The impact of free movement of workers from central and eastern Europe on the UK labour market: early evidence

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A report of research carried out on behalf of the Department for Work and Pensions
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Summary

The UK granted free movement of workers to nationals of eight new European Union Member States (A8) following enlargement in 2004. This paper draws together the available evidence in order to make an early impact assessment for the response of the UK labour market to migrant flows from the accession countries. Macroeconomic conditions remain robust in the UK following accession with record numbers in employment, stable unemployment and benign wage pressures. Our results suggest that the primary impact of A8 migration has been to increase output and total employment, with minimal impact on native workers, although higher levels of accession-worker migration do appear to be associated with small increases in the claimant unemployment count. There is some evidence that free movement appears to have resulted in a reduction in illegal, or unreported, working among A8 nationals. At a sectoral level, by far the most significant observed changes have been in the agriculture and fishing sector. Here, employment appears to have grown sharply as a result of accession-worker migration, while there is some mixed evidence that growth in nominal wages has been reduced relative to the rest of the economy. Overall, the economic impact of accession on the UK labour market appears to have been modest, but broadly positive, reflecting the flexibility and speed of adjustment of the UK labour market.
1 Introduction

On 1 May 2004, eight central and eastern European (A8) countries joined the European Union (EU). The EU is not only a free trade area, but guarantees free movement of workers (FMOW) for all its citizens. Eventually, citizens of the A8 countries will be free to move anywhere within the expanded EU to look for work. However, as with previous accessions, existing Member States (EU-15) had considerable concerns about the impact of complete liberalisation on their labour markets. The Accession Treaties, therefore, gave the EU-15 countries the option of delaying the implementation of full FMOW for up to seven years. Most of the EU-15, including France, Germany, Italy, and Spain, chose to impose restrictions in one form or another, with the exceptions being Ireland, Sweden and the United Kingdom.

The UK government announced in December 2002 that it would allow immediate free movement of A8 country workers following accession. This decision was taken for both political and economic reasons. As set out below, the UK labour market was, and remains, buoyant with unemployment at the lowest level for a generation. Moreover, while it faced considerable political difficulties over the issue of asylum seekers, the UK government has maintained the view, one supported by independent academic research, that economic migration yields substantial benefits to the

1 Cyprus and Malta also joined the EU on this date. However, in practice, citizens of these countries already had relatively free access to the EU labour market, especially in the UK, which has large Cypriot and Maltese communities.

2 This is inevitably something of an oversimplification. A thorough description of the complete regulatory framework applying to accession country nationals in the different existing EU states in the transition period can be found in Sriskandarajah et al. (2004).

3 In Sweden; although the (minority) government did attempt to impose restrictions, it was unable to secure parliamentary support, owing to a tactical alliance between the conservative opposition and the far left; the result was that no restrictions were imposed. Ireland also imposed no restrictions (which would have posed serious practical difficulties, given the lack of border controls between Northern Ireland, which is part of the UK, and Ireland).

4 Sriskandarajah et al. (2005).
economy. Additionally, the UK had always been a strong supporter of the accession of the new Member States. In these circumstances, there seemed to be a good economic case for immediate free movement; and it also yielded political benefits, with the new Member States warmly welcoming the UK position.

The original announcement by the UK government did not attract much attention; however, in the run-up to 1 May 2004 this decision became the subject of political controversy. Nevertheless, the government stood firm; although imposing some additional restrictions on the ability of new migrants to claim social security benefits, it maintained its original policy on labour migration. While not altering the policy, the government did announce one additional new measure; unlike migrants from EU-15 countries, migrants from the accession states who took up employment for more than one month, would be obliged to register with the Home Office under a new Worker Registration Scheme (WRS) at a cost of £50 per registration. There would be no quota or other restrictions; registration would be automatic for those who could show they were, in fact, accession country citizens. This requirement, while not imposing any significant additional restrictions on free movement of labour, provides the UK government with an important new source of labour market information about migrants from the accession countries, which we make use of in this paper.

Contrary to some predictions, there was no sudden flood of migrants from the new EU Member States, but rather a steady flow to sectors where labour was in demand. However, 176,000 accession country migrants have registered under the WRS in the first 11 months. It is now over a year since accession and there are a range of administrative and survey sources that enable us to provide an initial assessment of the labour market impact in the UK of FMOW from the A8. While it is obviously far too early to come to any firm conclusions, this paper will attempt to summarise what we know so far.

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5 In practice the ability of new migrants to claim benefits would, in any case, have been very limited due to the Habitual Residence Test, which imposes a qualifying period of residence on those wishing to claim benefits. The new measures strengthened the test as well as imposing some minor additional restrictions.

6 Details on the registration process can be found online at http://www.workingintheuk.gov.uk/working_in_the_uk/en/homepage/schemes_and_programmes/worker_registration.html
2 Literature review

2.1 Labour market impacts of migration

There is of course extensive literature on the impact of labour migration on economies and especially on labour markets. We will not attempt to summarise it here. Useful review articles\textsuperscript{7} can be found in the Handbook of Labor Economics. Most of this literature concentrates on the experience of the United States. It is, however, worth mentioning the key controversy in this field, which has been over the impact of migration on native employment and wages. Here, there probably remains a broad – although by no means uncontested – consensus that in the US context:

\textit{‘The overwhelming majority of empirical studies agree that there is essentially no statistically significant effect of immigration on labour market outcomes, with the possible exception of the least skilled domestic workers (i.e. that small share of the work force that are high school dropouts).’}\textsuperscript{8}

However, the lack of an effect of migration on wages and employment has long been regarded as something of a paradox. It seems intuitive that immigration must depress wages (at least of those whose skills are comparable/substitutable with those of migrants), even if it generates growth overall. More recently, it has been suggested – often by those approaching the issue from a trade-theoretic, rather than labour market, perspective – that migration affects not wages, but the composition of output (that is, the industrial structure of the receiving country). Thus, migration of workers into a particular sector allows that sector to expand, leaving the wages and employment of the existing workforce (in that and other sectors) unchanged.\textsuperscript{9} It should be noted that this hypothesis is arguably more plausible in the context of the UK (a small open economy by most measures) than for the US.

\textsuperscript{7} Borjas, G. (1999).

\textsuperscript{8} Gaston, N. and Nelson, D. (2001). Although he contributed a number of the analyses which helped build this consensus, a high profile recent dissident is Borjas, G. (2003).

2.2 UK evidence

There is considerably less evidence on migration to the UK (or indeed to Europe as a whole) than for the US. In 2001, the UK government published a highly influential (in policy terms), analysis of the economic and social impact of migration.\textsuperscript{10} This also led to the commissioning of further research, and the best summary of the general evidence on the economic impact of migration to the UK is found in a set of (largely descriptive) academic studies published by the Home Office.\textsuperscript{11} The key findings from these studies were that migrants:

- constitute about eight per cent of the UK population, and almost ten per cent of the working age population;
- of working age are less likely to be employed than natives but if employed, earn on average substantially higher wages;\textsuperscript{12}
- are concentrated in London and the South-East of the UK, and in service industries;
- are very heterogeneous (and more so than natives) in characteristics and outcomes.

Key factors (in addition to the obvious ones like education) which influence migrant labour market outcomes include:

- **Ethnicity**. Non-white migrants have lower wages and employment probabilities (even after controls), likely to reflect both unobservables and discrimination;\textsuperscript{13}
- **Time of arrival**. Migrants to the UK display the classic Chiswick assimilation wage curve, starting behind but quickly overtaking natives;
- **English language fluency**. This is a strong driver of both employment and earnings.

There is little evidence of any adverse impact on the labour market outcomes of natives in the UK.\textsuperscript{14}

2.3 The projected impact of accession

In the run-up to accession, a number of studies attempted to estimate likely migration flows from the accession countries to the existing member states. The most comprehensive assessment was performed by the European Commission. This forecast annual flows of migrants from the accession countries to the existing

\textsuperscript{11} Home Office (2002).
\textsuperscript{12} Dustmann, C., et al. (2003).
\textsuperscript{13} Shields, M., and Wheatley-Price (2003).
\textsuperscript{14} Dustmann, C., et al. (2003) (2).
Member States of between 3.2 million and 4.5 million over 25 years, amounting (in the central scenario) to perhaps five per cent of the population of the accession countries, and one per cent of the population of the existing Member States. The peak flow – shortly after enlargement – would be 370,000 in 2005. This compares to existing net migration from all sources to the existing Member States of between one and 1.5 million per year. The UK would receive a relatively small proportion of these flows, with the annual net flow peaking at 17,000 in 2005, equivalent to somewhat more than ten per cent of current annual net migration to the UK, but less than 0.03 per cent of the existing UK population. Other studies produced similar results. A research review commissioned by the UK Home Office, assessing all the available studies, concluded that likely net flows to the UK might be between 5,000 and 13,000 annually. However, before concluding that migration flows to the UK are likely to be negligible in labour market terms, there are two important caveats to all the available studies:

- The forecasting methodology used in all the studies is, necessarily, based on historic migration flows; either looking at a range of time series data on migration flows to EU countries (for example the Commission study looked at migration to Germany) or the experience of earlier EU accessions (notably Spain and Portugal in 1986). Such models do not, in general, have a very good track record in forecasting migration flows, particularly in the presence of a policy shock.

- None of the studies account for the ‘diversion’ effect induced by the fact that, of the large EU Member States, only the UK fully opened its labour market. It must be likely that some of those who would otherwise have migrated to Germany, Italy or France will now migrate to the UK.

The academic literature is limited for the UK and one of the main reasons for this is the paucity of appropriate data. However, accession and the associated collection of WRS data provide us with an opportunity to extend the evidence base. It should, however, be noted that such is the short timescale since accession, that our findings are preliminary.

16 These estimates included Bulgaria and Romania, which did not join the EU on 1 May 2004, although they are due to accede in 2007.
3 The UK labour market in 2004

At the time of accession, the UK labour market was healthy by both historic and international comparisons, with an employment rate\(^\text{18}\) of 72 per cent and an unemployment rate of around five per cent. These were the best figures among the G7 countries as well as reflecting a performance well above the EU average.

Figure 3.1 Employment and unemployment in the EU-25 and G7 in 2004/05

\(^{18}\) For international comparisons, the OECD classifies the working age population as all those aged 16 – 64. In the UK, the standard employment rate reflects state retirement age and hence classifies the working age population as 16 – 59 (women)/64 (men).
The UK labour market has been remarkably stable in recent times, with employment rising consistently over the last 13 years. A full description of recent developments in the labour market can be found in the Treasury/DWP publication ‘Full Employment in Every Region’. This also shows that performance has generally been good across all regions of the UK. Since accession in May 2004, the UK labour market has continued its robust performance. Between the quarters ending February 2004 and February 2005, employment in the UK grew by 231,000 and the employment rate of the working age population from 74.9 per cent to 75.0 per cent.

While there are some differences in levels of employment and unemployment across regions, they are not particularly large, nor were they growing. In 2004, over 80 per cent of the local authorities in the UK experienced a change in the proportion of the working age population on the claimant count of between 0 and -0.4 per cent points (the national average for the same period was a change of -0.2 per cent points).

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20 The claimant count records claimants of unemployment insurance: Jobseeker’s Allowance.
Figure 3.2  Change in the proportion of the working age population on the claimant count between December 2003 and December 2004

Key
- 0.2% or more
- 0% to 0.2%
- -0.4% to 0%
- -0.8% to -0.4%
- -0.8% or less

Orkney & Shetland Islands
Greater London
An important point to note is that, despite generally strong economic growth, London had, and continues to have, significantly lower levels of employment than other regions, supporting the view that much of the unemployment and inactivity is structural, resulting from supply-side factors, rather than related to labour demand or macroeconomic factors. This clearly relates to the debate on the labour market impact of migration described previously; if this is indeed the case, then we would expect that the impact of increased migration, in London, as a result of accession would be an expansion of overall employment and output, with little or no impact on native workers, rather than displacement of native workers.
4 A8 migrants in the UK

There are two principal data sources available on migrants from the A8 countries to the UK; the Labour Force Survey (LFS) (the standard data source for UK labour market information); and the WRS data. The details of these two data sources are given at the Appendix at the end of this paper. We now briefly describe the main information from each.

4.1 Labour Force Survey

Even before free movement, there were a considerable number of A8 nationals in the UK; and numbers had been rising steadily in recent years. By the end of 2003, there were about 145,000 A8 nationals in the UK. Of these, about 50 per cent were of Polish origin and approximately two-fifths were of pension age, reflecting post-war (refugee) migration. Despite this, working age migrants from accession countries made up just 2.5 per cent of the total working age migrant population and less than 0.25 per cent of the total working age population in the UK. The numbers of A8 nationals of working age were roughly comparable to the number of migrants from Cyprus and Malta.

4.1.1 Change to the stock of A8 migrants since accession

The latest LFS\(^{21}\) estimates that approximately 60,000 working age A8 nationals arrived in 2004 and remain in the UK with the stock of A8 migrants increasing to almost 205,000; as will be seen later, this is a rather different – although it should be stressed not contradictory – picture to that given by the WRS. Migrants from the A8 now make up just over 0.4 per cent of the total working age population. Figure 4.1\(^{22}\) shows that migrants arriving from the A8 in recent years are predominantly working age with very small numbers of migrants of pension age or with dependants.

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\(^{22}\) Figure 4.1 shows a cumulative total of migrants by year of arrival.
It should be noted that the estimate for net migration at this stage has a number of important caveats:

- Firstly, the LFS refreshes just one-fifth of its sample each quarter as all respondents are interviewed for five successive quarters. As a result, it can be expected that a time lag will be present in picking up a representative sample of the population.

- Secondly, it is rational to expect that the LFS will undercount migrants working in communal establishments and with irregular housing arrangements.

- Finally, an A8 migrant recorded at this stage on the LFS may not match the internationally agreed definition of a migrant (that is a person who changes his usual country of residence for at least a year). This is particularly important given that many A8 migrants are likely to be short-term or seasonal workers.

The estimate for net migration from the A8 countries in 2004 should, therefore, be treated with caution as a result of these caveats.

### 4.1.2 Change to the employment rate of A8 migrants since accession

Prior to accession, the employment rate of migrants from the A8 countries was significantly below that of people born in the UK and other migrant groups. However, since accession there has been a substantial, and statistically significant increase in the employment rate of A8 migrants and it now stands at a higher level than that of the working age population born in the UK and almost nine percentage points higher than migrants not from the A8 living in the UK.
While the cohort of A8 migrants arriving in 2004 have boosted the employment rate of A8 migrants as a whole, the increase in the employment rate of previous cohorts of A8 migrants supports the view that illegal or unreported working amongst these groups may have been reduced as a direct result of access to the formal labour market. This is an important finding of this work and provides support to the decision of the UK government to grant FMOW to accession migrants. At the same time as employment amongst A8 migrants has risen, the employment rate of migrants from other countries, both from within the EU-15 and from the rest of the world, has increased and it should be noted that this increase in migrant employment rates over the last 12 months has occurred without a compensating fall amongst employment of those born in the UK.

It is important to qualify our findings by noting that, prior to accession, some A8 nationals present in the UK may have been there illegally; or may have been there legally, but not entitled to work; or only entitled to work under certain restrictions (e.g. students). It is, therefore, likely that the LFS will have counted some – but not all – illegal or irregular workers. We have no way of knowing what proportion of those responding to the LFS as working are in fact working illegally; nor what proportion of respondents claim not to be working but are in fact working illegally; nor what non-response rates are.

### 4.1.3 Geography of A8 migrants since accession

Our preferred measure for the geographical location and industrial sector in which A8 migrants work is the WRS. However, the LFS provides the best measure of the pre-accession distribution. The LFS finds that over 50 per cent of all A8 nationals living in the UK prior to accession lived in London and at least two-thirds of all A8 nationals were concentrated in London and the South East. These results are
different to those seen in Worker Registrations where this regional concentration is significantly lower, A8 migrants arriving since accession have located in regions not traditionally associated with migrant flows and while London remains a disproportionately popular location, it has attracted just 25 per cent of A8 migrants registering for work since accession.

4.2 Worker Registration Scheme

Our second major source of information on developments since accession comes from the WRS. As set out already, all those A8 nationals taking up employment in the UK are obliged to register with the WRS. Applications include the following data:

- country of origin, gender, and age of applicant;
- geographical location and industrial sector of employment;
- wage rate and date of arrival in the UK.

It is important to remember that the WRS measures gross flows only; there is no requirement to deregister if the worker leaves the country. Between 1 May and 31 March 2005, an estimated total of 176,000 applications were received. A summary of the main characteristics of A8 migrants registering under the WRS can be found in the latest Home Office Accession Monitoring Report, published 26 May 2005. A broad overview (some of which is based on slightly earlier data) is given below; Figure 4.3 shows that a significant proportion of A8 migrants were living in the UK prior to May 2004 and that registrations\(^{23}\) peaked shortly after accession. It is too early, at this stage, to assess whether the fall in the number of applications towards the end of 2004 is the result of a seasonal pattern.

\(^{23}\) It should be noted that the registrations data used in this paper and the applications data used for the Home Office monitoring reports differ in their monthly profile due to the time lag in processing applications.
Unsurprisingly, given the rules of the scheme, almost no applications (less than one per cent) were refused, and those on technical grounds. The key points to emerge from the WRS data are:

- In the early months, the majority of those applying had been in the UK well before 1 May 2004. By December 2004, 26 per cent of all applicants reported being in the UK prior to accession and a further 12 per cent did not give details of their date of arrival in the UK. A proportion of these will have been in the UK legally as visitors or students, and not working, while others will have been working legally (with a work permit or self-employed) and registered a change of jobs after, 1 May. However, some proportion is likely to have been working illegally and accession has offered the opportunity to formalise their employment status.

- The dominant nationality was Polish, comprising about 57 per cent of the total, followed by Lithuanians. When registrations are expressed as a proportion of the host country population (see Table 4.1), Lithuanians appear to possess the greatest propensity to enter the UK labour market with registrations in the first eight months at over three times the rate of Poles.
Table 4.1  WRS applicants as a proportion of the host country population

<table>
<thead>
<tr>
<th>Country</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>0.13%</td>
</tr>
<tr>
<td>Estonia</td>
<td>0.22%</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.05%</td>
</tr>
<tr>
<td>Latvia</td>
<td>0.57%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>0.81%</td>
</tr>
<tr>
<td>Poland</td>
<td>0.27%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>0.36%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>0.01%</td>
</tr>
</tbody>
</table>

- Applicants were young, with 43 per cent under 24, and a further 40 per cent aged 25 – 34; they were equally divided between men and women.

- The majority of applicants were working in the hospitality, agriculture and administrative sectors. Figure 4.4 shows the number of applications by sector as a proportion of the workforce employed in that sector. The predominance of the agriculture and fishing sector should be noted and is explored in greater depth below.

Figure 4.4  Worker registrations as a proportion of all employees by sector in the UK

- Migrant wages were low, with more than 80 per cent earning between £4.50 (the minimum wage in the UK for those aged over 21 in 2004) and £6.00; this is between 45 and 60 per cent of average UK hourly earnings.
• Applicants are geographically concentrated in London and southern regions; but this concentration is perhaps not as marked as might be expected, with only about a quarter of applicants working in London, compared to about half of the stock of A8 resident migrants in the UK and having arrived prior to accession.

Figure 4.5  Hourly wages of A8 migrants registering with the WRS

In summary, the WRS has provided the UK government with an invaluable data source that has allowed for a more comprehensive assessment of the magnitude and impact of migrant flows than ever before. While we have briefly summarised its descriptive findings, we go on to make use of the micro-data in the regression analysis that follows.
5 Impact assessment

5.1 Descriptive analysis

In bringing the two data sources together, one of the key challenges is to assess the magnitude of net flows to the UK by A8 nationals. There were just over 130,000 applicants\textsuperscript{24} to the WRS in 2004; of these, about 85,000 stated that they had arrived in the UK since accession. By contrast, the LFS yields an estimate of an increase in the number of A8 nationals of about 60,000, over roughly the same time period. As noted in Chapter 4, the WRS only measures gross inflows while the LFS estimates stocks. While it is not appropriate to use the LFS and WRS to estimate the rate that migrant flows are returning to their home country, the two data sources support survey results since accession that report a significant proportion of migrants return to their country of origin within a few months of entering the UK. We do not think it is yet appropriate to use the available data to construct a final estimate of net migration from the new Member States.\textsuperscript{25} However, it does seem reasonably clear that migrant flows from the new Member States are in excess of those predicted by ex ante econometric analyses, although interpretation is hindered by the complications described earlier in this paper. The number of registrants is sufficiently high, and the geographical, wage and sector concentration sufficiently pronounced, that we might expect to see some impact of these flows on the UK economy and labour market, at least at a micro level.

As set out in Chapter 4, the single most concentrated inflow of A8 migrants, by sector, was in the agriculture and fishing sector. Figure 5.1 and 5.2 show nominal wage growth in each industrial sector, as reported on the LFS and the Average Earnings Index (AEI), respectively. Figure 5.1 suggests that the impact of accession in the agriculture and fishing sector might be a slowing in nominal wage growth.

\textsuperscript{24} Accession Monitoring Report Home Office online publication; February 2005.

\textsuperscript{25} Official estimates of international migration in 2004 will be published later in 2005 by the Office of National Statistics.
However, this is not replicated in the AEI which, on balance, we believe to be a more reliable source for wage data (see the Appendix). Overall, there is little evidence of reduced nominal wage growth in other industrial sectors. Of course we do not know the counterfactual situation. But given the large number of vacancies that existed in the UK economy in 2004, it seems unlikely that employers would have had sufficient bargaining power to significantly depress wages.

Figure 5.3 shows how a supply shock in the agriculture and fishing sector has most clearly manifested itself; increased employment within this sector. Our assessment is that the result of A8 migration has been most apparent in a change in the output mix, with growth in the agriculture and fishing sector, where an increase in the supply of low cost labour\(^{26}\) has allowed firms to cut average costs, and increase output and employment.

Figure 5.1 Index of hourly earnings by industrial sector
(spring 2002 = 100) four quarter rolling average

\(^{26}\) A8 migrants, registering with the WRS, report earning on average just £4.82 an hour in the agriculture sector, compared to an average hourly wage of £7.89, as reported on the LFS, for the sector as a whole.
Figure 5.2  Average Earnings Index in the agriculture and fishing industry and the whole economy (three month rolling average)

Figure 5.3  Employee jobs by industry (seasonally adjusted) (spring 2002 = 100)
The descriptive analysis suggests that there has been little in the way of observable wage impacts from migration on the UK labour market. However, in the agriculture and fishing sector, the data suggests that migrant flows from the A8 have stimulated a new equilibrium. The regression analysis shown in Section 5.2 will assess the impact that A8 migrant flows may have had on local unemployment rates of the native (and established migrant) working age population. While wages remain a central interest in our impact assessment, there is little available micro-level data since accession and while the LFS and AEI are timely indicators, the samples are sufficiently small for the findings to remain a provisional estimate of the response of wages to A8 migrant flows.

### 5.2 Regression analysis

Economic theory would predict that we would expect the impact of migrants on the labour market to include some or all of the following:

- lower wages for natives;
- higher overall employment;
- lower native employment;
- higher native unemployment;
- higher overall output.

The UK labour and product markets are widely perceived as flexible and dynamic in international comparisons with the ability to respond to supply shocks such as increases in migrant flows. This underpins our hypothesis that the UK economy has the ability to absorb migrant workers from the A8 countries through increased output, increased employment and a change in the product mix while simultaneously, native unemployment/employment remains unaffected. As noted previously, a crucial disagreement amongst labour economists is whether, in a standard competitive model, an increased labour supply of migrants will reduce the employment/increase unemployment of natives. This section will assess what evidence there is of such displacement.

Ideally, we would use each of these labour market measures as outcome variables in our analysis. However, the short time frame since accession means that some of these indicators, such as disaggregated wage data, are unavailable at this stage. The key advantage that accession gives us compared to previous studies of the labour market impact of migration in the UK and abroad, is that we are less concerned with the endogeneity of changes in migration flows. As illustrated extensively in the literature, attempts to identify the impact of migration on labour markets by regressing labour market outcomes (typically employment or wages of natives) on

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27 OECD (2002), Figure V1.2.
migrant numbers or migrant flows, are bedevilled by the problem that such flows are highly likely to be in part driven by labour market conditions. So, if we do not observe a negative correlation between (changes in) wages and flows (or indeed observe a positive one) this may not be because migration does not reduce wages; it may be because higher wages attract more migrants, who in turn reduce wages, but not by enough to generate an overall negative correlation.

The standard procedure in the literature is, therefore, to instrument migrant numbers or flows, usually by using previous migrant stocks or flows, a procedure that we follow here. The only previous attempt to measure the wider labour market impact of migration to the UK also adopted this approach. However, there are obvious problems with this methodology. A further problem, certainly in the UK context, is that migrant flows are poorly measured by the LFS or the Census, while migration-specific data on flows does not disaggregate by region or sector.

In this case, however, the increase in flows of relatively low-skilled migrants from the accession countries to the UK was driven, not by changes in labour market conditions, but by a policy change. We are also helped by the fact that the UK labour market, both nationally and regionally, was remarkably stable throughout 2004, with employment and unemployment rates hardly moving. Indeed, perhaps surprisingly, the data in Figure 5.4 shows that there is no observable correlation between flows of accession country migrants and local unemployment levels; and the correlation between flows and the change in unemployment in the year preceding accession is actually slightly positive as shown in Figure 5.5. This suggests that endogeneity may not be a significant concern.

Figure 5.4 Claimant count level in December 2003 and subsequent WRS applications

We proceed as follows: We regress the change in the unemployment rate in 2004 taken from social insurance administrative data on the number of A8 migrants recorded on the WRS as a proportion of the working age population. This is conducted at a local authority level. The measure of A8 immigration to each UK local authority is the number of WRS registrations as a proportion of the working age population, while, ideally, we would use net flows we must assume that A8 migrants exit rates are the same from each local authority. Due to the absence of outflows data, this measure is necessarily one of gross inflows and, as such, the coefficients in our results should be interpreted on a directional basis rather than in terms of magnitude effects. This is one of the major caveats of this analysis. We are unable, at this stage, to utilise data for wages and employment of natives/established migrants to derive an appropriate dependent variable. This will be central to any future work in this area. Also, while we considered the effect that migration may have had on native inactivity; we believe that, on balance, there is little reason to believe that any displacement will be reflected in rising inactivity particularly during a year in which inactivity rates in the UK economy fell for the first time in many years. 

The inactivity rate of the working age population fell from 21.5 per cent to 21.3 per cent in between the quarter ending December 2003 and the quarter ending December 2004.
5.3 Model design

In the standard competitive model, unemployment amongst natives will have an ambiguous response depending on the transmission of increased demand resulting from immigrant flows. Equation (1) estimates the response of native unemployment to A8 migrant inflows; the equation is one of a reduced form and captures both the supply and demand response to migrant flows.

\[ \Delta (u_i) = \beta_0 + \beta_1 (m_i) + \beta' (X_i) + \epsilon_i \]  

Equation (1) uses the change in proportion of the working age population in receipt of Jobseeker’s Allowance (JSA) for 434 local authority areas between December 2003 and December 2004 as the dependent variable; this allows for a large degree of regional disaggregation. \( \Delta (u_i) \) is the change in the proportion of the population claiming out of work benefits between December 2003 and December 2004, \( m_i \) is the number of A8 migrants registering in a local authority as a proportion of the working age population.\(^30\) \( X_i \) is a \( k \times 1 \) vector\(^{31}\) containing the \( k \) controls on the \( i \)-th local authority of influences that contribute to the employment outcomes of natives. We do not impose structural controls due to the absence of sufficient data at a local authority level and use lagged claimant count rates and changes to account for this absence.

5.4 Results

Figure 5.6 shows that the vast majority of regions within the UK saw falls in the proportion of the working age population on the claimant count in 2004. However, there is a small positive correlation between higher concentrations of WRS registrants and smaller falls in the claimant count. We, therefore, test for this formally in the regression framework set out above.

\(^{30}\) Note that A8 migrants do not have access to social security payments such as Jobseeker’s Allowance (the variable we use in our analysis that follows) and, as such, we should not expect migrants to impact directly on our dependent variable.

\(^{31}\) Significant controls included within \( x \) are a London dummy variable, a lagged unemployment level for December 2003 and a lagged unemployment change (December 2002 – December 2003).
The results for the model (1) are given below:

### Table 5.1 Regression results by local authority

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Unrestricted model (1)</th>
<th>Agriculture and fishing registrations only (2)</th>
<th>IV (3)</th>
<th>2003 claimant count change (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate of natives $\Delta (u)$</td>
<td>0.089 (0.022)</td>
<td>0.150 (0.056)</td>
<td>0.000 (0.000)</td>
<td>0.044 (0.025)</td>
</tr>
<tr>
<td>t-statistic</td>
<td>4.01</td>
<td>2.70</td>
<td>-0.18</td>
<td>1.73</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.262</td>
<td>0.246</td>
<td>0.233</td>
<td>0.173</td>
</tr>
</tbody>
</table>

Both the unemployment rate change [$\Delta (u)$] and the proportion of A8 migrants have the working age population in each local authority as their denominator. Models (1) and (2) suggest that a higher percentage of Worker Registrations in local authorities is associated with a small, but statistically significant higher rate of unemployment amongst natives, with the impact most pronounced in the agricultural sector.\(^{32}\) It should be noted that these are very small impacts, and in the context of falling unemployment overall. Moreover, given the mean reversion of unemployment rates displayed in Figure 5.7, we would not necessarily expect this effect to persist for very long.

\(^{32}\) A further model (not shown) using the percentage change in the claimant count (as opposed to a percentage point change) as the dependent variable also yields a result where WRS concentration in each local authority is significant at the 95 per cent level of confidence.
In model (3), we use an instrument for WRS registrations. The instrument we use is the proportion of foreign-born migrants in the total population for each local authority as estimated in the 2001 Census. This variable has a correlation co-efficient of 0.38 (similar to the instrument used by Pischke and Velling (1997))\(^3\); we then find that WRS registrations have no impact at all on native unemployment. Taken at face value, this last result suggests that there is no evidence of a relationship between A8 migrant flows and unemployment changes in 2004, and that the Ordinary Least Squares (OLS) results are the result of reverse causation. There are possible explanations for this; for example, employers in sectors experiencing acute cost pressures, especially in agriculture, may be most likely to take advantage of low-cost labour provided by A8 migrants. Alternatively, the instrument may be inappropriate. We have, at this stage, no strong evidence to distinguish between different hypotheses.

Model (4) provides some support that our findings are not the result of unobserved structural factors that determine a local authority’s rate of change in unemployment in any given time period. Here we use the change in the claimant count in 2003, again by local authority, as the dependent variable and we find that WRS registrations in 2004 are insignificant (at a 95 per cent level of confidence) in explaining the changes to the level of the claimant count in 2003.

Figure 5.7 shows the mean-reversion of the claimant count, with areas where unemployment was relatively higher, experiencing sharper falls in 2004. Although not within the direct remit of this paper, this is an interesting finding. One possible explanation is the relatively flexible labour market of the UK, combined with the welfare-to-work intervention regime and/or the mobility of factors of production. Not surprisingly, when assessing relative impacts, it is clear this a much stronger predictor of unemployment changes than A8 migrant flows.

What conclusions can we draw from these results? The OLS results appear relatively robust, suggesting that A8 migration has been associated, in local labour markets, with a small but significant increase in native unemployment. However, this increase is rather small, and certainly nowhere near big enough to counteract the positive impact on overall employment, and hence, output. We, therefore, conclude that the economic impact of accession has been, as the government anticipated, relatively limited but broadly positive; more data and time will be required to identify the magnitude and significance of impacts at a regional, sectoral and local level. In particular, we intend to use LFS and other data to look at the impact of A8 migration on employment and output at a sectoral and regional level.

### 5.5 Caveats

Analysis such as this carried out on a micro scale has a number of important caveats that should be considered when interpreting the results:

- The locality of A8 migrants’ and the native populations’ workplace and their home may differ significantly particularly in large areas of commuter activity such as London and the South East. This distortion of the results is more likely to effect results at a local authority level rather than at government office region.

- Short-term adjustments may be being picked up in the analysis that may be transitory as the labour market adjusts to a new equilibrium, future work will have the advantage of a broader evidence base.

- Illegal working by A8 migrants failing to register with the Home Office may mean that magnitude effects should be treated with caution. Equally, observed outcome variables such as unemployment, employment and wages of natives may fail to pick up changes resulting from migrant flows. This is a greater concern with LFS results due to sampling variation.
While we have assumed away local labour market volatility in 2004, there are risks associated with small area disaggregation and large impacts that are exogenous of migrant flows.

The native population also migrate from region to region over time, these, and other factor flows, can lead to the impact of migrants being understated. However, if the UK population is sufficiently geographically mobile for this to affect our results (and labour mobility within the UK is not very high), we should also expect local labour markets to quickly move to a new equilibrium, other things being equal.
6 Conclusion

Macroeconomic conditions remain robust in the UK following accession with record numbers in employment, stable unemployment and benign wage pressures. Our results suggest that the primary impact of A8 migration has been to increase output and total employment, with minimal impact on native workers, although higher levels of accession worker migration do appear to be associated with small increases in the claimant unemployment count. There is some evidence that free movement appears to have resulted in a reduction in illegal or unreported working among A8 nationals. At a sectoral level, by far the most significant observed changes have been in the agricultural and fishing sector. Here, employment appears to have grown sharply as a result of accession worker migration, while there is some mixed evidence that growth in nominal wages has been reduced relative to the rest of the economy. Overall, the economic impact of accession on the UK labour market appears to have been modest, but broadly positive, reflecting the flexibility and speed of adjustment of the UK labour market.

This paper has made a preliminary assessment of the labour market impacts of accession and should be viewed as such. The conclusions are those of its authors and are not necessarily those of the Department for Work and Pensions or any other government departments.
Appendix

Data sources

Data sources used in this paper include:

Worker Registration Scheme data

The UK required that A8 nationals entering the UK labour market for greater than one month were required to register with the Home Office under the Worker Registration Scheme.

The data used in this paper covers the period 1 May to the 10 December a period during which there were 124,188 processed applications by A8 nationals. After data cleaning, the administrative data totalled 104,327 records.

The records removed were, broadly, a representative sample of all registrations and their removal is not expected to bias the results.

Claimant count data

The claimant count is a by-product of administrative records of people claiming benefits. Each claimant gives their National Insurance number, address, sex, date of birth and marital status to the Jobcentre Plus local office. Details are also collected on the start and end dates of each claim and on the reason for ceasing a claim. These details provide data on the number of claimants for one particular day (the second Thursday) each month (the stock) as well as the numbers joining and leaving the count each month (the flows).
Labour Force Survey

The Labour Force Survey interviews over 60,000 households every quarter and is the largest regular household survey in the UK. The survey collects information about the personal circumstances and work of everyone who lives in these households.

Average Earnings Index

The Office for National Statistics calculates the AEI, based on a sample survey of 8,400 employers for the whole economy, public sector, private sector, manufacturing industries, service industries, production industries and private sector service industries, and also for 20 industry groupings.
References


Sriskandarajah, et al. (2005) Paying their way: The fiscal contribution of immigrants in the UK IPPR Research Paper:


The cross-market effects of product and labour market policies (2002): OECD online publication.