

**Labour mobility within the EU in the context of enlargement and the functioning  
of the transitional arrangements**

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**Country Study: UK**

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**Abstract**

The UK has experienced unprecedented flows of migration from the New Member States since 2004. We survey the available evidence on: the size of these flows (gross and net), the characteristics of the migrants, and the impact that they have had on the UK labour market and on UK public services at a local level. We also show that recent migrants from the NMS are employed overwhelmingly in occupations which are less-skilled, and lower-paid, than equivalently education UK-born workers.

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## **1 The Institutional Setting**

### **1.1 The institutional arrangements for recent migration**

The UK agreed to permit free access to the UK labour market for nationals of the NMS-8 countries from 1 May 2004. Nationals of the NMS-8 who wish to take up employment in the UK for at least one month are required to register with the *Worker Registration Scheme*. Self-employed workers are not required to register. Full worker rights (for example, full access to benefits) are not available until an NMS-8 national has completed 12 months of continuous employment under the Worker Registration Scheme.

A different set of rules apply for Bulgarian or Romanian nationals wishing to work in the UK. Employees from these countries are required to apply for an accession worker card, while self-employed workers require a registration certificate. In most cases, employers of Bulgarian or Romanian nationals are required to apply for work permits, although there are exceptions for certain occupations.<sup>1</sup> Access for low-skilled workers is limited by quota, but workers may also apply under the Highly Skilled Migrant programme, which awards points for relevant qualifications and skills.

### **1.2 Other aspects of UK labour market institutions**

The UK is usually characterized as having a relatively deregulated labour market: it has one of the lowest benefit replacement ratios amongst OECD economies, although these payments have relatively long duration; spending on Active Labour Market Policies is low; union membership density is relatively low with limited co-ordination of wage bargaining; employment protection is lower than in any other EU country.<sup>2</sup>

### **1.3 The UK Economy 2004–2008**

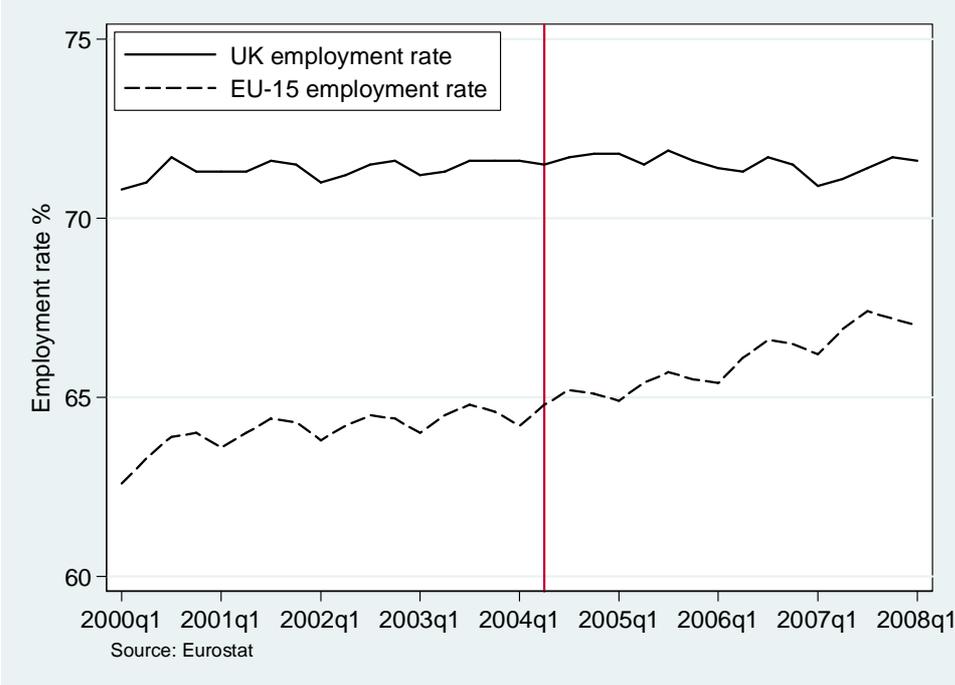
UK labour market performance was strong compared to the average for all EU-15 countries at the time of accession; see Figures 1 and 2. The UK employment rate stood at over 70% compared to the EU-15 average of 65%. The unemployment rate was 4.8%, compared to the EU-15 average of 8%.

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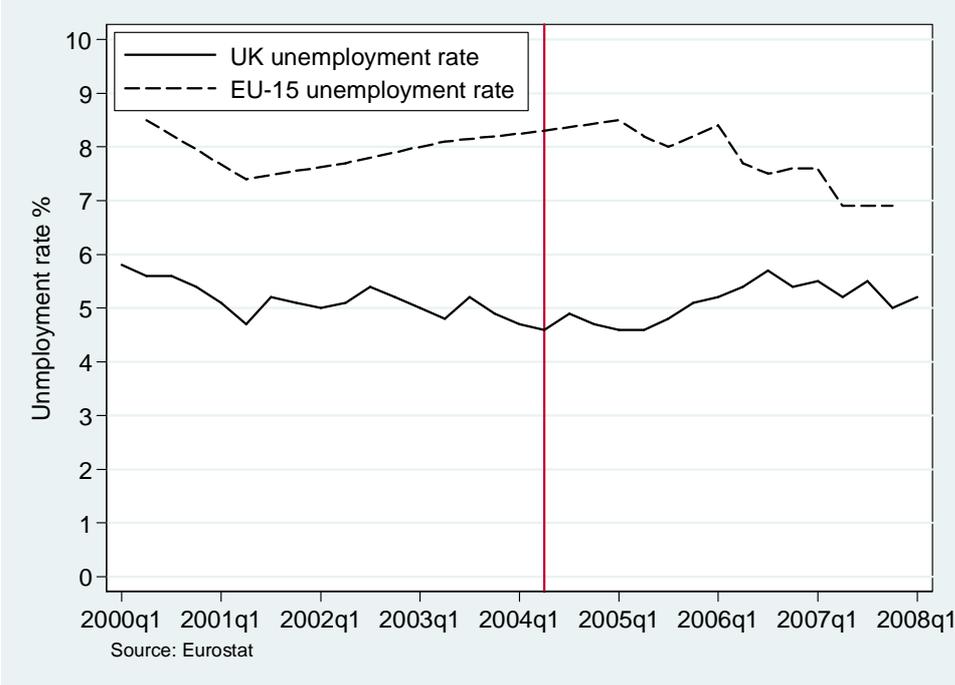
<sup>1</sup> See <http://www.ukba.homeoffice.gov.uk/workingintheuk/eea/bulgariaromania/liveworkuk/>. Exceptions include teachers on approved exchange schemes, qualified nurses on a period of supervised practice.

<sup>2</sup> See Nickell, Nunciata and Ochel (2005) for more detail.

**Figure 1: UK and EU-15 employment rates**



**Figure 2: UK and EU-15 unemployment rates**



Real GDP growth in the UK from 2005–2007 was greater than the Euro area average (OECD 2007, Annex Table 1). In the period since accession, UK unemployment rates have increased slightly to 5.4%, while the employment rate has remained stable (as of 2007). Another indicator of labour market demand is given by the number of unfilled

vacancies. The ratio of unfilled vacancies to jobs in the UK has actually increased slightly from 2.3% (February 2004) to 2.6% (February 2008).<sup>3</sup> Home Office (2007) also note that vacancies in those sectors where migrants are concentrated (such as hotels and restaurants) remain at historically high levels, and that the magnitude of vacancies in a given month is high even relative to the scale of in-migration.

The outlook for the remainder of 2008 and 2009 is, however, less optimistic. The repercussions of the credit crisis are starting to be felt in the real economy. The unemployment rate has started to rise and the employment rate to fall, while at the same time the inflation rate has risen above its target as a result of increases in input prices, in particular food and fuel. Of course, any weakening in the UK labour market will be likely to have effects on in- and out-migration rates.

## **2 Relevant data sources and limitations**

As noted by the recent report from the Select Committee on Economic Affairs (House of Lords 2008) the available statistical information on the scale of migration into the UK is rather weak. There are at present four widely-used sources of information from which one can estimate the scale of immigration. These are described in more detail in Salt and Millar (2006).

### **2.1 Labour Force Survey**

The Labour Force Survey (LFS) is a sample survey of around 60,000 households living at private addresses in the UK. The survey records information on country and birth and year of arrival in the UK. As of 2007, the LFS includes information on about 10,000 foreign-born individuals, out of a total sample of about 120,000. Of these, 1,200 come from NMS-8 countries and a further 240 from candidate countries. These relatively small numbers mean that further breakdowns by precise country of origin, or by other characteristics, will be difficult. Further more, the LFS almost certainly undersamples migrants (see House of Lords (2008) p.10). The LFS may undercount the actual numbers of foreign-born workers for three reasons. First, it excludes students in halls of residence who do not have a UK resident permit. Second, it excludes people who live in most types of communal housing. Third, it is grossed up to population estimates which include only long-term migrants (those staying more than 12 months).

### **2.2 International Passenger Survey**

The International Passenger Survey (IPS) is a survey of a random sample of passengers entering or leaving the UK. Sampling is conducted on all "major routes" into and out of the UK (so some regional airports are not included). Although over 250,000 interviews

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<sup>3</sup> Source: ONS vacancy survey, series AP2Z.

are conducted, the number of migrants identified by the survey is small (around 3,500) and relies on self-reported status as regards purpose of each visit.

### **2.3 Worker Registration Scheme**

Nationals of NMS-8 who wish to take up residence in the UK for at least one month must usually register with the Worker Registration Scheme (WRS). Self-employed workers are not required to register. However, an individual who leaves employment is not required to de-register, and so the data only provides an indication of gross inflows rather than net migration.<sup>4</sup>

### **2.4 National Insurance Recording System**

National Insurance numbers are allocated by the Department of Work and Pensions to overseas nationals, and details are held on the National Insurance Recording System (NIRS). The NIRS includes information on the date of arrival in the UK as well as date of registration. As with the WRS data, the NIRS does not record outflows or length of stay.

## **3 Patterns of labour mobility into the UK**

### **3.1 Stocks and flows of migrants from accession and candidate countries 2000–2008**

Migrant status can be defined either in terms of a person's country of birth, or in terms of their nationality. The UK Office for National Statistics has preferred to use country of birth, and therefore, where possible, we use this definition also.

Probably the most reliable estimate of stocks of migrants from accession and candidate countries can be obtained from the Labour Force Survey. However, sampling error means that accurate estimates are not available for smaller countries; see Table 1.

The latest estimates of the total stock (based on our own calculations from the QLFS Q4 2007) are that there are some 650,000 migrants from the NMS8 countries living in the UK. This is consistent with Clancy (2008, Table 3) who also use the QLFS, and reports that there were 615,000 migrants from the NMS8 of working age in the first quarter of 2008. Our estimates for 2005 and 2006 are also similar to those given in Blanchflower *et al.* (2007) Table D (also based on QLFS), but there appears to have been a very large increase between Q2 2006 and Q2 2007, primarily accounted for by a continued increase in the numbers of Polish migrants.

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<sup>4</sup> In addition, as far as we are aware there are no penalties associated with non-compliance, and so the incentives to comply fully with the WRS may be weak.

Table 2 summarises estimates of net flows using three alternative data sources. The QLFS suggests that net flows of migrants from NMS-8 from Q2 2004 to Q4 2007 have been about 525,000. Flows between Q2 2007 and Q4 2007, however, are only 37,000 which suggests that the rate has greatly reduced.

**Table 1: Stocks of migrants in the UK**

	2000	2001	2002	2003	2004	2005	2006	2007	2008 (Jan-Mar)
<b>NMS-10</b>									
Czechoslovakia	•	•	•	•	•	•	•	•	•
Czech Republic	•	•	•	16	•	•	25	31	27
Slovakia	•	•	•	•	•	26	24	55	51
Cyprus	73	76	81	71	79	79	76	72	75
Hungary	16	13	13	11	13	15	12	25	26
Poland	47	59	50	65	77	132	229	423	520
Estonia	•	•	•	•	•	•	•	•	•
Latvia	•	•	•	•	•	•	15	15	27
Lithuania	•	13	•	16	•	26	47	54	68
Malta	27	27	37	24	30	29	27	20	29
Slovenia	•	•	•	•	•	•	•	•	•
<b>NMS-2</b>									
Bulgaria	•	•	•	•	11	14	22	14	28
Romania	•	•	•	12	•	20	16	26	40
<b>Candidate</b>									
Yugoslavia									
Montenegro								13	•
Kosovo								25	32
Serbia	30	27	40	46	56	46	23	•	•
Croatia	•	•	13	•	•	•	10	•	10
Macedonia	•	•	•	•	•	•	•	•	•
Bosnia Herzegovina	•	•	•	•	•	•	•	11	12
Turkey	48	60	57	79	68	57	75	73	62
Albania	•	•	14	•	•	10	19	•	14
Total NMS	209	223	236	241	256	365	506	750	900
Total candidate countries	92	110	130	142	138	124	129	140	142
Total NMS-10	199	214	219	223	238	332	468	710	832
Total NMS-8	99	112	102	128	129	224	365	617	727

Notes: • indicates estimate less than 10,000

Source: Quarterly Labour Force Survey, Q2 where available

**Table 2: Comparison of NMS-8 net inflow estimates May 2004-Dec 2007, 000s**

	Jan 04- Dec 04	May 04- Dec 04	May 04- April 05	Jan 05- Dec 05	May 05- April 06	Jan 06- Dec 06	May 06- April 07	Jan 07 - Dec 07	May 07 - Dec 07	Jan 08 - Jun 08	Total May 04 - Dec 07
QLFS <sup>1</sup>			94		141		252		37		525
TIMS <sup>2</sup>	49			61		71			NA		181*
WRS <sup>3</sup>		126		205		228		211		84	766
NIRS <sup>4</sup>		63		222		267		255			807

Notes:

1. Own calculation from Quarterly Labour Force Surveys, weighted by population weights.

2. ONS Total International Migration time series, based on the International Passenger Survey (ONS 2007).

3. Worker Registration Scheme, taken from Table 1 of Accession Monitoring Report, June 2008 (Home Office 2008).

4. National Insurance Registration Scheme, taken from Table 12 of Accession Monitoring Report, December 2007 (Home Office 2008)

\* Total is from January 2004--December 2006.

How do these estimates compare with other sources of information? The ONS International Migration series (Office for National Statistics 2007), which is derived from the International Passenger Survey, estimates net flows to be only 181,000 for the period 2004–2006. In contrast, more than 765,000 workers registered for employment via the

Workers Registration scheme over period May 2004–December 2007, which is considerably higher than the LFS estimate. This presumably reflects the fact that the WRS series counts inflows only. Finally, National Insurance numbers allocated to workers from NMS-8 over the period May 2004–December 2007 come to 807,000 which is very close to the WRS estimates. Once again, the NIRS data measures only inflows.

We would therefore suggest that the total net inflow of NMS-8 migrants from May 2004 to December 2007 is probably around 525,000, and that current stocks are reasonably estimated by Table 1. The very latest evidence from the first half of 2008 suggests that the arrival rate of new migrants is slowing somewhat. The number of applicants for the Worker Registration Scheme has fallen in each of the last four quarters, from 2007 Q3 to 2008 Q2. Further, the number of applications has also fallen in each of the last three months (April 2008 – June 2008).

### **3.2 Return flows of migrants**

A key problem with the UK data sources which measure inflows of NMS-8 migrants (WRS and NIRS) is that no record is made of return flows. These datasets therefore represent a measure of gross inflows. A comparison of inflow estimates from Table 2 suggests that, since May 2004, approximately 31%-34% of NMS-8 migrants have already left the UK.<sup>5</sup> This is broadly consistent with the findings of Pollard, Latorre and Sriskandarajah (2008). A survey by the University of Surrey (2006) of 500 Polish migrants found that one in five identified themselves as seasonal migrants, while one in three intended to stay for less than two years.

### **3.3 Employment patterns**

Table 3 reports some key features of NMS-8 migrants in terms of their employment patterns. NMS-8 migrants are significantly more likely to be employed than the UK-born, but have almost the same risk of unemployment.

Employment rates of NMS-8 migrants have increased dramatically since accession, indicating that the vast majority of new migrants have arrived in the UK for reasons of employment. In 2005, for example, employment rates were only 57%, rising to 74% in 2007. Clancy (2008, Table 3) confirms this trend. He also shows that employment rates of NMS-8 migrants are also significantly higher than employment rates of migrants from the EU14 and the Rest of the World.

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<sup>5</sup> This estimate is based on the difference between the LFS estimate of flows (which represent a net inflow) and the WRS/NIRS estimates (which represent a gross inflow).

**Table 3: Employment patterns, 2007**

	UK-born	NMS-8
(a) Proportion employed	67%	74%
(b) Proportion self-employed	10%	8%
(c) Proportion unemployed (ILO)	4%	5%
(d) Average hourly wage	£11.89	£7.20
(e) Industry:		
Agriculture	1%	2%
Manufacturing	14%	29%
Trade	15%	12%
Hotels and catering	4%	13%
Services	15%	11%
Health, education, public sector	36%	15%

**Notes:**

All results weighted by population weights.

Sample includes those of working age (16-64 for men and 16-59 for women)

Source: QLFS quarter 2 2007.

Table 3 also shows that NMS-8 migrants earn substantially less per hour than UK-born workers, and that they are employed disproportionately in agriculture, manufacturing and hotels and catering.<sup>6</sup>

### 3.4 Skill structure

The lower hourly wages of NMS-8 migrants suggests that they are disproportionately employed in low-skilled occupations. Table 4 confirms this: the proportion of NMS-8 migrants working as operative or in elementary occupations is over 60% compared to only 18% for UK-born workers.<sup>7</sup>

The occupational structure of recent migrants is confirmed by the Worker Registration Scheme Data (Home Office 2008, Table 7). The most common occupations for workers being registered include process operatives, warehouse operatives, packers and kitchen assistants.

In contrast, however, NMS-8 migrants have, on average, 2 years additional education compared to UK-born workers. This will partly reflect the fact that migrants are much younger than UK-born workers (see Table 6 for more on this). Nevertheless, Table 4 is strongly suggestive of the fact that in some senses NMS-8 migrants are “under-employed” relative to their education.

<sup>6</sup> Portes and French (2005) also note that the concentration of NMS-8 migrants is highest in agriculture.

<sup>7</sup> Process, plant or machine operatives plus elementary occupations.

**Table 4: Skill structure, 2007**

	UK-born	NMS-8
(a) Age completed full-time education	18	20
(b) Occupation		
Managers and professionals	28%	6%
Associate professional, administrative and skilled trades	37%	20%
Service occupations	17%	11%
Operatives and elementary occupations	18%	63%

Notes:

All results weighted by population weights.

Sample includes those of working age (16-64 for men and 16-59 for women).

Source: QLFS quarter 2 2007.

### 3.5 Regional distribution

Table 5 compares the regional distribution of NMS-8 migrants with UK-born individuals. At this fairly aggregate level the most distinctive feature is the concentration of migrants in London.

The geographical distribution of recent migrants from the NMS-8 can also be seen from the location of employers of workers registered on the WRS. The Accession Monitoring Report (Home Office 2008, p. 17) shows that Anglia, the Midlands and London were the most common locations. In fact, the proportion of new registrations for London-based employers fell from 20% in 2004 to just 10% by the end of 2007, suggesting that the distribution of NMS-8 migrants in Table 5 partly reflects existing locations of migrants pre-enlargement.

**Table 5: Regional distribution, 2007**

	UK-born	NMS-8
	%	%
North East	4	1
North West	9	6
Merseyside	2	*
Yorks. & Humberside	9	9
East Midlands	7	9
West Midlands	9	6
Eastern	9	9
London	10	34
South East	14	11
South West	9	5
Wales	5	2
Scotland	9	5
Northern Ireland	3	2

Notes:

\* Indicates less than 0.5%

All results weighted by population weights.

Sample includes all individuals.

Source: QLFS quarter 2 2007.

The LFS is not well-suited to an analysis at a finer level of disaggregation because sample sizes become too small. A more detailed breakdown is available from Pollard *et al.* (2008, Appendix B) using WRS registrations, which shows particularly high concentrations of NMS-8 migrants in certain local authorities in London and Eastern England. Of 434 local authorities, 26 have concentrations of NMS-8 migrants of 2% or above, while 337 local authorities have concentrations of less than 1%. Anecdotal evidence suggests that this concentration of migrants has caused problems in terms of provision of local services such as health and education. We return to this issue in Section 4.3.

**3.6 Other socio-economic patterns**

There has been considerable debate in the UK regarding pressure of migrants on social services such as education, health and housing (see Section 4.3 for more detail). Table 6 considers some basic socio-economic characteristics of NMS-8 migrants to the UK. NMS-8 migrants are much younger, on average, and are much more likely to be of working age. A crude indication of receipt of education or health services is given by the proportion of migrants who are children or who are older. Table 6 shows that only a small proportion fall into these categories.

**Table 6: Socio-economic characteristics, 2007**

	UK-born	NMS-8
	%	%
(a) Average age, years	39	30
(b) % working age	58	83
(c) % < 16	20	11
(d) % > 60	22	5
(e) % male	49	52

Notes:  
 All results weighted by population weights.  
 Sample includes all individuals.

Source: QLFS quarter 2 2007.

**3.7 Illegal immigration**

All the data sources described in Section 2 are uninformative about the size or effects of illegal immigrants to the UK. Woodbridge (2005) for the Home Office estimates the size of the total illegal migrant stock in the UK for 2001 to be about 430,000, or 0.7% of the UK population. One obvious assumption to make would be that the decision to allow free entry to NMS-8 migrants would reduce any illegal migration from those countries, but as far as we are aware there is no evidence on this issue. Farrant, Grieve and Sriskandarajah (2006) use information on individuals detained under the Immigration Act. The majority come from outside Europe (39% from Africa and 28% from Asia). Of those from Europe, the largest European nationality groups were from Turkey, Serbia, Montenegro and Romania.

## 4 Effects of labour mobility on the UK labour market

### 4.1 The wage and employment effects on natives

A large economic literature exists which attempts to determine the effect of migration on natives' wages and employment.<sup>8</sup> The majority of this evidence comes from the US. Dustmann, Fabbri, Preston and Wadsworth (2003) argue that "The almost universal conclusion of these studies for other countries is that there is no large discernible impact of immigration on wages or employment of existing workers." In this section we briefly review the recent UK evidence.

#### 4.1.1 Pre-2004 evidence

Dustmann *et al.* (2003) and Dustmann, Fabbri and Preston (2005) provide perhaps the most systematic evidence on the effects of migration on the UK labour market before the 2004 accession. In these papers the effect of migration is identified by the spatial correlation between immigrant inflows (or immigrant stocks) and labour market outcomes. As is well known, a number of key difficulties arise. In particular, the distribution of migrants across geographical areas is non-random and almost certainly correlated with the outcome of interest. In addition, adjustment of natives' labour supply, natives' mobility and capital flows may mitigate the impact of migration. In the UK case, an additional difficulty is the lack of comprehensive data on the number of migrants across narrowly defined geographical areas. Dustmann *et al.* (2003) conclude that there is "no strong evidence of large adverse effects of immigration on employment or wages of existing workers." Dustmann *et al.* (2005) find, if anything, slightly positive wage effects but these are statistically poorly determined.

An alternative approach is taken by Manacorda, Manning and Wadsworth (2006), who estimate a production function which explicitly allows for native and migrants to be imperfect substitutes. They argue that because immigrants to the UK tend to be more educated than natives (see Table 4 for example), increased immigration will reduce the return to education for natives. But because natives and migrants are imperfect substitutes, the size of this effect will be small and "it is not surprising that existing studies have failed to find a significant effect on the labour market outcomes of natives." In fact, Manacorda *et al.* find that the main impact of increased migration is to depress the earnings of migrants who are already in the UK.

Dustmann, Frattini and Preston (2007) is the most recent study which looks at pre-accession migration effects on the UK labour market. Their focus is not just on average wages, but also on the impact of migration over the period 1996–2005 on the whole distribution of wages. They find that, on average, increase immigration is associated with

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<sup>8</sup> There also exists a large literature on the earnings and employment outcomes of migrants themselves, which we do not cover here. See Dustmann and Fabri (2005) for a review of this literature.

small positive wage effects, but that these effects differ across the distribution of wages. They find that “wages at the low end of the distribution (including those at points in the distribution close to the minimum wage) were held back by immigration over the period under consideration...the overall magnitude of effect that immigration had on wages at the low end of the distribution is modest, however.”

#### **4.1.2 Post-2004 evidence**

The large increase in migration post-2004 provides, in theory, an excellent opportunity to estimate labour market effects more precisely. However, time-lags in producing research and the continuing difficulty of finding accurate measures of migrant stocks mean that the number of published studies is small. To date, only Portes and French (2005), Gilpin, Henty, Lemos, Portes and Bullen (2006), Lemos and Portes (2008) and Reed and Latorre (2009) provide microeconomic estimates which explicitly refer to the post accession period, and these papers mostly concentrate on unemployment effects (rather than wage effects). Estimates of the post-2004 macroeconomic impact are discussed briefly in Section 4.3.

Portes and French (2005) provide some preliminary evidence. They first note that evidence that migrants select into geographical areas on the basis of the economic performance of those areas is actually rather weak (Figure 5.4). The relationship between WRS applications and unemployment in 2003 is, if anything, positive rather than negative. This implies that the endogeneity of post-accession inflows might be less of a problem. Portes and French then regress the change in the unemployment rate of natives on the number of WRS applications at a Local Authority level, and find that “A8 migration has been associated, in local labour markets, with a small but significant increase in native unemployment.” However, they also note that this effect is very small in relation to the increase in employment which occurred over the same time period.

Gilpin *et al.* (2006) update and extend the initial findings of Portes and French. They show that there is no discernible statistical relationship between migrant inflows and either claimant unemployment or the number of vacancies posted by employers in local labour markets. They also find no evidence of a fall in nominal wage growth since accession. A large number of econometric models are estimated which attempt to deal with the endogeneity problem outlined earlier. The conclusion is that in the great majority of cases the number of NMS-8 migrants has no discernible impact on the numbers of unemployed in a given geographic region.

Lemos and Portes (2008) extend the analysis of Gilpin *et al.* in several important ways. They extend the length of the period studied; they examine the impact of migration on different occupational groups; they examine the impact at different points in the earnings distribution; and they examine the impact on migration flows within the UK. Despite all these extensions, however, Lemos and Portes also fail to find any significant impact of additional migration on either unemployment rates or wages of natives.

Reed and Latorre (2009) summarise the UK evidence, and conclude that "...the best available UK microeconomic evidence on the effects of migration on employment finds either no effect at all, or very small negative effects." (p.17). Reed and Latorre (2009) also conduct their own analysis of the relationship between job registrations, wage changes and employment changes. Once again, there is no obvious relationship between the size of the migrant inflow and either wages and employment (if anything, the relationship is positive rather than negative).

Reed and Latorre also use regression analysis to examine the relationship between wage changes and the share of migrants in the workforce. They partition the data into cells based on region and occupation, and find a small negative effect: a 1% increase in the share of migrants in a particular occupation and region decreases wages in that occupation and region by about 0.3%. The result is significant at 10% but not at the 5% level. Interestingly, they find that this negative effect emerges because of the inclusion of more recent data, post 2005.

#### **4.2 Effects on firms**

There are at present no academic studies on the effect of increased migration on firms. However, surveys of businesses strongly support the view that migration makes a positive contribution to firms' profits and productivity. For example, a survey by the Institute of Directors (2007) reports that business leaders regard migration as an important way to alleviate skills shortages and to "widen the labour pool for employers." This is confirmed by a survey of members of the British Chambers of Commerce (2007). The majority of respondents said that they employed migrant workers because of a shortage of suitable candidates, and also that migrant workers are "more productive" or have a "better work ethic" than UK equivalents.

#### **4.3 Macroeconomic impacts**

We have already discussed wage and employment effects in Section 4.1. In this section we discuss macroeconomic effects more generally. Section 1.3 suggested that there have been no great shocks to the main macroeconomic labour market indicators as a result of the greatly increased migration flows. Although the unemployment rate increased marginally after 2004, Riley and Weale (2006) note that "it is difficult to argue that the immigration...has been a *prima facie* cause of unemployment." Gilpin *et al.* (2006) find no evidence of a relationship between migrant inflows and unemployment. Riley and Weale do suggest, however, that the slight rise in unemployment inflows of young workers might reflect the increased competition from large numbers of young migrants.

The consensus view is that recent migration to the UK has had a strong effect on GDP growth. Riley and Weale, for example, calculate that total immigration to the UK contributed about 1% to GDP, and that the inflow from the New Member States accounts for 0.2% of GDP: "Since the actual growth rates in 2004 and 2005 were 3.3% and 1.9% respectively, it is obvious that the effect of immigration on economic growth has been

substantial." The Home Office (2007) additionally estimate that over the period 2001–2006 migration contributed around 15–20% of output growth.

The most detailed macroeconomic estimates are provided by Barrell, FitzGerald and Riley (2007), using an econometric forecasting model. Their forecasts are based on the assumption that the migrant stock is constant from 2006q3 onwards, which as we have seen, has not proved accurate. Nevertheless, their simulations predict that output in the UK is two-thirds of a percent higher than it would have been in the absence of the NMS migration. During the adjustment period unemployment rises and inflation falls, but these effects do not persist in the long-run.

However, House of Lords (2008) note that "There has been no empirical research that has analysed the impact of immigration on the per capita income of the resident population of the UK." They argue that what evidence there is suggests that the impact on GDP per head is likely to be minimal. They recommend that "much more empirical work might usefully be done on the labour market and the macroeconomic impacts of immigration in the UK"

#### **4.4 Fiscal impacts**

Gott and Johnston (2002) analyse the likely fiscal impact of migrants in some detail. The key point they make is that employment and earnings are the key determinants of an individual's net fiscal impact: "those who are economically active...are likely to be making a net fiscal contribution." As we have seen in Section 3, there are a number of reasons why new migrants from the NMS-10 countries are likely to have a positive fiscal impact. First, they have high rates of employment. Second, they tend not to have dependents (especially children), and so the cost of education is low. Third, they tend to be young, and so the cost of health and social care is low.

#### **4.5 Effects on public expenditure and public services at the local level**

In this section we consider the impact of the increased migration flows on public expenditure and the use of public services. Much of this information comes from Institute of Community Cohesion (2007), which collected information from a variety of local authorities. However, most of the information presented in this section is qualitative and it is very difficult to accurately estimate the additional cost of increased migration on local and national services

In the UK, the majority of local expenditure on services is funded by grants from Central Government which are directly link to population estimates. Large increases in local populations which are not captured by official population estimates therefore place an immediate strain on local government finances.

#### **4.5.1 Receipt of unemployment benefits**

Data from National Insurance number allocations (Department for Work and Pensions 2007, p.9) show that the proportion of overseas nationals entering the UK and claiming an out-of-work benefit has fallen dramatically since the turn of the century, from 11% in 2000/01 to only 3% in 2005/06. Home Office (2008) reports that the number of applications by NMS-8 nationals for tax-funded income-related benefits was very small. Between May 2004 and December 2007, there were only 7,765 applications for Income Support, 13,622 for income-based Jobseeker's Allowance and 372 for State Pension Credit. Of these, the majority (78%) were disallowed on the basis of the Right to Reside and the Habitual Residence Test (see Section 1.1). These figures suggest that the rate of benefit receipt amongst NMS8 migrants is extremely low.

#### **4.5.2 Education services**

The WRS contains information on the number of dependents of each registered worker.<sup>9</sup> Only a small minority (7%) of registered workers declared that they had dependent children living with them. As a proportion of all registered workers, the total number of dependents aged less than 17 was 4.2% in 2005, 7.2% in 2006 and 8.6% in 2007. This suggests that use of education services in total was rather low (Home Office 2008 Table 5)

The Pupil Level Annual School Census is an annual count of all children at state schools and records first language and ethnicity. There has been an increase in the proportion of pupils whose first language is not English between 2003 and 2006. Of the 10 local authorities where the increase is greatest in pupils whose first language is not English, nine are in London (Institute of Community Cohesion 2007, Table 14). This suggests that this increase in pupil numbers is not purely a result of the NMS8 Accession, since we also observe significant concentrations of NMS8 migrants in Eastern England outside London.

Various local authorities reported additional pressure on schools from increased migrant flows. In particular, it has proved difficult to plan for increased numbers of children as family groups arrive to join migrant workers. Schools have experienced increased "churn" of pupils because their parents often stay in the UK for short periods. The Association of Local Government quantified the additional cost of registering new children at non-standard times as £400 for primary- and £800 for secondary-age children, but this does not include additional costs for extra teaching support such as language services (Institute of Community Cohesion 2007).

#### **4.5.3 Health services**

The age distribution of NMS-8 migrants suggests that the use of health services related to illness and old age is likely to be very low. Various local authorities have reported that

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<sup>9</sup> It should be noted that the Home Office does not verify these responses.

"Migrant workers have had little impact on health services, as they are mainly young and healthy" (Institute of Community Cohesion 2007, p.53).

However, births to mothers who were themselves born outside the UK have increased substantially since 2004. Institute of Community Cohesion (2007, Table 15) shows an increase of 27% in births to non-UK mothers, and an increase in 52% of births to mothers born in Europe.<sup>10</sup> The top 10 authorities for percentage of live births to mothers born outside the UK in 2006 were all London boroughs, with nine exceeding 60%. In 2001 58 authorities had more than 15 per cent of their live births to foreign-born women of which 28 were outside London. In 2006 this had grown to 119 authorities of which 86 were outside London, which points to increasing pressure on healthcare system outside London. Some Local Authorities had a very large percentage of live births given by mothers born outside the UK – the actual percentage ranging from 33% to 53% for the top 10 authorities.

#### **4.5.4 Crime**

A recent report by the Association of Chief Police Officers (Maxwell and Fahy 2008) concluded that migrants are no more likely to commit crime than natives. Maxwell and Fahy argue that there is no evidence to support the idea that migration created any kind of large scale "crime wave". In fact, crime actually fell over the period in question. They do note that cultural differences may exist (such as attitudes to offences like drink driving), but that these can be exaggerated. The main problems associated with the influx of NMS8 migrants has been in terms of "local rumour and misunderstandings fuelling tensions", and in terms of significant increases in spending on interpreters.

The Institute of Community Cohesion (2007) includes results of surveys aimed at assessing effects of migration on public services from 100 councils, including policing. They find that most of the crimes consist of minor offences such as drink-driving, lack of documentation including tax and insurance, and the non-use of safety belts.

#### **4.6 Effects on immigrants: brain waste?**

Dustmann *et al.* (2007 p.58) show that despite being better educated than natives, new immigrants to the UK (at least in the period 1996–2005) tend to downgrade to less-skilled occupations upon arrival. Drinkwater, Eade and Garapich (2006) confirm this finding. They say that "the majority of post-enlargement migrants from accession countries have found employment in low-paying jobs...it follows that recent Polish migrants typically have lower returns to their education than other recent arrivals."

In this section we measure the extent to which recent migrants are employed in jobs below their education level. The data are taken from the UK Quarterly Labour Force

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<sup>10</sup> Information on precise country of birth of the mother is not available.

Survey 1993Q4–2007Q4. We are of course particularly interested in the years since the NMS-8 joined the EU that is 2004–2007. Years before 1993Q4 do not contain information on wages.

We use all observations where a respondent’s labour market status is “employee” and where information on hourly wages is available. We drop outliers on hourly pay (top and bottom 1%), and we drop observations with missing information on year of arrival in the UK and years of education. The resulting sample has approximately 750,000 observations on 575,000 individuals (because from 1998 onwards about 175,000 individuals are interviewed twice).

#### 4.6.1 Do immigrants’ wages reflect their educational qualifications?

The basic model we estimate is

$$(1) \quad \ln w_i = \beta_0 + \beta_F \mathbf{F}_i + \beta_{Fl} (\mathbf{F} \cdot l)_i + \beta_e e_i + \beta_{Fe} (\mathbf{F} \cdot e)_i + \beta_x \mathbf{x}_i + \tau_i + \varepsilon_i$$

The dependent variable is log hourly wages. The vector  $\mathbf{F}$  contains a dummy variable for each migrant group. In the simplest case,  $\mathbf{F}$  would simply be 1 for a person born outside the UK, and 0 otherwise. In practice we will separate foreign-born into five groups:

1. UK-born
2. Born in NMS, arrived before 2004
3. Born in NMS, arrived after 2004
4. Born in EU17 country<sup>11</sup>
5. Born in any other country<sup>12</sup>

The variable  $\mathbf{F} \cdot l$  measures the number of years since arrival in the UK, and is zero for UK-born workers. The coefficient  $\beta_{Fl}$  therefore provides an estimate of the rate of “catch-up” by migrant workers. If  $\beta_{Fl} > 0$ , then migrant workers’ earnings catch up with natives’ earnings as migrants’ tenure in the UK increases.

The variable  $e$  measures years of education measured as (age left full-time education–5).<sup>13</sup> Individuals who are still in education are dropped. So the coefficient  $\beta_e$  can be interpreted as a rate of return to an additional year of education. The interaction term  $\mathbf{F} \cdot e$  allows us to see if this rate of return differs between migrants and natives. The

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<sup>11</sup> EU15 plus Cyprus and Malta.

<sup>12</sup> Includes other European countries which are not in the EU.

<sup>13</sup> This may be problematic, since children in Eastern Europe typically start their formal education aged seven.

basic hypothesis is that  $\beta_{Fe} < 0$  because the returns to education are smaller for foreign-born workers. An additional interaction term of the form  $(\mathbf{F} \cdot e \cdot l)_i$  would also allow us to see if there was a “catch-up” in terms of returns to education. For example, if migrants initially start in a low-skilled job regardless of their education then  $\beta_{Fe} < 0$  when  $l$  is low. As the length of stay increases they may find better jobs and  $\beta_{Fe}$  might rise.

The vector  $\mathbf{x}$  contains other characteristics of individuals, in this case, age, sex and region of residence. There are numerous other controls that one could include in a Mincerian wage equation of this sort which would undoubtedly have an effect on wages, such as occupation and industry. But if migrants’ lower returns to human capital are a result of working in low-skilled industries or occupations, then we are in danger of “controlling away” the causes of low returns to education. Finally,  $\tau_t$  is a calendar time effect measured by year and quarter dummies. Results are reported in Table 7.

**Table 7: Returns to education, natives and migrants**

	Model 1	Model 2	Model 3	Model 4
<i>F</i>				
Born in NMS, arrived before 2004 (NMS)	-0.2652*** (0.0195)	-0.0264 (0.0623)	0.1658* (0.0838)	0.1478* (0.0709)
Born in NMS, arrived after 2004 (new NMS)	-0.4249*** (0.0259)	0.3336*** (0.0701)	0.1778 (0.1211)	0.0269 (0.1024)
Born in EU15 (EU15)	0.0229** (0.0079)	0.0997*** (0.0203)	0.3122*** (0.0281)	0.2540*** (0.0238)
Born in rest of world (RoW)	-0.1467*** (0.0045)	0.1400*** (0.0112)	0.2928*** (0.0169)	0.1432*** (0.0143)
<i>F•l</i>				
Length of stay (NMS)	0.0083*** (0.0009)	0.0077*** (0.0009)	-0.0036 (0.0034)	-0.0047 (0.0029)
Length of stay (new NMS)	0.0165 (0.0163)	0.0170 (0.0149)	0.1369 (0.0773)	0.1382* (0.0654)
Length of stay (EU15)	-0.0005 (0.0003)	0.0032*** (0.0003)	-0.0078*** (0.0010)	-0.0065*** (0.0009)
Length of stay (RoW)	0.0044*** (0.0002)	0.0050*** (0.0002)	-0.0028*** (0.0007)	-0.0031*** (0.0006)
<i>E</i>				
Years of education		0.0802*** (0.0002)	0.0802*** (0.0002)	0.0338*** (0.0002)
<i>F•e</i>				
Years of education (NMS)		-0.0283*** (0.0037)	-0.0413*** (0.0053)	-0.0234*** (0.0045)
Years of education (new NMS)		-0.0598*** (0.0045)	-0.0492*** (0.0081)	-0.0172* (0.0068)
Years of education (EU15)		-0.0192*** (0.0012)	-0.0336*** (0.0018)	-0.0220*** (0.0015)
Years of education (RoW)		-0.0300*** (0.0007)	-0.0405*** (0.0011)	-0.0205*** (0.0009)
<i>F•e•l</i>				
Years of education*length of stay (NMS)			0.0008*** (0.0002)	0.0006** (0.0002)
Years of education* length of stay (new NMS)			-0.0081 (0.0051)	-0.0085 (0.0043)
Years of education* length of stay (EU15)			0.0008*** (0.0001)	0.0006*** (0.0001)
Years of education* length of stay (RoW)			0.0006*** (0.0000)	0.0004*** (0.0000)
Gender dummy	1	1	1	1
Age dummies	11	11	11	11
Region dummies	19	19	19	19
Time dummies	17	17	17	17
Occupation dummies				8
Industry dummies				18
Constant	1.1468*** (0.0075)	0.2910*** (0.0072)	0.2904*** (0.0072)	1.1102*** (0.0080)
R <sup>2</sup>	0.2440	0.3702	0.3704	0.5502
N	748,882	748,882	748,882	748,333

Source: own calculations from QLFS.

The first column reports basic wage differences between migrants and natives without considering returns to education. Migrants from the NMS who arrived before 2004 earn, on average, 26.5% less than natives. The interaction term for this group with length of stay is positive and significant, but small, suggesting that “catch-up” with natives would only occur after a long period. Recent NMS migrants have an even larger wage gap. The

coefficient on length of stay for this group is poorly identified presumably because there is insufficient variation in length of stay. In contrast, migrants from the EU15 earn a small wage premium of 2.3%. Migrants from the rest of the world have a smaller wage gap (-14.7%) but an equally long "catch-up" period as pre-2004 NMS migrants.

The second column estimates equation (1) and includes measures of returns to education split by migrant group. Returns to education for natives are estimated to be 8%. Returns to education for all migrant groups are significantly smaller. Interestingly, the largest effect is for post-2004 migrants whose return to education is estimated to be only 2% (8%–6%). This is consistent with returns to education estimated for Polish migrants by Drinkwater *et al.* (2006).

Finally in column 3 we also introduce interactions between education and length of stay. A positive coefficient here indicates that a particular migrant group's return to education increases with length of stay. We find small but significant effects for all migrant groups *except* recent NMS migrants. So, for example, a migrant from the NMS who arrived before 2004 is estimated to have a return to education of 4% (8%–4%) upon arrival, but after 10 years this would rise to about 4.7% (8%–4%+(10 × 0.08% = 4.7%). Again, the short period of time that new NMS migrants have been here means that the interaction term for these migrants is poorly identified.

There are a number of reasons why returns to education might be lower for migrants. One possibility is that their choice of occupation and industry leads to low-skill jobs which do not reward human capital. If this were the case, the inclusion of controls for occupation and industry should reduce the negative coefficient of  $\beta_{Fe}$ . In column 4 we add these controls. Their inclusion significantly reduces the overall rate of return to education for natives and migrants, but the gap between natives' and migrants' returns to education remains significant. Now, however, the gap between natives' and migrants' returns to education no longer differs significantly between migrant groups ( $p$ -value=0.7185), suggesting that the larger gap for new NMS migrants found in Model 2 was the result of occupation and industry differences.

A second possibility is that, even within an occupation or industry, education is less well-rewarded for migrants, perhaps because of discrimination or because they have genuinely lower productivity for a given level of education. An example of this latter might be related to language skills.

#### **4.6.2 Are immigrants employed below their skill levels?**

A second way of assessing "brain waste" is to compare the occupational structure of similarly educated migrants and natives. We classify education using the age when the individual left full-time education, grouped into bands corresponding loosely to ages when significant qualifications are received in the UK education system, namely 16, 18 and 21. Occupations are classified using the SOC-2000 major groups.

The results, shown in Tables 8a-8c are quite striking. Table 8a shows the distribution of occupations across educational groups for workers born in the UK. Nearly 80% of workers who left full-time education after the age of 21 (most of whom will have a degree) are employed in managerial, professional or associate professional occupations. In contrast, nearly 80% of workers who left school before the age of 16 are in non-managerial and non-professional occupations.

**Table 8a: Distribution of occupation by education: UK-born workers**

Occupation	Age left full-time education				Total
	≤15 %	16,17 %	18,19,20 %	≥21 %	
Managers and senior officials	9.01	13.12	19.07	19.79	14.33
Professionals	2.40	4.70	11.14	44.50	11.58
Associate professional and tech.	5.60	10.79	18.66	18.38	12.25
Admin and secretarial	12.93	19.02	20.76	7.91	16.33
Skilled trades	13.41	11.95	4.60	1.51	9.38
Personal services	12.88	10.68	10.38	2.95	9.86
Sales and customer services	8.82	8.69	7.64	2.88	7.62
Process, plant and machine oper.	16.23	10.37	3.13	0.87	8.85
Elementary occupations	18.71	10.67	4.62	1.21	9.80

Source: own calculations from QLFS.

**Table 8b: Distribution of occupation by education: migrants from NMS (pre-2004)**

Occupation	Age left full-time education				Total
	≤15	16,17	18,19,20	≥21	
Managers and senior officials	8.33	4.62	8.71	13.21	10.29
Professionals	2.78	4.62	5.41	30.38	16.59
Associate professional and tech.	5.56	5.38	8.71	10.75	9.08
Admin and secretarial	8.33	10.77	13.88	11.32	12.01
Skilled trades	8.33	18.46	8.94	3.96	7.69
Personal services	5.56	7.69	18.82	8.87	12.19
Sales and customer services	6.94	10.77	9.41	5.47	7.61
Process, plant and machine oper.	27.78	12.31	7.53	6.04	8.64
Elementary occupations	26.39	25.38	18.59	10.00	15.90

Source: own calculations from QLFS.

**Table 8c: Distribution of occupation by education: migrants from NMS (post-2004)**

Occupation	Age left full-time education				Total
	≤15	16,17	18,19,20	≥21	
Managers and senior officials	0.00	0.85	0.74	2.77	1.43
Professionals	0.00	0.00	0.18	8.31	2.96
Associate professional and tech.	0.00	0.00	2.03	7.20	3.54
Admin and secretarial	3.85	0.00	3.33	4.99	3.54
Skilled trades	19.23	16.10	9.80	8.86	10.42
Personal services	0.00	5.08	8.32	12.47	9.18
Sales and customer services	3.85	0.85	1.85	2.22	1.91
Process, plant and machine oper.	15.38	33.05	24.03	17.17	22.47
Elementary occupations	57.69	44.07	49.72	36.01	44.55

Source: own calculations from QLFS.

A higher proportion of migrants from the NMS who arrived before 2004 are in less-skilled (and lower-paying) occupations, and this is the case across all education groups. But much greater differences are seen in Table 2c, which looks at NMS migrants who arrived

after 2004. A remarkable 36% of these migrants who left full-time education after the age of 21 are employed in elementary occupations, compared to 1% of similarly educated natives. These results are quite consistent with the regression results because there are large wage differences between these occupational groups.

## **5 Summary**

The UK provides an interesting test-bed for the impacts of increased migration. Workers from the NMS8 were essentially free to come to the UK to work, and as a result the UK experienced unprecedented flows of migration in a short period of time. Three aspects in particular are worth highlighting.

### **1 *Measuring the size of the inflow***

As has been noted elsewhere, it is difficult to precisely estimate the *net* inflows of migrants into the UK. There is no up-to-date population register, and the best available administrative data records only gross inflows of migrants who enter the official labour force. Nevertheless, the available data sources examined here suggest that up to a million migrants from the NMS-8 arrived in the UK over the period 2004–2007, and that around 600,000 of these are currently residing in the UK.

### **2 *The characteristics of the migrants***

All the evidence we have suggests that the vast majority of these migrants arrived in the UK to work. Only a small fraction has claimed benefits of any kind. The new migrants tend to have rather more education than the average native, but they are predominantly employed in low-skilled occupations. This fact explains why the wages of new migrants are significantly lower than equivalently education natives, in contrast to other groups of migrants to the UK who often earn higher wages than UK-born workers. The location of the jobs which the new migrants do means that they are geographically concentrated in London (services and hospitality industries) and the East of England (agriculture and manufacturing industries).

### **3 *The labour market outcomes for natives***

The overwhelming consensus from almost all UK studies is that there is no statistically significant relationship between migrant inflows and the labour market outcomes of natives, including both wages and unemployment. However, it should be noted that the available evidence post-2004 is limited to only three studies reviewed in Section 4.1, and there remains a widespread belief that the large numbers of migrants employed in low-skill occupations has put downward pressure on low-skilled wages. The pressures of increased migration have been felt at a local level in the increased use of education, health and social services. This reflects in part the fact that local services are primarily funded by grants from central government (rather than local taxation).

## **Outlook**

The latest data on inflows (see Table 2) shows that the rate at which NMS-8 migrants arrive in the UK has been slowing. Coupled with evidence that a significant proportion of these migrants are leaving, or are intending to stay for a short period, this suggests that the largest wave of migration has probably passed. We would expect, over the next few years, to see net migration from NMS-8 states fall as outflows rise and inflows fall. Developments in the sending countries (such as increases in wages) will strengthen this trend. Furthermore, the recent shocks to the UK economy which have caused increases in inflation and unemployment, and a fall in the exchange rate, would also be expected to reduce net migration trends.

Any lifting of restrictions on migration from Bulgaria and Romania might be expected to cause another wave of migration from those countries. However, there are several reasons to suppose that migration to the UK from Bulgaria and Romania might be considerably smaller than that from the 2004 enlargement. First, in terms of population, the addition of these two countries to the EU is on a much smaller scale. Second, patterns of migration from Bulgaria and Romania to Spain and Italy are already well-established, and this would be expected to continue. Finally, as we have noted, the downturn in the UK economy would tend to discourage additional migration. The Migration Advisory Committee (2008) report on the labour market impact of relaxing restrictions on A2 employment in the UK concludes that "It is not possible to predict accurately what flows from A2 countries will be if the UK lifts restrictions..." but that "...removing the restrictions would probably have a small labour market and economic impact."

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