter and the error term in a regression. This can be caused by omitted variables, measurement error and simultaneous variable determination.

earn some additional money during a summer holiday or for an extended trip abroad, so a skill deficit may not be an indication of poor job-matching.³⁰

Choice of dependent variable³¹

The existing literature looks at the impact of migration on a range of labour market outcomes for the resident population, including employment, unemployment, and wages. As described above, there are a number of ways in which the labour market might adjust to an increase in migration, therefore the choice of labour market outcome used may affect whether a statistically significant impact is identified. For example, if wages are flexible, migration could have a statistically significant impact on wages, but little impact on employment or unemployment.

Moreover, it is clear that unemployment impacts may not be the simple inverse of employment impacts if, for example, there is also an impact on inactivity. One of the difficulties in this area is that imperfect data make it hard to estimate effects with precision. In practice, a decrease in native employment associated with increased immigration could result in both an increase in native unemployment and native inactivity. This could mean that a statistically significant effect is observed when employment is the dependent variable but not if either inactivity or unemployment rates are used individually. This is because natives displaced from the labour market may have been dispersed across the two categories, creating a weaker effect that is harder to observe amidst the variation in the data. On the other hand, it could also imply that no effect exists. Selecting either unemployment or inactivity as the dependent variable would omit the important interaction between the two, which suggests that employment would be a more reliable choice for analysis.

³⁰ See Annex 4 for further consideration of methodological issues associated with these approaches.

³¹ A dependent variable is the variable whose value depends on that of another. In this context, the dependent variable is the labour market outcome of native workers – employment, unemployment or wages.

6. Review of the evidence

Summary

- Until recently, the bulk of the UK literature did not identify statistically significant impacts of migration on the employment rates of natives.
- The recent Migration Advisory Committee (MAC) study provides tentative but strong evidence for a labour market impact in the UK (Migration Advisory Committee, 2012); some other studies (see below) have also found effects in different places and time periods.
- Differences in findings between studies can be explained by factors such as the choice of time period, definition of a migrant, and nationality or skills mix.
- It is likely that the impacts of migration on the labour market vary according to social and economic conditions.
- The recent economic downturn may in part explain why the MAC analysis (*ibid.*) identified a statistically significant displacement effect from non-EU migration. Further testing of the MAC analysis shows that this finding was particularly driven by a downturn in the labour market during 2009 and 2010.
- To date, there is still little evidence of any statistically significant labour market displacement caused by EU migrants. This could mean that EU migration has no statistically significant displacement impacts, or that data issues have prevented any impacts from being observed.
- Evidence from the literature suggests that any displacement effect is likely to be greatest for the low skilled.

Literature review

A review of the literature identified 29 major studies examining the labour market impacts of migration. These included UK, international, cross-country and meta-analyses.³² See Annex 2 for a full list of the studies included, with a short description of each. An outline of the main results identified in the literature is presented below.

The first studies looking at the impact of migration on native labour market outcomes focused largely on the USA's labour market. A seminal paper in this area was Card (1990), who examined how labour market outcomes of Miami residents were affected by a large influx of Cuban immigrants in the 1980s. He found that there was little effect on the wages or unemployment rates of natives in Miami. In contrast, a more recent paper by Glitz (2012) looked at the exogenous³³ labour supply shock to Germany following the collapse of the Soviet Union, and found a statistically significant displacement effect of 3.1 unemployed workers for every 10 immigrants who found employment. Other studies used the methodologies outlined

³² Meta-analyses are studies that examine the results of a large number of studies and use a statistical procedure to calculate an average result across the studies.

³³ An exogenous labour market shock is one that can be considered to be independent of local economic factors.

in the previous chapter and found some evidence of small, negative impacts on both employment and wages in the USA, see, for example, Card (2001) and Borjas (2003). This was followed by additional research by Ottaviano and Peri (2005) who concluded that immigrants and natives are not perfect substitutes, and that the effect of immigration is mainly borne by existing immigrants through lower wages. The findings from a wide range of studies in a variety of countries do not therefore provide a consistent guide to the impact of immigrants on native labour market outcomes.

In reviewing the literature in this area, it is important to recognise that the time period covered by studies is highly relevant as the impacts of migration on resident labour market outcomes are likely to be specific to both time and place (Ruhs and Vargas-Silva, 2012). Studies that cover more recent time periods – from 1998 onwards for the UK - are therefore likely to provide a closer indication of current migration impacts due to both changes in the volume and composition of migrant flows over time. This is especially the case in the UK over this period, when net migration increased substantially relative to previous years (as shown in Figure 3.1).

UK studies that looked at the earlier period (that is, data pre-2000), when levels of migration were relatively low, generally found little impact of immigrants on wages and employment. For example, Dustmann *et al.* (2003) used Labour Force Survey (LFS) data over the period 1992 to 2000, using the ratio of non-UK born to UK born in the working-age population. They did not find a statistically significant impact of migration on resident unemployment. Using the same definitions and LFS data from 1983 to 2000, Dustmann *et al.* (2005) found negative effects on overall native employment and positive effects on overall native unemployment, although again these results were not statistically significant (apart from the small effects found for the UK born intermediately qualified). Similarly, the Migration Advisory Committee (2012), using LFS data and defining migrants based on country of birth, truncated its data set to cover the period 1975 to 1994, and found no impact on employment.

The enlargement of the EU in 2004, resulting in the inflow of labour from the eight new EU Eastern European Member States (A8), can be seen as a natural experiment that provided an excellent opportunity to test the impacts of immigration on the UK labour market. This prompted a number of studies to look at the impact of migrants from the accession countries on the UK labour market. Using administrative data from the years immediately following accession, several studies – Gilpin *et al.* (2006); Lemos and Portes (2008); Lemos (2010) – found no statistically significant effect of A8 nationals on the claimant count rate of unemployment.

By 2008 there was an extensive body of literature both for the UK and other countries, examining the impact of migrants on native labour market outcomes. In this period, when the economy was strong, studies typically found that there was little impact of immigrants on employment, while *“studies estimating the impact of migrants on UK wages have generally found little or no impact on average wages”* (Migration Advisory Committee, 2012). Where studies from this period identify statistically significant impacts on the native population, they tend to be distributional impacts affecting primarily the less skilled, with positive impacts elsewhere in the distribution leading to a statistically insignificant impact overall. For

example, Dustmann *et al.* (2008) found that average wages fell for the lowest decile of the wage distribution but rose for other deciles.

The finding that the impacts of migration vary across the skill distribution is in line with economic theory, which suggests that impacts on native labour market outcomes will be concentrated on those natives who are in competition with migrants (that is, those who are substitutes in production rather than complements). This is much more likely to be the case for the low skilled, although may also affect some skilled professions. Other studies with similar findings to Dustmann *et al.* (2008) include Nickell and Salaheen (2008), who identified a positive impact on average wages, but negative wage impacts for those in low-skilled occupations. Nathan (2011) estimated that there was a negative and statistically significant relationship between migrant shares and native employment rates, with the impacts strongest amongst the intermediate and low skilled.

Some UK studies that have included the recent period have found more statistically significant and negative impacts of migration on the labour market outcomes of UK workers. For example, Nathan (2011) covered the period 1994 to 2008 inclusive, and found a statistically significant negative impact on the native employment rate from increased migration. The Migration Advisory Committee (2012) analysis over the period 1995 to 2010 found a negative association – albeit tentative – which suggests that an increase of 100 non-EU born working-age migrants is associated with a reduction in native employment of 23. This suggests that the displacement effect of migrants was higher during the recent decade when levels of migration were much higher than previously. It is also likely to indicate negative impacts as a result of the recession in the last years of this period, although Nathan (2011) predated this effect. This would be in line with the findings from Peri (2010), who presented evidence of greater negative impacts on USA native employment and wages during periods of a negative output gap (and for the less skilled). The Migration Advisory Committee (2012) also found a negative association when the output gap was at or below zero, and found no effect when the output gap was positive. On the other hand, despite including data covering the period 2002/03 to 2010/11, Lucchino *et al.* (2012) estimated only very small negative and generally statistically insignificant impacts of migration on UK claimant unemployment, either overall or for any identifiable subgroup, although it is important to note that this study was one of very few to use National Insurance Number (NINo) data rather than the LFS.

A further consideration is the potential effect of native outflows from a region seeing an increase in migrant inflows. This is an important consideration, as its occurrence may mean that the impacts on the labour market from increased migration are not accurately identified. Nathan (2011) conducted robustness checks and found that there was no statistically significant impact of native outflows on the extent of displacement. Such checks were also incorporated in the estimates of Dustmann *et al.* (2003), Dustmann *et al.* (2005), Lemos and Portes (2008), and Lucchino *et al.* (2012) – though none of these studies, aside from Dustmann *et al.* (2005), looked at employment effects (see Annex 2).

The distinction between EU migrants and non-EU migrants may be important. EU migrants have full access to the UK labour market and are not subject to

immigration controls. In addition, the closer geographical proximity of EU countries means that EU migrants may be more likely to return home if the economic prospects in the UK deteriorate. Few studies in the literature make the distinction between EU and non-EU migrants. Amongst those that do focus on migrants from within the EU, there is little evidence of a statistically significant displacement effect. Notably, the Migration Advisory Committee (2012) found a tentative displacement effect only for non-EU migrants. Although the study found a similar sized coefficient for EU migration as for non-EU migration, it was not proven to be statistically significant. In part, this may of course be due to the variation in the data due to the smaller number of EU migrants making it harder to achieve results from these sorts of analyses. As discussed above, studies looking at migration from the EU accession countries also found no statistically significant effect.

Studies looking at the impacts across countries provide a further insight into the effects of migration on labour markets. Angrist and Kugler (2003) looked at 18 European countries and their results suggest that greater labour and product market rigidity increases negative immigration effects. The estimates typically imply more native job losses in countries with restrictive institutions. Jean and Jiménez (2007) instead looked at 18 OECD countries and found that anti-competitive product market regulations increased both the magnitude and persistence of the negative impact, while more stringent employment protection legislation magnified its persistence. A higher average replacement rate of unemployment benefits increases the magnitude of the effects. A meta-analysis of 18 studies from 10 countries by Longhi *et al.* (2008) found that impacts of migration varied with the definition of the labour market, extent of substitutability of foreign and native workers and controls for endogeneity of immigrant settlement.

There are, therefore, a wide range of findings in the literature, dependent on both the method and focus of inquiry. There is agreement across the literature, however, that there are no substantial long-term impacts of migration on the labour market outcomes of UK workers. For example, the Migration Advisory Committee (2012) found that any displacement effect was eradicated after a five-year period for a given cohort, while Peri (2010) found no negative impact on native employment in the long term (defined as seven to ten years). Jean and Jiménez (2007), in their study of males in OECD countries, also found no long-lasting effects of immigration on native unemployment, though they suggest that under certain circumstances, there may be a transitory impact that could last five to ten years.

The studies referenced here used a range of methodologies and definitions, and covered different time periods and countries. It is therefore unsurprising that they produced a range of findings. More of the UK literature focusing on employment found evidence of displacement – specifically Nathan (2011) and the Migration Advisory Committee (2012). Dustmann *et al.* (2005) found no effect on average, but did find a statistically significant employment impact on natives with intermediate qualifications. However, studies examining the impacts on native unemployment rarely identified statistically significant effects – for example, Dustmann *et al.* (2003) and Dustmann *et al.* (2005) found no effect overall, as did Gilpin *et al.* (2006), Lemos and Portes (2008), Lemos (2010), and Lucchino *et al.* (2012).

The results from the literature outlined in this chapter suggest that the labour market impacts of migration depend critically on context – migration is a social, economic and geographic phenomenon, and therefore impacts may vary depending on social and economic conditions. In particular, it seems likely that whether migration is found to have a statistically significant impact on the UK labour market depends on contemporaneous conditions in the labour market, the scale of net migration inflows compared with the overall labour market, and the composition of net inflows (for example, the proportion of skilled to low skilled).

Box 6.1: Summary of recent UK studies on displacement

Dustmann *et al.* (2005)

Dustmann *et al.* (2005) looked at the impact of foreign born migrants on the British labour market between 1983 and 2000. This study used data from the LFS to look at a range of labour market outcomes including employment, unemployment, participation and wages. Using a spatial correlation approach, Dustmann *et al.* found little evidence of displacement or any adverse impacts on native labour market outcomes. When broken down by skill level, the results suggested a small negative displacement effect on low-skilled workers and a small positive effect on the higher skilled. Estimated wage effects (using data from 1992–2000) were small and positive, but statistically “*poorly determined*”. It is important, however, to note that the data used in this study are pre-2000 and therefore do not cover the period when the volume of net migration to the UK was at its peak.

Lemos and Portes (2008)

Lemos and Portes (2008) examined the impact of migration from the new EU Member States (A8 Eastern European countries) on UK native workers from 2004 to 2006. The study used a combination of administrative data sources on A8 migration (Worker Registration Scheme – WRS) and unemployment (claimant count), and was an empirical examination of the impact of a large and relatively exogenous shock to the UK labour market. Using a spatial correlation approach, the authors failed to find any statistically significant impact of A8 migration on native claimant unemployment – either overall or for any identifiable subgroup, as well as no statistically significant impact on wages. However, a significant limitation in the data used was that the WRS only measures gross inflows of A8 migrants, although the authors present evidence suggesting a close link between cumulative WRS inflows and the LFS measure of the stock of A8 migrants.

Nathan (2011)

Nathan (2011) examined the impact of migration on the labour market outcomes of UK natives between 1994 and 2008. The study uses the LFS broken down into ‘travel to work areas’ and by skill level. Using a spatial correlation approach, increases in migrant shares were associated with a fall in native employment rate and an increase in native wages. However, these results varied by skill group with those at the bottom of the skill distribution being the most adversely affected. For employment, there were negative coefficients for all skill levels, although these were only statistically significant for intermediate and lower skilled, while for wages, Nathan found positive coefficients for the high and intermediate skilled and negative coefficients for the low skilled, although these were not statistically significant. Using the skill-cell approach, he found little impact on wages at different skill levels and found that the biggest impact on native employment was for the low-skilled UK workers. This was a methodologically strong study, using a number of model

specifications. However, results from this study suggest considerably larger displacement effects than the rest of the literature in this area.

Migration Advisory Committee (2012)

The Migration Advisory Committee (2012) examined the impact of migration from both the EU and non-EU on the employment rates of UK native workers across regions from 1975 to 2010. The study used annual LFS data to look at the impact of migrants across the economic cycle, in both the short and long term. Using a spatial correlation approach, the MAC found a tentative negative association that was statistically significant between migrant share and native employment rates in periods when the output gap was negative, and for non-EU migrants in the period 1995 to 2010. The study found no association between working-age migrants and native employment when the output gap was positive, for EU migrants or for the earlier period 1975 to 1994.

Lucchino, Rosazza-Bondibene and Portes (2012)

Lucchino *et al.* (2012) looked at the relationship between immigration and unemployment for all new foreign national inflows between 2002/03 and 2010/11 (financial years). The study combines NINo registration and claimant count data. It looked at the recent recession period (2008 to 2009) but found no statistically significant impact of migration on claimant unemployment either overall or for any identifiable subgroup over the time period, including during the recession period. Using a spatial correlation approach, they found a very small negative and generally insignificant correlation between the migrant inflow rate and the change in the claimant count rate. These estimates remain small and negative when an instrumental variables approach is used.

Further analysis of the Migration Advisory Committee (2012)

The Migration Advisory Committee (2012) analysis is both the most recent and arguably one of the most wide-ranging studies of the impact of migration on UK labour market outcomes, looking as it does over periods of high and low migration, economic upturns and downturns, and across both EU and non-EU migration and for different skill groups. It tentatively identified a negative and statistically significant displacement effect for non-EU migrants between 1995 and 2010. This finding was a departure from much of the previous economic research in this area. Therefore, as part of this review we undertook a limited amount of additional analysis using the Migration Advisory Committee (2012) data set and methodology.

This additional testing revealed that the main result³⁴ remains robust to a number of tests. First, when omitting London data from the regressions,³⁵ and defining

³⁴ We interpret the regression in Table A4, Regression (4), 1995–2010 (Migration Advisory Committee, 2012) as the headline result.

migrants by nationality rather than country of birth, the magnitude of the result remained largely unchanged and still statistically significant, albeit at a weaker level of statistical significance (10%). Second, updating the data set with data up to Q2 2012 produced results similar in magnitude and strongly statistically significant (at the 1% level).³⁶

However, when data from part of the period of economic downturn (2009 and 2010) were omitted, the impact of non-EU migration was not found to be statistically significant.³⁷ This latter finding – that the results identified by the MAC for non-EU migration in recent years were closely linked to the recent downturn in economic growth – reconciles the MAC findings with much of the previous literature. Whilst some other contemporary studies, such as Lucchino *et al.* (2012), have not found statistically significant impacts, they were based on an alternative and arguably analytically weaker NINo data set, as described above. The finding that displacement impacts may be heavily influenced by economic conditions is consistent with evidence from the USA by Peri (2010), and fits with the intuition that there will be more intense competition for jobs in periods when the economy is weaker.

Applying the MAC analytical approach with native unemployment rates as the dependent variable failed to uncover a statistically significant impact. This result was similar to Lucchino *et al.* (2012) who examined the impact of NINo inflows on claimant count rates. However, as discussed in Chapter 5, if there is displacement of native workers from the labour market, it is possible that examining unemployment alone may fail to identify it.

It should be noted that the Migration Advisory Committee (2012) analysis presented a range of model specifications, including an instrumental variables (IV) approach, using lagged migrant shares to instrument for current migrant shares.³⁸ This instrument is routinely applied in the literature. However, the success of the IV technique fundamentally depends upon the quality of the instrument available. In this case, there are several reasons why the IV approach might not be a substantive improvement compared with ordinary least squares (OLS) with region and time fixed effects, although this is an issue for debate. Firstly, one of the main sources of endogeneity in the OLS specification is the likely correlation between current migrant inflows and current economic outcomes. But as economic outcomes are likely to be correlated over time, this means that lagged migrant shares are likely to

³⁵ Given the importance of London as a destination for migrants, it makes sense to consider whether the MAC result is a national finding or whether it is driven by impacts in London.

³⁶ See Annex 1 for tables showing these results in full.

³⁷ The testing also experimented with examining more truncated time periods to coincide with periods where migration flows changed significantly, for example, after the enlargement of the EU in 2004, and since the recession in 2008. However, this relied on fewer observations, and the results were more volatile and likely to be unreliable, so are not reported here.

³⁸ The reason for trying an IV approach is that, where the instrument is valid, the technique removes the sources of endogeneity that may result in biased estimates when using ordinary least squares (OLS) with fixed effects. This includes the problem that native outflows in response to migrant inflows may result in biased estimates of the impact of migration on native employment. In the specification that used an IV approach, the statistical significance of the headline result emphasised in the MAC's conclusions disappeared.

be also correlated with current economic outcomes. Thus lagged migrant shares probably fail to meet the exclusion restriction required of an instrument (that it be uncorrelated with the error term). Secondly, instrumenting results in larger standard errors (even when the instrument is valid, but particularly when the instrument is only weakly correlated with the endogenous variable) and therefore allows for less precise estimates, reducing the likelihood of identifying a statistically significant impact where one exists. The Migration Advisory Committee (2012) points out that experimenting with different lag periods for the instrument produced significant variation in the coefficient on migrant share – perhaps indicating some of the problems that can arise with this technique.

In its 2012 report, the MAC emphasises that the model with region and time fixed effects that generated the headline result focused upon here is its preferred model, a view shared by its peer reviewers and the authors of this report. The MAC's preferred model is able to eliminate some sources of endogeneity, but endogeneity remained a concern. Therefore, in drawing conclusions, the MAC was careful to highlight a "*tentative association*" identified in the data, rather than a fully causal interpretation. This should be emphasised in any interpretation of this report's results, but will be equally true of any of the other studies of migration effects on the labour market.

Future research considerations

Although our further analysis looked at the recession effects, it did not look at other major changes to labour market conditions – such as the impact of the 2004 EU accession. The analysis of impacts from EU migrants could be considered through segmented analysis of a long-term data set encompassing all migrants (EU and non-EU) – the segments being pre-2004 accession and post-2004 accession. This approach would examine whether there might be statistically significantly different impacts before and after the large influx of A8 migrants. This would add to the existing research that looks solely at EU migrants around the 2004 time period (typically 2003 to 2006), such as Portes and French (2005), Gilpin *et al.* (2006), Lemos and Portes (2008) and Lemos (2010). This could be supplemented by segmenting by migrants with low/high education.

Whilst the discussion thus far has focused on the impacts of migration on native employment – and to some extent unemployment – there are numerous dimensions to the labour market, and migration may impact natives through any one (or more) of these dimensions. For example, increased migration may affect the share of part-time/full-time working patterns amongst UK natives; the hours worked by UK natives; and/or the decision to enter the labour market. These areas of enquiry consider the impacts on UK workers – similarly research should continue to examine impacts of migration on UK businesses by investigating the impacts of migration on profits/revenue and productivity. The role that skill levels play, for example, in terms of the relative advantage of native and foreign workers in acquiring particular kinds of jobs, should also be taken into consideration.

Future research might also focus on developing a deeper understanding of the mechanisms by which the labour market and wider economy adjusts in response to

increased migration. Adjustment requires a reallocation of resources in the light of increased labour migration. This might include some substitution between migrant and native labour. However, there might also be substitution between capital and labour, as well as between new migrants and older migrants.

It is these areas that are relatively less studied, compared to effects on employment, unemployment and wages. Although future research on these less studied areas would face methodological problems similar to those already discussed, consideration of these elements would provide a well rounded insight into the impacts of migration.

7. Conclusions

The UK has experienced high levels of net migration since the late 1990s. Non-EU migrant inflows rose considerably in the late 1990s, whilst EU migrant inflows rose sharply after 2004 following the enlargement of the EU. Net migration peaked in 2010 and since then has fallen back, but remains relatively high in historical terms.

Much of this period of high net migration took place during a sustained period of economic growth, which averaged 3.2 per cent annually between 1992 and 2007.³⁹ During much of this period (specifically, up to 2005), labour market outcomes improved for UK workers and migrant workers alike. Since 2008 the performance of the UK economy has been weaker whilst net migration has remained relatively high, and during 2009 and 2010, labour market outcomes deteriorated for both UK natives and migrants. However, employment levels for UK nationals have been rising more than those of foreign nationals over the period 2012/13 (Home Office, 2013).

The predictions of economic theory regarding the overall labour market impacts of net migration depend on a number of assumptions. In the long term, it is argued that there is no negative impact on wages or employment of native workers as, over time, economies find ways to adjust to a stable equilibrium. Dynamic impacts on productivity and innovation may imply that in the long term migration could have positive impacts on the labour market. However, these dynamic effects are unproven and they are difficult to measure and assess robustly.

In the short term, the predicted impacts of net migration on natives vary depending on a range of factors, including how the skill mix of migrants compares with that of the native population, the flexibility of the labour and product markets, general economic conditions, and the extent to which migrants increase aggregate demand in the economy. It is likely that while some groups in the economy benefit from immigration, others will lose out.

Given the ambiguity of theoretical predictions, the labour market impact of net migration might be considered an empirical question. The key question that empirical research attempts to answer is whether these short-term impacts are large enough in magnitude and long enough in duration to be observed in labour market data. However, the data available for analysis have a range of weaknesses and therefore empirical evidence is mixed. Ruhs and Vargas-Silva (2012) conclude that “*research evidence on the labour market effects of immigration is thus always specific to time and place*”. This review highlights that studies examining the labour market impacts of migration differ not only in time and place, but also perhaps due to their choice of methodology and data.

Our assessment of the evidence

³⁹Source: Gross domestic product (GDP) by gross value added (GVA), at basic prices: data series IHYP, Office for National Statistics (ONS). Available at: <http://www.ons.gov.uk/ons/rel/naa2/quarterly-national-accounts/q3-2013/tsd-quarterly-national-accounts--q3-2013.html>

In carrying out this review we attempted to reconcile the wide-ranging conclusions from the economic literature in this area. Importantly, we recognise that the impacts of migration on the labour market depend on a range of factors that vary over time, and therefore the impact of migration on the labour market cannot be condensed to a 'one size fits all' answer. Any assessment of future impacts of migration on the labour market cannot therefore just be based on previous impacts, but must also incorporate a judgement about how similar future conditions will be to those in the past. In addition, data and methodological imperfections mean that it is difficult to assess the impacts of migration on the labour market in an accurate and reliable way. Future improvements in data and/or analytical approaches may improve upon, and possibly alter the view of, the evidence described in this report.

It is therefore impossible to predict the impacts of future net migration on native employment rates with any great degree of certainty. However, in advising on government policy, government analysts have to make a judgement. The conclusions below summarise our view of the evidence to date that we will employ in making that judgement in the future, according to the economic and wider context.

Prior to 2008 the bulk of the evidence suggested little impact of net migration on labour market outcomes for UK natives. Typically, estimated impacts were small in magnitude and not statistically significant, even in those studies covering the post-accession period from 2004 onwards. These studies covered a time period with sustained economic growth and relatively low levels of unemployment. Therefore, we conclude that there is little evidence of a statistically significant displacement effect when the labour market is buoyant, even when net migration inflows may be quite large.

However, there is evidence to suggest that high levels of net migration in an economic downturn may result in some displacement of natives. The Migration Advisory Committee (2012) analysis found a statistically significant displacement effect between 1975 and 2010 when only periods of economic downturn were examined. The MAC also identified a statistically significant impact of all migrants, and particularly non-EU migrants, on native employment rates between 1995 and 2010. Further testing of the data has shown that this result is driven by data towards the end of this period, when there was a severe recession. This is consistent with Peri (2010) who found that greater displacement occurred in the USA during times of economic downturn. It also fits with the predictions of the theoretical framework outlined in Chapter 2, where the duration of the short-term impacts of a net migration inflow might reasonably be expected to last longer during a recession.

Overall, our assessment of the evidence is as follows.

- There is relatively little evidence that migration has caused statistically significant displacement of UK natives from the labour market in periods when the economy is strong.
- However, in line with some recent studies, there is evidence of some labour market displacement, particularly by non-EU migrants in recent years when the

economy was in recession. This is consistent with the idea that labour market adjustment is slower during a recession, and with wider international evidence.

- Displacement effects are more likely to be identified in periods when net migration volumes are high, rather than when volumes are low – so analyses that focus on data prior to 2000 are less likely to find any impacts.
- There has been little evidence so far in the literature of a statistically significant impact from EU migration on native employment, although significant EU migration is still a relatively recent phenomenon and this does not imply that impacts do not occur in some circumstances.
- Where displacement effects are observed, these tend to be concentrated on lower skilled natives.
- The evidence also suggests that where there has been a displacement effect from a particular cohort of migrants, this is likely to dissipate over time – that is, any displacement impacts from one set of new arrivals will gradually decline.
- The review also suggests that the nature of the available empirical data makes it difficult to reach definitive conclusions with regard to displacement, but at present, and notwithstanding the various caveats, the most reliable data set for assessing these changes remains the LFS.

Annex 1 – Regression analysis

The first column in each table below replicates a key result from the [Migration Advisory Committee \(2012\)](#) analysis (Table A4, Regression (4), 1995–2010). The subsequent columns in each table show how the original result varies when a certain aspect of it is changed. For each regression the econometric specification is identical to that used by the MAC. The regression is of native employment rates on the non-EU/native ratio, the EU/native ratio and other control variables, with year and region fixed effects.

Test 1: Testing whether Migration Advisory Committee (2012) results are sensitive to a) the exclusion of London b) an alternative migrant definition (nationality) and c) to updating the data to Q2 2012.

The magnitude of the estimated effect remains similar and statistically significant (at the weaker 10% statistical significance level) when London is omitted and when migrants are defined by nationality rather than country of birth. When the data set is updated to Q2 2012, the results are virtually unchanged.

Variables	Migration Advisory Committee result	London omitted	Migrants defined by nationality rather than country of birth	Updating the MAC data set (1995–2012)
Non-EU/native ratio	-0.230*** (0.003)	-0.242* (0.076)	-0.221* (0.073)	-0.210*** (0.001)
EU/native ratio	-0.238 (0.206)	-0.050 (0.838)	-0.122 (0.713)	-0.211 (0.225)
25–49/16–24 age ratio	0.034*** (0.006)	0.036*** (0.005)	0.033*** (0.003)	0.034*** (0.002)
50–64/16–24 age ratio	-0.041* (0.078)	-0.044* (0.063)	-0.043** (0.046)	-0.039* (0.076)
Intermediate/low qualification ratio	0.092** (0.013)	0.074** (0.044)	0.078** (0.033)	0.106*** (0.002)
Graduate/low qualification ratio	0.026 (0.651)	0.008 (0.902)	0.038 (0.48)	0.013 (0.77)
Observations	176	160	176	198
R-squared	0.424	0.405	0.393	0.420

All regressions include year and region fixed effects. P-values are presented in parentheses.

* Indicates statistical significance at the ten per cent level. ** Indicates statistical significance at the five per cent level. *** Represents statistical significance at the one per cent level.

Test 2: Testing whether results are dependent on recent data points.

Working back from 2010, the magnitude of the estimated impact on native employment drops, and becomes statistically insignificant when data from 2009 and 2010 are omitted. The estimated effect is still negative, but is not statistically significant. It should be noted that reducing the number of observations is likely to result in less precise estimates (larger standard errors).

Variables	Migration Advisory Committee result (1995–2010)	1995–2009	1995–2008	1995–2007
Non-EU/native ratio	-0.230*** (0.003)	-0.156** (0.04)	-0.111 (0.19)	-0.111 (0.194)
EU/native ratio	-0.238 (0.206)	-0.214 (0.294)	-0.229 (0.367)	-0.268 (0.375)
25–49/16–24 age ratio	0.034*** (0.006)	0.028** (0.011)	0.019 (0.109)	0.019 (0.127)
50–64/16–24 age ratio	-0.041* (0.078)	-0.047* (0.072)	-0.037 (0.174)	-0.035 (0.218)
Intermediate/low qualification ratio	0.092** (0.013)	0.062** (0.032)	0.055 (0.151)	0.073 (0.123)
Graduate/low qualification ratio	0.026 (0.651)	0.045 (0.424)	0.035 (0.521)	0.033 (0.539)
Observations	176	165	154	143
R-squared	0.424	0.410	0.202	0.223

All regressions include year and region fixed effects.

P-values are presented in parentheses.

* indicates statistical significance at the ten per cent level.

** Indicates statistical significance at the five per cent level.

*** Represents statistical significance at the one per cent level.

Test 3: Using native unemployment rates as dependent variable.

Running the same regression on native unemployment rates over the same period, no statistically significant impact of migrant shares on native unemployment rates is observed.

Variables	Migration Advisory Committee result (1995–2010)	1995–2010
	Dependent variable: Native employment rates	Dependent variable: Native unemployment rates
	-0.230*** (0.003)	0.0170 (0.682)
Non-EU/native ratio	-0.238 (0.206)	-0.004 (0.969)
EU/native ratio	0.034*** (0.006)	0.004 (0.458)
25–49/16–24 age ratio	-0.041* (0.078)	-0.000 (0.977)
50–64/16–24 age ratio	0.092** (0.013)	-0.005 (0.606)
Intermediate/low qualification ratio	0.026 (0.651)	-0.064** (0.028)
Graduate/low qualification ratio		
Observations	176	176
R-squared	0.424	0.782

All regressions include year and region fixed effects. P-values are presented in parentheses.

* indicates statistical significance at the ten per cent level. ** Indicates statistical significance at the five per cent level. ***Represents statistical significance at the one per cent level.

Annex 2 – Literature review

UK studies

Framework criteria for assessment of labour market displacement by migration studies – part 1									
Study	Study coverage					Study results			Comment/summary
Study	Geographic coverage	Time period	Data source	Methodology	Migrant scope	Estimated impact on employment	Estimated impact on unemployment	Estimated impact on wages/wage distribution	Overall comment/initial assessment of study
Dustmann, Fabbri, Preston and Wadsworth (2003) <i>The local labour market effects of immigration in the UK</i>	UK	1983 (unemployment) / 1992 (wages) – 2000	Labour Force Survey (LFS)	Spatial correlation approach, using instrumental variables (IV)	All working migrants (ratio of non-UK born to UK born in the working-age population, by year and region)	n/a	Positive coefficients but no statistically significant impact of all migration on resident unemployment Evidence of an impact for semi-skilled migrants – a 1 percentage point rise in the non-UK born/UK born ratio for working-age individuals increased unemployment by 0.4 percentage points	Positive coefficients – statistically significant impact of non-UK born on UK born average wages (a 1 percentage point rise in the non-UK born/UK born ratio for working-age individuals increases average non-immigrant wages by 0.2 percentage points Effects are more positive for skilled migrants but not statistically significant	One of the first studies for the UK Used IV technique to control for endogeneity issue; suggested it was a starting point for analysing impacts of migration
Dustmann, Fabbri and Preston (2005) <i>The Impact of Immigration on the British Labour Market</i>	GB	1983 (employment and unemployment) / 1992 (wages) – 2000	LFS	Spatial correlation approach, using IV	Ratio of non-UK born to UK born in the working-age population, by region and year	No statistically significant impact overall; -0.2 for UK born with intermediate qualifications A 1 percentage point increase in the non-UK born/UK born ratio for working-age individuals with intermediate qualifications reduced the employment rate of the UK born with intermediate qualifications by 0.2 percentage points	No statistically significant impact overall; 0.1 for UK born with intermediate qualifications (a 1 percentage point increase in the non-UK born/UK born ratio for working-age individuals with intermediate qualifications increased the unemployment rate of the UK born with intermediate qualifications by 0.1 percentage points)	Not significant (No statistically significant effect of non-UK born on UK born average wages)	Used an IV approach to correct for endogeneity issue, but notes that the IV could be problematic if local economic shocks were persistent and instruments were insufficiently lagged, or if the lag effect washes out

Portes and French (2005) <i>The impact of free movement of workers from central and eastern Europe: Early evidence</i>	UK	2003–2004	Worker Registration Scheme (WRS)	Spatial correlation approach, using IV	Ratio of the 2004 accession to the EU of Eastern European countries (A8) national WRS registrations to total working-age population, by region and year	n/a	0.09 (A 1 percentage point rise in the ratio of A8 national WRS inflows to the working-age population resulted in a 0.09 percentage point increase in the Jobseeker's Allowance [JSA] claimant rate)	n/a	Covers a short time period and was followed up by the Gilpin <i>et al.</i> (2006) and Lemos and Portes (2008) studies, so may be less relevant
Manacorda, Manning and Wadsworth (2006), <i>The impact of immigration on the structure of male wages: theory and evidence from Britain</i>	GB	1975 (LFS since 1993) – 2005	General Household Survey (GHS) and LFS	Skill-cell approach and simulation	Foreign born migrants aged 26–60 Uses log ratio of UK born/non-UK born by age, education and year	n/a	n/a	-0.16 (A 1% increase in the UK born/non-UK born ratio decreased the ratio of average wages of the UK born and non-UK born by 0.16%)	Use of GHS data a weakness as small sample; impacts simulated using regression estimates of elasticity of labour supply Otherwise robust study and results suggest migrants have little effect on native wages but more significant effect on previous migrants' wages
Gilpin, Henty, Lemos, Portes and Bullen (2006) <i>The Impact of Free Movement of Workers from Central and Eastern Europe on UK Labour Market</i>	UK	2004–2005	WRS	Spatial correlation approach	Ratio of A8 national WRS inflows to total working-age population, by region and year	n/a	Not significant (No statistically significant effect of A8 nationals on the JSA claimant rate)	n/a	Possibly group with the later Lemos and Portes (2008) study and the Portes and French (2005) study
Lemos and Portes (2008) <i>The impact of migration from the new EU member states on native workers</i>	UK (local authority level)	2004–2006 (extended to 2007 for data analysis)	WRS, JSA and Annual Survey of Hours and Earnings (ASHE) data	Spatial correlation approach/hybrid	Ratio of A8 national WRS inflows to working-age population, by region and year	n/a	Not significant (No statistically significant effect of A8 nationals on the JSA claimant rate) either overall or for any identifiable subgroup Unemployment coefficients: baseline OLS -0.015; not statistically significant at local authority level, -0.072 at county level, -0.161 at Government Office Region (GOR) level but results not statistically significant regardless of level of geographic aggregation or controls added	Wage coefficients: 0.125 (OLS), 0.252 (GLS) for average wages Not statistically significant for the 1st to the 5th deciles (0.110 for 1st, 0.438 for 5th) of the wage distribution; results not reported for higher deciles (No statistically significant impact of A8 nationals on wages across the wage distribution)	Study covers short time period, but extends the original Gilpin, Henty, Lemos, Portes and Bullen (2006) paper and corrects many of the methodological issues It adopts both skill-cell and spatial correlation and corrects for likely measurement error or simultaneity bias using instruments

Dustmann, Frattini and Preston (2008) <i>The Effect of Immigration along the Distribution of Wages</i>	GB	1997–2005	LFS	Hybrid	Foreign born working-age migrants	n/a	n/a	0.2 to 0.3 (A 1 percentage point increase in the non-UK born/UK born ratio increased average wages by 0.2% to 0.3%); -0.5 for the 1st decile of the wage distribution, 0.6 for the median and 0.4 for the 9th decile (a 1 percentage point increase in the non-UK born/UK born ratio decreased average wages by 0.5% in the 1st decile of the wage distribution; but increased average wages by 0.6% in the 5th decile; and increased average wages by 0.4% for 9th decile)	The paper considers the impact of immigration on wages across the whole wage distribution as well as on the average wage This is vital for an understanding of how immigration might affect the distribution of workers and those covered by the national minimum wage Robustness checks carried out on wage impacts
Nickell and Saleheen (2008) <i>The Impact of Immigration on Occupational Wages: Evidence from Britain</i>	GB	1992–2006	LFS, Annual Survey of Hours and Earnings (ASHE) and National Employer's Skills Survey (NES)	Hybrid	Non-UK born share working in a given occupation, by region and year, lagged by one year; Immigrant/native ratio, by occupation and skill-cell	n/a	n/a	-0.04 (An increase of 1 percentage point in the non-UK born share of the workforce in a particular occupation reduced average wages of that occupation by approximately 0.04% in the subsequent year); -0.5 for semi-skilled and unskilled service occupations; -0.2 for skilled production occupations; statistically insignificant impact on managers, professionals, semi-skilled and unskilled production occupations; -0.3 for caring and personal service occupations	The paper considers the impact of immigration on average wages and across occupation groups No detailed robustness checks were conducted
Reed and Latorre (2009) <i>The economic impacts of migration on the UK labour market</i>	UK	2000–2007	Department for Work and Pensions (DWP) administrative data and LFS	Spatial correlation approach	Working-age migrants defined as anyone not born in the UK; ratio of National Insurance Numbers (NINOs) allocated to the non-UK born and the working-age population, by local authority	Estimated coefficient not reported; low correlation between change in employment rates and ratio of NINOs allocated to the non-UK born and the working-age population (little evidence that the non-UK born affected UK employment rates)	n/a	-0.3 (A 1 percentage point increase in the non-UK born share of the working-age population reduced the average wage by approximately 0.3%)	Only includes a regression model for wage effects – analysis of employment and unemployment is descriptive only and includes correlations
Lemos (2010) <i>Labour Market Effects of Eastern European Migration in</i>	Wales	2004–2006	WRS	Spatial correlation approach	Ratio of A8 national WRS inflows to	n/a	Not significant (no statistically significant effect of A8 nationals on the JSA)	3.4 (A 1 percentage point increase in the ratio of A8 national WRS inflows to the	Similar study to Gilpin, Henty, Lemos, Portes and Bullen (2006) and Lemos and Portes

Wales					working-age population, by region and year		claimant rate)	working-age population increased average wages by 3.4%) A 1 percentage point increase in the ratio of WRS inflows to working-age population increased average wages in the 6th and 7th deciles by approximately 4% and 5% No impact on bottom half of the distribution)	(2008) but only covers Wales, so less relevant to the whole UK labour market
Nathan (2011) <i>The long-term impacts of migration in British cities: Diversity, wages, employment and prices</i>	GB urban areas	1994–2008	LFS	Spatial correlation and skill-cell approach, IV used	Conventional definition of migrant share using country of birth and fractionalisation index (measure of diversity by nationality), by region and year	A 1% increase in migrant share associated with a 0.4% fall in native employment rate, statistically significant at the 5% level Skill-cell approaches show a 1% increase in the migrant population is associated with a 0.6% decrease in employment rates amongst intermediate skilled UK workers, and a 0.8% decrease in employment rates amongst low-skilled UK workers (statistically significant at the 1% and 5% levels).	n/a	A 1 percentage point increase in migrant share is associated with a 0.5% increase in native wages, statistically significant at the 5% level Skill-cell approaches do not show statistically significant impacts on wages at any skill level	Appears to be a robust study with a number of model specifications, disaggregations and robustness checks
Migration Advisory Committee (2012) <i>Analysis of the Impacts of Migration</i>	UK	1975–2010 (1975–1994 and 1995–2010)	LFS	Spatial correlation approach	Ratio of non-UK born and UK born, ratio of non-EU born and UK born, and ratio of EU born and UK born	Tentative negative association between working-age migrants and native employment when output gap is negative, for non-EU migrants and for 1995–2010: of -0.23 for all migrants and -0.23 for non-EU migrants (both statistically significant at 1% level), and -0.3 for all migrants during a downturn (statistically significant at 5% level)	n/a	n/a	The MAC found a similar coefficient for EU migration, but statistically insignificant – this could be due to sample size or the skill structures of the two groups EU results were more reactive to the economic cycle than non-EU Robustness checks reveal: results are statistically insignificant when outliers

						Found no association between working-age migrants and native employment: in upturn; for EU migrants; and for 1975–1994.			are removed; results are not robust to alternative model specifications; and results are not robust to using lagged ratios - possible endogeneity bias but results may reflect weak data
Lucchino, Rosazza-Bondibene and Portes (2012) <i>Examining the Relationship between Immigration and Unemployment using National Insurance Number Registration Data</i>	UK (local authority and GOR)	Financial years 2002/03 to 2010/11	NINo data	Spatial correlation approach, IV used	Adult overseas nationals entering the UK receiving NINo allocations New migrant inflows to local authorities based on NI registrations of foreign nationals Ratio of non-UK born and UK born	n/a	No statistically significant effect of A8 nationals on the JSA claimant rate at district/local authority level and at county level At GOR level, a 1 percentage point increase in migration inflow is associated with a 0.01ppt decrease in the claimant count rate No evidence of a more adverse effect during periods of low growth or the recent recession	n/a	Relatively short time period There is the problem of identification of areas that truly match closed labour markets and the study acknowledges estimates are limited to aggregate impacts, which might conceal dynamics occurring at the subgroup level Study is robust although use of the NINo data set has been questioned – does not factor in outflows

International country-specific studies

Framework criteria for assessment of labour market displacement by migration studies – part 1									
Study	Study coverage					Study results			Comment/summary
Study	Geographic coverage	Time period	Main data source	Methodology	Migrant scope	Estimated impact on employment	Estimated impact on unemployment	Estimated impact on wages/wage distribution	Overall comment/initial assessment of study
Card (1990) <i>The Impact of the Mariel Boatlift on the Miami Labour Market</i>	Miami, USA	1979–1985	Current Population Survey	Standard OLS regression	Cubans migrating to Miami in the Mariel Boatlift (1980)	Little evidence of an effect on employment of other low-skilled workers and on employment outcomes of other non-Cuban workers	No evidence of an effect on unemployment rate of Whites or Blacks.	No evidence Mariel immigration reduced wages of less-skilled natives.	Natural experiment: Provides good opportunity to analyse effects of immigration Specific to the Miami labour market – Lewis (2004) argues out-migration and previous immigration helped Miami to absorb the new immigrants
Lewis (2004) <i>How did the Miami labour market absorb the Mariel immigrants?</i>	Miami and comparison USA cities	1972–1996	Annual Surveys of Manufacturers (ASM), Censuses of Manufacturers (CM)	OLS regression approach using difference in difference	Cuban working-age migrants – the majority of whom are low skilled	Original 1990 Card paper (see above) – Mariel immigrants increased labour force of Miami by seven per cent (mainly unskilled), but analysis of wages over 1979–85 reveals no effect of influx on wages/ unemployment of less-skilled Blacks or non-Cuban workers – even wages and unemployment of earlier immigrants were not substantially affected.	n/a	n/a	Study suggests native wages are insensitive to migration shocks if markets adapt production technology to factor supplies The paper focuses on one particular USA labour market, which had experienced growth in immigration prior to the boatlift – it is possible that the market had adjusted and could absorb the sudden influx more efficiently
Borjas (2003) <i>The Labor Demand Curve is Downward Sloping: Re-examining the Impact of Immigration on the Labor Market</i>	USA	1960–1990 and 1998–2001	Census and Current Population Survey	Skill-cell correlation	All migrants	n/a	n/a	When controlling for experience as well as schooling -0.4 per cent reduction in weekly earnings (significant at the 10 per cent level)	This paper controls for the level of workers' labour market experience as well as level of education.
Roodenburg, Euwals and ter Rele (2003)	Holland	n/a	n/a	Simulated	All migrants and by skill level	n/a	n/a	Model uses simulation based on labour supply elasticity and suggests potentially negative	Model uses simulation and may be less robust than other econometric studies

<i>Immigration and the Dutch economy</i>								effects of migration on resident wages, particularly for lower skilled	
Peri (2006) <i>The Effects of Immigration on California's Labor Market</i>	California, USA	1960–2004	Census data	Skill-cell, IV used	All migrants	No impact of immigration on native employment amongst those of similar levels of education and experience	No impact of immigration on native unemployment	Positive effect of immigration on native wages (with effects increasing with skill level), negative effect on wages of existing migrants	Argues that migrants are imperfect substitutes for natives of similar age and education – thus they stimulated, rather than harmed demand for native workers
Kugler and Yuksel (2008) <i>Effects of Low-Skilled Immigration on U.S. Natives: Evidence from Hurricane Mitch</i>	Southern USA	1980–2005	Census data	Spatial correlation, IV used	Latin American immigrants, flows instrumented using data on Hurricane Mitch	Low-skilled immigration has no effect on native employment Negative employment effects only for existing immigrants	n/a	Low-skilled immigration increases wages of skilled natives	Interesting study that exploits a natural experiment to assess labour market impacts Finding of negative employment impacts only for pre-existing migrants supports other results in the literature
Dustmann, Glitz and Vogel (2009) <i>Employment, wages and the economic cycle: Differences between Immigrants and natives</i>	UK and Germany	1981–2005	LFS (UK) and administrative data (Germany)	Combined spatial and skill-cell approach	All migrants	n/a	Results suggest a larger unemployment response to economic shocks for immigrants relative to natives within skill groups These differences were particularly pronounced for non-OECD immigrants	Results do not identify a statistically significant difference in response of immigrant wages to an economic shock, compared with the response of native wages	Not clear if the LFS has a large enough sample size to allow a combined spatial correlation and skill-cell approach The finding that migrants experience a larger unemployment response in a recession is relevant to the overall discussion of labour market impacts through the economic cycle
Peri (2010) <i>The impact of immigrants in recession and economic expansion</i>	USA	1960–2006	Gross State Product data	Spatial correlation, IV	Working-age migrants	No negative impact on employment in the long term (7 years) during periods of growth or decline. Statistically significant negative impacts on native employment in the short term (1 year) during periods of both growth and decline. Statistically significant positive impacts on total employment in the long run during growth and	n/a	Positive long-run effect on average income of native workers found in the long run (10 years): net inflow of migrants equal to 1 per cent of employment raises income per native worker by 0.26 per cent. No effect observed on incomes in the short run (1 to 2 years).	Peri argues long-term benefit of migration is due to the impact of migration on total factor productivity (due to investment, specialisation and innovation) However, long-term gains require short-term adjustment costs

						decline, but impacts only on native employment are not statistically significant.			
Glitz (2012) <i>The Labor Market Impact of Immigration: A Quasi-Experiment Exploiting Immigrant Location Rules in Germany</i>	Germany	1996–2001	German Federal Administration Department and statistical office IAB employment subsample 1975–2001	Quasi experiment – exogenous immigrant shock spread across regional German labour markets using OLS and IV approach	Effect of exogenous inflow of 2.8 million ethnic Germans who had been living in Eastern Europe and the former Soviet Union	Effect of inflows on skill-specific employment rates and wages Results show that shifts in the relative supply of different skill groups in a locality systematically affect the employment/labour force rate of the resident population	The results indicate a displacement effect of 3.1 unemployed workers for every 10 immigrants who find a job	No conclusive effect on relative wages	Useful study when considering short-term impacts of immigration on local labour markets with different skill mix Focuses on Germany over a five-year period The nature of exogenous shock can be compared with accession nationals inflow to UK – that is, a large number of relatively low-skilled workers evenly spread over regions Also suggests results of impact largely depend on existing labour market structures: strong trade unions in Germany mean adjustment through employment rather than wages is more likely.
Martins, Matloob, and Varejao. (2012) <i>Do Immigrants Displace Native Workers?</i>	Portugal	2002–2008	Panel data set of all private sector employers	Combined spatial and skill-cell approach	All migrants	At firm level, immigrants do not displace natives Results are consistent with estimations carried out at a more conventional, regional level of aggregation	n/a	n/a	Argues strong complementarity between native hiring and migrant hiring when matched by skill level

International cross-country studies and meta-analyses

Framework criteria for assessment of labour market displacement by migration studies – part 1									
Study	Study coverage					Study results			Comment/summary
Study	Geographic coverage	Time period	Main data source	Methodology	Migrant scope	Estimated impact on employment	Estimated impact on unemployment	Estimated impact on wages/wage distribution	Overall comment/initial assessment of study
Angrist and Kugler (2003) <i>Productive or counter productive? Labour market institutions and the effect of immigration on EU natives</i>	18 European countries (including the UK)	1983–1999	Eurostat (LFS)	Spatial correlation, using OLS and IV		Increase in the foreign share of 10% would reduce native employment rates by 0.2–0.7 percentage points. OLS estimates for European countries show small, mostly negative immigration effects while an IV strategy based on immigrants from former Yugoslavia generates larger, though mostly statistically insignificant, negative estimates	n/a	n/a	Specifications allowing interactions between immigration and measures of labour and product market rigidity suggest lower flexibility increases negative immigration effects The estimates typically imply more native job losses in countries with restrictive institutions
Longhi, Nijkamp and Poot (2006) <i>The impact of immigration on the employment of natives in regional labour markets</i>	Various OECD countries (from within the EU, Israel and the USA)	Many periods	Cross-country data (LFS)	Spatial correlation approach, some include IV	Ratio of native born/non-native born workers	Using 9 studies with 165 estimates, average impact on employment is -0.024% with a range of -0.4% to +0.6% Impacts are larger for EU countries, for females, and for studies using IV to correct for simultaneity	n/a	n/a	Uses meta-analysis of nine studies but relevant to different countries/labour markets – suggests studies using IV tend to find higher estimates so average estimate may be biased down
Jean and Jiménez (2007) <i>The Unemployment Impact of Immigration In OECD countries</i>	18 OECD countries including Australia, New Zealand, the UK and other EU countries, and the USA,	1984–2003 and 1992–2003	LFS for 18 OECD countries	Spatial correlation approach	All foreign and foreign born (for non-EU) immigrants Lagged change in the non-UK born share in the working-age population, by	-0.3 on male employment for lag 1 for all immigrants; statistically insignificant for higher lags (A 1 percentage point rise in the non-UK born share of the working-age population decreased the UK born male employment rate by 0.3 percentage	0.4 for lags 1 and 2 for all immigrants and non-EU immigrants; statistically insignificant for other lags (a 1 percentage point rise in the non-UK born share of the working-age population in year 1 increased the UK born unemployment rate by 0.4 percentage points in years 2 and 3, but had no impact on the UK born unemployment rate in	n/a	Anticompetitive product market regulations found to increase both the magnitude and the persistence of the negative impact, and more stringent employment protection legislation magnifies its persistence A higher average replacement rate of unemployment benefits

					country and year	points in the first year, but has no long-term impact on the UK born male employment rate)	subsequent years) Effect may last between five and ten years		increases the effects magnitude
Longhi, Nijkamp and Poot (2008) <i>Meta-Analysis of Empirical Evidence on the Labour Market Impacts of Immigration</i>	Meta-analyses of 18 studies from 10 countries	1982 - 2007	Cross-country data (LFS)	Meta-analysis	Varies across studies (foreign national or foreign born)	Employment results more likely to be statistically significant but are small on average (-0.02) depending on study but wide standard deviation (+/- 0.14) Ranges from -0.6 to +0.8 and more show negative effect More recent studies find more negative effects	Unemployment results less likely to be statistically significant but are small on average (0.02) depending on study but wide standard deviation (+/- 0.16) Ranges from -0.4 to +1.14)	Wage results less likely to be statistically significant but are small on average (-0.03) depending on study but wide standard deviation (+/- 0.16) Ranges from -0.6 to +0.8 and more show negative effect	Evidence for a negative effect greater than for positive effect Suggests impacts lower in USA, impacts on employment greater than on wages, low impacts overall, impacts vary by labour market institutions
Longhi, Nijkamp and Poot (2011) <i>The Economic Impact of Immigration on the Labor Market of Host Countries – Meta-Analytic Evidence</i>	Meta-analyses of 18 studies from 10 countries	1982–2003	Cross-country data (LFS)	Meta-analysis	Varies across studies (foreign national or foreign born)	Employment results more likely to be statistically significant but are small (-0.24% on average) but higher outside USA, and range from -3.9% to +6.2%	n/a	Wage results are small on average (-0.12%) but range from -5.4% to +4.5%, and more show negative effect	Evidence suggests impacts vary with: definition of labour market; extent of substitutability of foreign and native workers; and controls for endogeneity of immigrant settlement
Brucker, Jahn and Upward (2012) <i>Migration and imperfect labour markets</i>	Cross-country study (Denmark, Germany and the UK)	1990–2009	Cross-country data (LFS)	Production function and simulation	All foreign born working migrants	Elasticity of substitution in the UK between migrants and residents is -12.6%	-0.02% (simulated results suggest aggregated impact of 1% increase in migration lowers UK native unemployment by -0.02% but raises unemployment 0.1% in Denmark and 0.06% in Germany) in the short term; in the long term lowers unemployment by 0.22 percentage points in the UK, 0.09 percentage points in Germany but no effect in Denmark, but effects vary by skill group	-0.16% (simulated results suggest aggregated impact of 1% increase in migration reduces UK native wages on average by 0.16%, 0.09% in Denmark and 0.06% in Germany) in the short term but raises wages in the long term up to 0.11 percentage points in the UK if capital stock adjusts; but effects vary by skill group – more negative effects for low-skilled natives	Uses new approach to look at wage-setting functions and model elasticity of substitution between resident and migrant labour – and uses results to simulate wage and unemployment effects

Annex 3 - Data sources

Table A.1: Data sources, strengths and weaknesses

Data set	Summary	Migration information	Strengths	Weaknesses
<i>Labour Force Survey (LFS) and Annual Population Survey (APS)</i> ⁴⁰	<p>Quarterly (since 1992) sample of approximately 40,000 households</p> <p>APS uses aggregated LFS data since 2004</p>	<p>Country of birth</p> <p>Nationality</p> <p>Ethnicity</p> <p>Year of first and last arrival in the UK (since 2008)</p> <p>Route of entry (since 2011)</p> <p>Main reason for coming to the UK at most recent arrival (since 2011)</p>	<p>Large nationally representative sample</p> <p>Continuous</p> <p>Long time dimension</p> <p>APS includes a boost sample of local areas</p>	<p>Relatively small sample of migrants when disaggregated</p> <p>APS has higher sample, but shorter time dimension (post-2004)</p>
<i>National Insurance Numbers (NINOs)</i>	<p>100 per cent administrative data on NINo registrations as an indicator of inflows across region</p> <p>Data available since 2002</p>	<p>Nationality at point of NINo registration</p>	<p>100 per cent administrative data across regions of inflows – allows more granular analysis at local area level</p>	<p>Does not represent net flows or current stocks</p> <p>Limited data on characteristics of migrants, such as skills/wages</p> <p>Does not account for those gaining citizenship</p> <p>Not consistent with official definition on in-migration, i.e. short term/long</p>

⁴⁰ For more detail on the Labour Force Survey, please refer to the following:

Labour Force Survey User Guide (p 9), available at: <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/labour-market/labour-market-statistics/volume-1---2011.pdf>

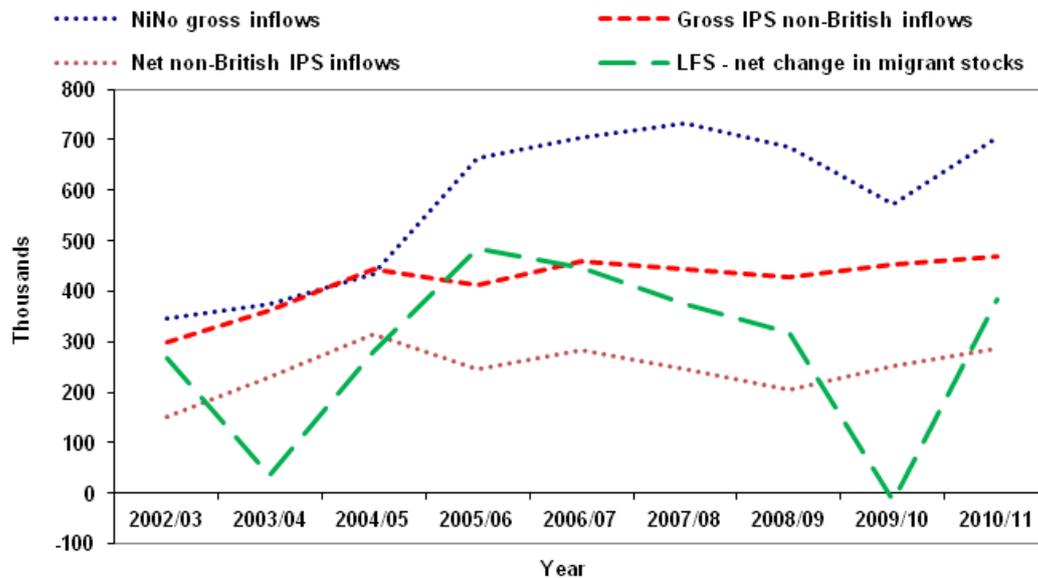
BBC Article from Caron Walker (ONS Head of Collection and Production), available at: <http://www.bbc.co.uk/news/business-22870886>

				term No family or dependants data captured
Long-Term International Migration (LTIM) and International Passenger Survey (IPS)	Survey of approximately 700,000–800,000 passengers, of whom approximately 4,000–5,000 are long-term migrants Data available from 1975	Citizenship Usual occupation Main reason for migration Country of birth Year of arrival Actual length of stay Intended length of stay	Large nationally representative sample Continuous Long time dimension	Relatively small sample of migrants when disaggregated Limited information on characteristics
Worker Registration Scheme (WRS) [now closed]	Population data on WRS registrations – possible indicator of inflows across region	A8 migrant information only between accession and end of WRS	Population sample across regions – allows more granular analysis at local authority level	Represents inflows (not net flows or current stocks) Limited data on characteristics of migrants, such as skills/wages
Census	Population data every ten years Latest data available for 2011	Country of birth Nationality Ethnicity Year of arrival in UK	Population sample across regions – allows analysis at local authority level	Limited data on migrant route of entry
Annual Survey of Hourly Earnings (ASHE)	Sample of wages across occupations and regions in the UK	No migration variable	Accurate wage information Geographic indicators	No migration identifiers

It is important to understand if different data sources show similar trends in migration across regions – if they do not, studies using different data will find different results.

Figure A.1 shows that there are clear differences in trends in gross NiNo flows, IPS gross and net inflows, and changes in LFS stocks at the national level over the past decade.

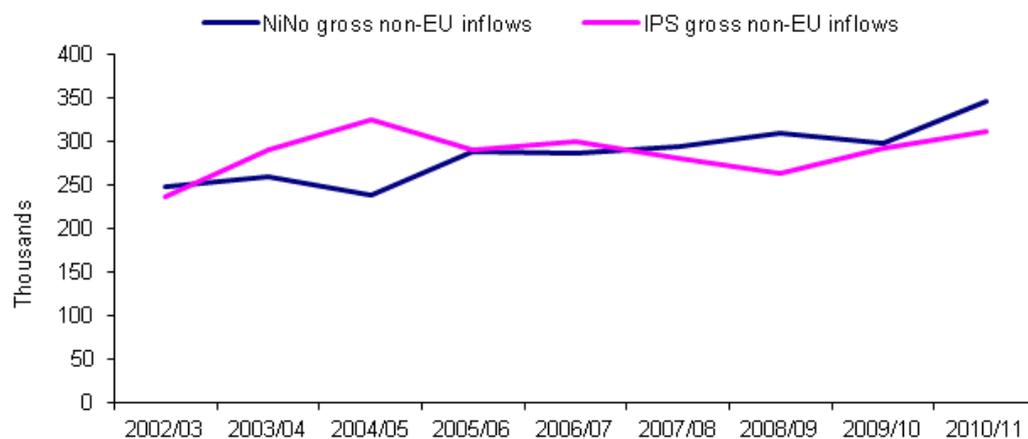
Figure A.1: Comparison of National Insurance Number gross inflows, International Passenger Survey gross and net inflows, and Labour Force Survey net changes in migrant stocks, 2002/03–2010/11



Source: Department for Work and Pensions – NiNos; Office for National Statistics – International Passenger Survey, Labour Force Survey

Figure A.2 shows that measures of gross inflows from NiNo and IPS data for non-EU nationals are similar in terms of volumes, but do not always move in the same direction.

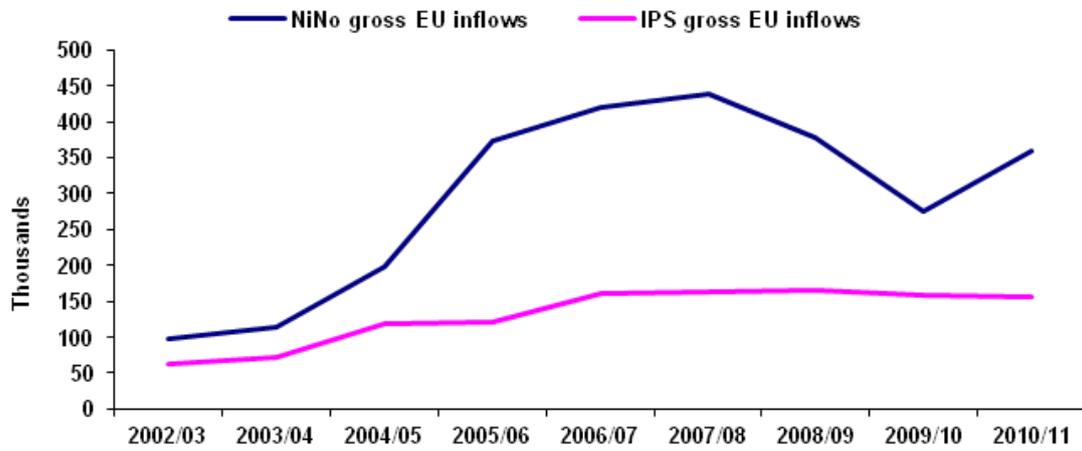
Figure A.2: Comparison of National Insurance Number gross inflows and International Passenger Survey gross inflows for non-EU nationals, 2002/03–2010/11



Source: Department for Work and Pensions – NiNos; Office for National Statistics – International Passenger Survey, Labour Force Survey

Figure A.3 shows that in contrast, measures of gross inflows from NiNo and IPS data for EU nationals show large differences in volumes.

Figure A.3: Comparison of National Insurance Number gross inflows and International Passenger Survey gross inflows for EU nationals, 2002/03–2010/11



Source: Department for Work and Pensions – NiNos; Office for National Statistics – International Passenger Survey, Labour Force Survey

Annex 4 - Methodological issues

Most of the literature reviewed uses the spatial correlation or skill-cell approach. Each suffers to some extent from the following methodological issues and uses different solutions to overcome any potential bias in results.

A. Permanent effects

Issue

When using a spatial correlation approach to assess the impacts of migration, the allocation of migrants is assumed to be random and independent of permanent labour market conditions across regions. This assumption, however, does not hold in practice as local labour market conditions vary considerably (consider London compared with other areas), and migrants can choose where they are located – that is, they are likely to choose areas that have historically had the best economic performance. In addition, migrants often choose to settle in regions where there are high concentrations of existing migrants. These may historically have high or low economic performance and may therefore lead to positive or negative correlations between migration and economic outcomes even if there are no genuine effects.

Solution

It is possible to deal with this problem by using ‘differences’ to remove any such ‘fixed’ effects. This relates the *changes* in immigrant concentration between two points in time to *changes* in economic outcomes and should eliminate any persistent effects present in all periods. Alternatively, the skill-cell correlation approach can overcome this issue as it controls for differences in the characteristics of migrants and natives within and across regions.

B. Simultaneity

Issue

When estimating the impacts of migration, even when using differences or controlling for skill levels, it is difficult to control for changing economic shocks across regions that influence where migrants then choose to settle. Immigrants may be attracted to areas that are experiencing economic success. As a result, in addition to migration flows affecting labour market outcomes, labour market outcomes may also affect migration flows. It is, therefore, not always possible to determine the direction of causality and this selective migration may lead to an upwardly biased estimate of the effects of migration on labour market outcomes, particularly if migrant inflows are concentrated in areas with the greatest economic shocks.

Solution

One solution to simultaneity problems is to use instrumental variables – where the instrument is correlated with the independent variable but not correlated with the dependent variable. An example used in migration research is historic migrant settlement patterns, which are seen as a strong driver of migrant flows, but that with

a sufficient time lag should not be correlated with current economic shocks. A number of studies use this approach but with different time lags. In practice this approach regresses the difference in regional economic outcomes on differences in immigrant/resident ratios using past immigrant densities as an instrument for the latter. It is not possible to test fully the strength of the instrument – but studies can test the strength of correlation between lagged concentrations and inflows as one indicator of the validity of the instrument. Instrumental variables are not, however, a panacea, as weak instruments can lead to imprecise estimates, while instruments that are correlated with the error term in the regression lead to biased estimates.

C. Measurement error/attenuation bias

Issue

A further problem occurs due to low data quality and sample sizes, which may lead to measurement error. This is more of a problem for survey-based data, particularly when disaggregated to regional levels. Measurement error leads to a tendency to find no effect even when one is present in reality, as mismeasured inflows will be less strongly associated with labour market outcomes than the true inflows, and the estimated effects will therefore be biased towards zero. This problem is known as attenuation bias, see Borjas (2006) for more detail, and will tend to be a larger problem, the smaller the sample size of data used.

Solution

One solution to measurement error is the same as for simultaneity – the use of instrumental variable regression. The required conditions for a valid and appropriate instrument are as highlighted earlier.

D. Out-migration of natives

Issue

An additional problem is that local labour markets are not closed in reality and residents (or previous migrants) are free to move in or out. If there was an impact of migration on labour market outcomes, one would expect those affected to consider moving to other areas, and this may disperse the wage impact of migration across the whole economy. This makes it harder to identify the impact of migration within regions and may underestimate the impacts on residents.

Solution

The literature has attempted to deal with this problem in various ways. The first approach is to estimate whether this effect appears important – there are conflicting views in the literature on the seriousness of this problem. Alternatively, it is possible to treat this as an omitted variable problem, including the additional outflow variable in the estimation. However, the outflow of residents is also likely to be correlated with economic shocks and would need to be instrumented (it is less clear what could be used as an instrument for this). The most common approach used in the literature, however, is to use wider geographical units and look at the impacts of immigration at the national rather than regional level.

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