

# Immigration: trends and macroeconomic implications

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## Introduction

Immigration is a key political issue in most of the developed OECD countries. This is, in part, because rates of net inward migration into these countries have been rising over the last two decades. However, by comparison with some of the episodes of population movement in the past, current immigration rates are comparatively modest. In what follows we focus on a particular aspect of this issue, namely the economic consequences of immigration, concentrating on impacts on the macroeconomy.

We begin with an overview of immigration patterns in the OECD, noting the big differences between countries, with some receiving immigrants at a rate which has a significant impact on the rate of growth of the labour force. Even then, it is plain that the impact of migration is generally small relative to the consequences of the much bigger movements of goods and capital.

In Section 2, we briefly discuss the microeconomic outcomes of immigration for the host countries. Most of the research in this area is concerned with the impact on the relative pay and employment of those groups of the native population most affected, frequently the unskilled. Then, in Section 3, we consider the theoretical framework which would enable us to analyse the macroeconomic consequences of immigration, both in the short and in the long run. This leads on to Section 4, where we look at the empirical evidence on the effect of immigration on unemployment and inflation in the host country. We round off our investigation with a summary and some general conclusions.

## 1. Immigration in the OECD: an overview

### Stocks of migrants

In order to obtain a picture of the overall significance of immigration in the OECD countries, we present in Tables 1, 2 and 3 some data which give an idea of the numbers of foreigners or foreign-born individuals living and working in each country. Note that the numbers of foreign-born are always greater than those of foreigners because some proportion of the former have, at some stage, been granted citizenship and are no longer classified as foreigners.

In most, but not all countries, the number of immigrants has tended to rise in recent years. The variation across countries is significant, with around one quarter of the labour force being foreign-born in Australia compared with less than 2% in Finland. Perhaps the most striking increases have occurred in Spain, where there have been very large inflows of immigrants in the last decade.

Table 1  
Percentage share of immigrants in the labour force, 1984–2004

	Men			Women		
	1984	1994	2004	1984	1994	2004
Austria	...	10.2	9.4	...	8.8	7.6
Belgium	9.0	9.8	8.7	5.5	5.7	7.3
Denmark	2.1	1.9	3.2	1.9	1.8	3.1
Finland	...	0.7	1.8	...	0.8	1.3
France	8.8	7.4	6.1	4.9	4.9	4.6
Germany	9.4	10.2	10.3	7.3	6.9	7.8
Ireland	2.4	3.0	5.9	3.1	2.9	5.5
Italy	...	0.6	3.2	...	0.8	3.3
Netherlands	4.4	4.8	4.0	2.6	3.1	3.3
Norway	...	2.8	4.1	...	2.7	4.0
Portugal	0.5	1.0	2.9	0.4	0.9	3.1
Spain	0.3	0.7	9.5	0.4	0.7	9.6
Sweden	...	4.5	4.6	...	4.4	4.7
United Kingdom	4.6	3.5	5.6	4.7	4.0	5.7
Australia	28.1	26.6	26.3	24.7	24.8	25.3
New Zealand	...	18.4	21.5	...	18.8	20.2
United States	...	12.6	18.1	...	10.0	13.9

Individuals aged 20–59. Data for Australia, Italy, New Zealand and the United States refer to foreign-born individuals, otherwise data refer to foreigners.

Source: Jean and Jimenez (2007, Table 1).

Table 2  
Stocks of foreign-born population  
As a percentage of total population

	1995	2004
Austria	11.2 <sup>1</sup>	13.0
Belgium	9.7	11.4 <sup>2</sup>
Denmark	4.8	6.3
Finland	2.0	3.2
France	...	10.0 <sup>3</sup>
Germany	11.5	12.9 <sup>2</sup>
Ireland	6.9 <sup>4</sup>	11.0
Italy	...	2.5 <sup>5</sup>
Netherlands	9.1	10.6
Norway	5.5	7.8
Portugal	5.4	6.7
Spain	...	5.3 <sup>5</sup>
Sweden	10.5	12.2
Switzerland	21.4	23.5
United Kingdom	6.9	9.3
Australia	23.0	23.6
Canada	16.6	18.0
New Zealand	16.2 <sup>4</sup>	18.8
United States	9.3	12.8

<sup>1</sup> 1998. <sup>2</sup> 2003. <sup>3</sup> 1999. <sup>4</sup> 1996. <sup>5</sup> 2001.

Source: OECD (2006b, Table A.1.4).

Table 3

**Stocks of foreign labour force**

As a percentage of total labour force

	1995	2004	Increase
Austria	9.9	11.9	2.0
Belgium	8.3	9.1	0.8
Denmark	3.0	3.9	0.9
Finland	1.6 <sup>1</sup>	1.9	0.3
France	6.2	5.6	-0.6
Germany	8.9 <sup>2</sup>	9.1	0.2
Ireland	2.9	5.5 <sup>3</sup>	2.6
Italy	1.7	6.0 <sup>4</sup>	4.3
Netherlands	4.0	3.8	-0.2
Norway	2.5	6.6	4.1
Portugal	1.8	5.5	3.7
Spain	0.8	6.3	5.5
Sweden	5.1	4.9	-0.1
Switzerland	18.6	20.6	2.0
United Kingdom	3.4	5.2	1.8
Japan	0.1	0.3	0.2

**Stocks of foreign-born labour force**

As a percentage of total labour force

Austria	...	15.3	...
Denmark	...	5.4 <sup>4</sup>	...
Spain <sup>5</sup>	1.0	9.4	8.4
Australia	24.4	24.4	0
New Zealand	...	19.9 <sup>6</sup>	...
United States	10.3	15.1	4.8

<sup>1</sup> 2000. <sup>2</sup> 1997. <sup>3</sup> 2002. <sup>4</sup> 2003. <sup>5</sup> Bentolila et al (2007, Fig 5). <sup>6</sup> 2001.

Source: OECD (2006b, Tables A.2.2, A.2.3).

**Flows of migrants**

The numbers on stocks are mirrored by the data on flows reported in Table 4. Spain had the largest inflow rate in 2004 and Finland the second smallest. Relative to the size of the populations, these numbers are not, however, particularly large. During the mass migrations of the 19th and early 20th centuries, movements of people were much larger relative to overall populations. For example, the number of immigrants who came to the United States in 1901–10 was almost identical to the number who came in 1991–2000 (approx 9 million, see Freeman (2006)), when populations were vastly greater.

Table 4  
**Migration flows**  
 Per 1,000 inhabitants

	1995			2004		
	Inflow	Outflow	Net	Inflow	Outflow	Net
Austria	...	...	...	13.3	5.9	7.4
Belgium	5.2	3.3	1.9	7.0	3.6	3.4
Denmark	6.3	1.0	5.3	3.5	1.7	1.8
Finland	1.4	0.3	1.1	2.2	0.8	1.4
France	0.9	...	...	2.3	...	...
Germany	9.7	6.9	2.8	7.3	6.6	0.7
Ireland	3.8	...	...	8.2	...	...
Italy	...	...	...	5.5	...	...
Netherlands	4.3	1.4	2.9	4.0	1.4	2.6
Norway	3.8	2.1	1.7	6.1	2.0	4.1
Portugal	0.5	0.1	0.4	1.3	...	...
Spain	...	...	...	15.1	...	...
Sweden	4.1	1.7	2.4	5.3	1.8	3.5
Switzerland	12.5	9.6	2.9	13.0	6.5	6.5
United Kingdom	3.9	1.7	2.2	8.3	2.5	5.8
Australia	...	0.9	...	7.5	1.5	6.0
Canada	7.3	...	...	7.4	...	...
Japan	1.7	1.6	0.1	2.9	2.2	0.7
New Zealand	15.2	2.9	12.3	8.9	7.1	1.8
United States	2.7	...	...	3.2	...	...

Source: OECD (2006b, pp 165–225).

### Migration in context

Migration is also small relative to movements of capital and goods, essentially because the migration of persons is subject to significantly greater costs and barriers than the “migration” of capital or goods. Despite, or perhaps because of, these costs and barriers, the incentives to migrate are substantial. Earnings within occupation are typically several times higher in high GDP per capita countries than in low GDP per capita countries (see Freeman (2006, Table 2)). So people flows typically move from low to high GDP per capita countries and are greater, the smaller the geographical and linguistic distance. They are also bigger, the larger the already existing stock of migrants in the receiving countries. Finally, the discrepancy between the shares of young adults in the populations of the sending and receiving countries is a significant driver (see Hatton and Williamson (2002) for an overview).

While the flows of immigrants into OECD countries are typically relatively small, they can nevertheless make a significant contribution to employment growth. For example, in recent

years, over 40% of employment growth in both the United States and the United Kingdom has been down to immigration. Their contribution to employment will, typically, depend on why immigrants come. Different countries have different rules governing immigration and the proportion of individuals who come specifically to work differs widely from one country to another. For example, of the flow of migrants coming to Denmark, Portugal and Switzerland in 2004, more than 40% came specifically to work rather than for family or humanitarian reasons. By contrast, the equivalent figure for Norway and the United States was less than 10% (see OECD (2006, Chart 1.2)). Of course, the fact that a migrant enters a country for family or humanitarian reasons does not necessarily mean they do not work.

### **Cross-border commuting**

At the opposite extreme to more or less permanent migration is the notion of cross-border commuting. Given free movement of labour within the European Union, there are no legal barriers to living in one country and working in another. Despite this, in 1999 a mere 0.2% of the total EU workforce commuted to another member country (European Commission (2001)). Even in regions located close to national borders, only 1.5% of the labour force can be characterised as cross-border commuters. As we can see in Table 5, not surprisingly, Luxembourg provides the highest number of cross-border commuters of any region.

Table 5  
**Cross-border commuters and share in total regional employment**

<b>Border region</b>	<b>Number of commuters</b>	<b>Share in total regional employment (%)</b>
Belgian-German	6,300	0.67
Belgian-Dutch	22,900	0.67
Belgian-French	24,400	0.88
Danish-German	2,500	0.76
Danish-Swedish	3,000	0.13
German-French	61,700	2.50
German-Dutch	33,100	0.76
German-Austrian	21,000	0.96
Spanish-French (incl Andorra)	4,100	0.17
Spanish-Portuguese	4,000	0.15
French-Italian (incl Monaco)	27,900	1.10
French-British	2,700	0.28
Irish-British	11,500	1.42
Italian-Austrian	1,900	0.22
Finnish-Swedish	900	0.41
Luxembourg (with Belgium, Germany and France)	79,200	4.73

Source: Van Houtum and Van Der Velde (2004, Table 1).

More recently, the proportion of cross-border commuters in the European Union has risen to a number closer to 0.4% (see OECD (2007a, Figure 8.1)), basically because of the accession of the new member states. Slovakia, for example, has around 5% of its working age population commuting to the Czech Republic and Austria. In part, of course, this is a consequence of the recent division of Czechoslovakia into its two constituent parts. Overall, cross-border commuting is simply not big enough to have any serious macroeconomic implications. This is not, however, true of migration overall. So, in what follows, we look at the consequences of migration for receiving countries. Ultimately we are interested in the macroeconomic implications, but we first consider the microeconomic outcomes.

## **2. Immigration: the microeconomic outcomes**

The basic argument here is that an exogenous increase in labour supply in any particular labour market will lower the equilibrium wage for market participants. If there are constraints which attenuate this wage adjustment, then there will be a rise in unemployment. The empirical question is then, how big are these effects in practice? In particular, are the native workers, notably the unskilled, hit by weaker wage growth and/or higher unemployment as a result of immigration? Underlying this research is a widespread view among the general public that immigrants take jobs away from native workers (see Dustmann and Glitz (2006)).

The answer to the basic empirical question is the subject of an ongoing controversy exemplified by Borjas (2003) and Card (2005). In an earlier paper, Card (1990) examines the impact of the Mariel Boatlift of Cubans into the Miami labour market and finds little impact on the wages of natives. Borjas (2003) argues that such an analysis gives a misleading impression because regional labour markets are not self-contained. Thus, as immigrants move into a region, natives move out, thereby attenuating wage effects. So he considers the impact of immigrants on wages in national age/education groups and finds a significant impact on wages in the United States. An immigrant inflow of 10% of the labour force lowers the wages of natives by 3 or 4%. Applying the same analysis to Germany, Bonin (2005) finds very much smaller effects and no measurable employment effects.

To shed further light on this issue, Card (2005) reports an analysis of high school dropouts (HSDs) in the United States. In 2000, the proportion of HSDs in the native workforce was 14.7%, whereas among immigrants it was 38.2%. Immigration led to huge variation in the changes in the proportion of HSDs across cities over the period 1980–2000. On average, this proportion fell from 24.3% to 17.8% during the period. But in cities like Los Angeles, Miami and Houston, which have seen a huge increase in their immigrant populations, there have been increases or only tiny falls in HSD proportions. Overall, there is a very strong relationship across cities between increases in the immigrant population and increases in the proportion of HSDs. This suggests that there has not been a very large offsetting mobility response of native HSDs.

So what has been the consequence of these differential changes in the ratios of high school dropouts to high school graduates in US cities? The answer is only a very weak impact of these shifts in the labour supply ratios on either relative employment or relative wage rates. There is some slight impact on relative employment rates and no significant impact on relative wages.

So the overall conclusions are:

- (i) Increases in the number of immigrants into localities have generated significant increases in the proportion of low-skilled workers, indicating no important offsetting effects via native mobility.
- (ii) Local shifts in the proportion of low-skilled workers have minimal effects on low-skill wage or employment rates relative to those of high school graduates.

How can this be, given that standard economics indicates that a significant increase in labour supply should lower wage rates and/or employment rates? The evidence in this case rules out the offsetting native migration explanation. One possible explanation is that immigrant flows induce capital flows to the immigrant receiving areas. If this leads to the growth of immigrant employing industries selling output at fixed world prices, wages would not respond. The expansion of clothing industry “sweatshops” in New York and Los Angeles would be an example. However, Lewis (2004) and Card (2005) indicate that most of the adjustment to the immigrant inflow has been within industries. An alternative explanation is that there is a weaker adoption of advanced technology, which is complementary to skilled labour, in the presence of larger numbers of the unskilled. This would offset the wage effects of shifts in the proportion of the unskilled workers. Lewis (2005) and Beaudry et al (2006) provide some evidence in favour of this hypothesis.

The vast majority of the existing research on migration has been concerned with microeconomic issues, particularly the impact of immigration on the relative pay and employment rates of a variety of particular groups. By contrast, there is very little research on the standard macroeconomic questions, notably the impact of immigration on inflation and unemployment. This will be the subject of the remainder of the paper.

### 3. Immigration and the macroeconomy: theory and some facts

In the simplest macroeconomic model, an influx of migrants lowers the capital/labour ratio, lowers the real wage, raises the return on capital and generates a net welfare gain for natives. The gains accruing to the owners of capital are greater than the losses faced by the supplier of labour.<sup>1</sup>

In the long run, the higher return to capital stimulates investment and in the new equilibrium the capital/labour ratio, the real wage and the marginal product of capital will revert to their original levels under constant returns. The natives neither gain nor lose and the economy is simply that bit bigger. This simple model immediately suggests that we should divide the impact of immigration into short-run and long-run effects, and we begin with the latter.

#### Long-run effects

There are two possible long-run macroeconomic effects worth noting. The first is that, for one reason or another, immigrants permanently reduce the equilibrium unemployment rate. This will happen if, for example, immigrant workers are more flexible and reduce the extent of skill mismatch, or if they are more elastic suppliers of labour with higher levels of motivation and reliability. As OECD (2006) indicates,<sup>2</sup> “international as well as UK evidence suggests immigration can serve to make the labour market as a whole more fluid and wages less

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<sup>1</sup> If immigration raises employment from  $L$  to  $L_1$ , and we suppose production is

$F(L)$ ,  $F' > 0$ ,  $F'' < 0$ , then we have:

Gains to native workers =  $(F'(L_1) - F'(L))L < 0$

Gains to native capitalists =  $(F(L_1) - F'(L_1)L_1) - (F(L) - F'(L)L)$

So total gain is

$F(L_1) - F(L) - F'(L_1)(L_1 - L)$

which is positive since  $F'' < 0$  (use mean value theorem).

<sup>2</sup> Quoted in Blanchflower et al (2007).

sensitive to demand fluctuations”. So this is not just a theoretical possibility. This effect may, however, decrease over very long periods of time as migrants become more like the native population.

The second possible long-run effect arises if the skill profile of migrants differs from that of natives and the number of migrants is big enough to have a significant impact on the skill mix of the population as a whole. If migrants are more skilled, on average, than natives and there is capital-skill complementarity, then in the long run the capital/labour ratio will be higher and productivity will be higher. The opposite will apply if migrants are less skilled, on average.

Looking across the OECD, there is huge variation in the education profile of migrants relative to natives which derives, in part, from differences in the regulations governing migration. In Table 6, we present the patterns of education of migrants and natives in the continental European economies and, in Table 7, we can see how much more likely it is that the highly educated will work. Thus, in Denmark, Ireland, the Netherlands and Sweden, we find that migrants and natives have quite similar education profiles, with high proportions of tertiary and upper secondary employees. By contrast, migrants in Italy and Spain are far less well educated than natives, with a very high proportion at the lowest level. Interestingly enough, however, these low-educated migrants are far more likely to work than their native equivalents.

Table 6  
**Educational attainment of the employed by birth status, 2005**

	Native-born			Foreign-born		
	Completed studies 10 years ago or less			Present in country for 10 years or less		
	Below upper secondary (%)	Upper secondary (%)	Tertiary (%)	Below upper secondary (%)	Upper secondary (%)	Tertiary (%)
Austria	15	60	25	21	55	24
Belgium	9	40	50	29	23	48
Denmark	20	42	38	26	33	40
France	17	38	45	40	25	35
Ireland	8	38	54	14	37	48
Italy	14	55	31	45	45	11
Netherlands	23	41	36	23	47	30
Portugal	41	27	32	55	28	17
Spain	26	22	52	41	37	22
Sweden	10	46	44	16	41	43

Source: OECD (2007, Table 1.10).

Table 7  
**Percentage employment rates by education,  
natives and foreign-born, 2003–04**

	Native			Foreign-born		
	Education level			Education level		
	Low	Medium	High	Low	Medium	High
Austria	43.6	73.1	84.1	54.3	68.5	77.5
Belgium	41.9	66.3	83.9	33.9	53.5	73.7
Denmark	61.0	81.8	87.9	44.3	57.5	64.2
Finland	47.7	72.3	85.0	39.1	64.1	69.5
France	47.1	70.6	78.7	47.8	62.1	70.8
Germany	40.2	69.1	84.5	45.1	62.4	68.1
Ireland	48.0	71.5	86.5	44.4	63.8	76.5
Italy	45.6	65.9	81.4	59.5	67.4	78.8
Netherlands	63.9	80.9	88.1	50.7	69.9	78.3
Norway	52.6	77.9	87.5	43.9	67.9	79.8
Portugal	66.5	62.3	87.6	67.5	70.0	83.6
Spain	53.4	60.2	79.5	61.2	68.9	73.2
Sweden	57.7	80.4	87.4	45.9	66.8	76.0
Switzerland	57.1	80.4	92.4	63.4	74.1	81.9
United Kingdom	52.5	77.5	88.1	39.3	66.9	81.8
Australia	59.7	80.0	85.7	51.4	68.8	78.4
Canada	53.1	76.2	83.7	51.0	69.1	75.4
United States	35.9	71.0	83.0	58.6	70.0	77.6

Source: OECD (2006b, Table 1.10, p 53).

### Short-run effects

Consider a surge in the number of immigrants. Such an increase in the flow of labour into the economy has a variety of possible effects. The easiest way to think of these is to consider the effects on aggregate demand and aggregate supply at a given monetary policy stance.

On the demand side, the rise in the population will plainly generate an increase in expenditure. It is probable that immigrants will spend a lower proportion of their incomes than natives because of remittances, and that they will make a lower initial expenditure on durables and have higher savings because immigrants often have lesser entitlements to state benefits than natives, at least initially. On the supply side, the surge of migrants will typically lead to an increase in potential aggregate supply with an initial rise in unemployment and effective labour supply more generally.

The overall impact on the economy will depend on the temporal pattern of these short-run effects on aggregate demand and aggregate supply. If the former dominate, we are likely to

observe a short-run increase in output accompanied by heightened inflationary pressure. This will tend to be offset by a tightening of monetary policy tending to reduce the surge in economic activity. By contrast, if the growth in aggregate supply tends to dominate, we will see a smaller increase in output and downward pressure on inflation which will then lead to a loosening of monetary policy and a further increase in output. This pattern will be accentuated if the rise in migration leads to enhanced labour market flexibility and a fall in the equilibrium rate of unemployment, for then there is an increase in potential output beyond that generated simply from the rise in the labour force.

These shorter-term effects of immigration are likely to be influenced by labour and product market institutions. If these tend to increase the rigidities in the economy, this will slow down the rate at which migrants tend to be absorbed into the economy, lower the rate at which aggregate supply adjusts and increase any inflationary pressures arising from the rise in aggregate demand generated by the migrants.

Before looking at the evidence on the macroeconomic consequences of increased migration, it is worth considering the argument that immigration may have helped to flatten the Phillips curve, a phenomenon which has been noted in some countries in recent years.

The Phillips curve reflects the relationship between changes in inflation,  $\partial\pi / \partial t$  say, and some measure of economic activity relative to potential. If the latter is proxied by the proportional change in output,  $\Delta\gamma$  say, then migration will certainly tend to flatten the relationship. If higher levels of  $\Delta\gamma$  are associated with higher inflows of migrants via a demand-pull mechanism, then it is plain that this will help to suppress inflationary pressures and flatten this type of “Phillips curve”. However, if we take the standard Phillips curve as:

$$\partial\pi / \partial t = a - \beta (u - u^*)$$

where  $u$  is unemployment and  $u^*$  is the equilibrium rate, then it is hard to see why any relaxation of barriers to migration will lower  $\beta$ . It may, for example, reduce fluctuations in unemployment as migrants move in and out with the level of domestic activity. Or it may reduce the equilibrium unemployment rate as we have already noted. But why migration should impact on  $\beta$  is not clear. If, of course, the analysis does not properly control for reductions in  $u^*$ , then it will indeed appear that  $\beta$  has decreased and the Phillips curve will appear to have flattened. This is, however, a spurious conclusion based on omitted variable bias.

#### 4. Immigration and the macroeconomy: evidence

While there is a fair bit of evidence on the aggregate impact of migration on employment and unemployment in the short and medium run, there is very little which considers the consequences of this for inflation. We consider these two points in turn.

##### Migration and unemployment

An interesting analysis of the temporal pattern of unemployment effects arising from significant immigration is provided by Hercowitz and Yashiv (2002). They analyse the substantial migration from the former Soviet Union to Israel in the 1990s, which resulted in an 18% increase in Israel’s population in a decade. Because of the different temporal patterns of the impact of immigration on aggregate demand and aggregate supply, they find an initial positive impact on employment followed by a later negative impact and ultimately no impact at all. Thus, in the Israel context, initially aggregate demand dominates, then aggregate supply and finally there is no long-run effect.

Angrist and Kugler (2003) provide some evidence on the role of labour and product market institutions in determining the short-run consequences of immigration but a more

comprehensive empirical analysis is provided by Jean and Jimenez (2007). They use panel data (1984–2003) for 17 OECD economies. Their basic analysis suggests that an increase in the number of immigrants equivalent to 1% of the labour force leads to the unemployment rate being, successively, 0.2, 0.3 and 0.4 percentage points higher one, two and three years later before fading away to a zero impact after around six years. This suggests that, overall, the aggregate supply effect dominates in the short run with these unemployment effects being accompanied by downward pressure on inflation.<sup>3</sup>

Turning to their evidence on institutions, Jean and Jimenez find that the impact of strong employment protection laws is to slow down and extend the unemployment effects of migration as a consequence of more sluggish employment adjustment. The extent of product market regulation is also important. A high degree of such regulation tends to magnify the unemployment effects throughout, essentially because the economy is slower to adjust to the new sources of labour supply. By contrast, in the presence of very low levels of product market regulation, the unemployment effects are negligible.

### **Inflation and other macroeconomic effects**

There is certainly a broad acceptance in the United Kingdom, for example, that immigration has had a tendency to reduce inflationary pressure. For example, Blanchflower<sup>4</sup> et al (2007), in their conclusions, note that "... at present it appears that A8 immigration has tended to increase supply by more than it has increased demand in the UK (in the short run), and thereby acted to reduce inflationary pressure". However, rigorous empirical analysis in this area is in short supply, with perhaps the most telling contribution to be found in Bentolila et al (2007).<sup>5</sup>

Their analysis first reveals how to adjust the derivation of the New Keynesian Phillips curve to incorporate immigration, starting from Blanchard and Gali (2006). They then estimate their model using Spanish data and discover that the very high levels of immigration into Spain in recent years have been responsible for a negative impact on inflation of 0.9 percentage points per annum. This arises essentially because immigrants have raised effective labour supply and reduced the natural rate of unemployment. These developments have helped macroeconomic policy to bring down the overall unemployment rate by almost 7 percentage points since 1999 with minimal inflationary consequences. This is an example of an apparent flattening of the Phillips curve deriving from a reduction in the equilibrium unemployment rate.

## **5. Summary and conclusions**

Our overall conclusions are as follows:

- (i) In nearly all of the developed OECD countries, net immigration flows are positive and increasing. In a small number, notably Austria, Spain and Switzerland, annual net inflows are currently more than ½% of the population. In Spain, the proportion of

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<sup>3</sup> Although inflation is not discussed by Jean and Jimenez (2007).

<sup>4</sup> Blanchflower is, of course, a member of the Bank of England Monetary Policy Committee, so his views on this matter have practical implications for UK macroeconomic policy. A8 refers to the eight new accession countries in the European Union.

<sup>5</sup> Izquierdo et al (2007) present some results which are consistent with those of Bentolila et al (2007).

foreign-born individuals in the labour force has risen by 8.4 percentage points in a decade.

- (ii) Cross-border commuting is typically very small except in Luxembourg. Overall across the European Union, the proportion of cross-border commuters in the labour force is less than ½%, and even in regions close to national borders it is only 1½%.
- (iii) The weight of the evidence suggests that the impact of unskilled immigration on the relative employment and wages of the native unskilled population is minimal. This is by no means a settled issue, however, and some economists remain convinced that there are significant effects.
- (iv) There is some evidence to suggest that immigration makes the labour market more flexible, effectively reducing the equilibrium unemployment rate in the long run. In particular, high rates of immigration into Spain have helped the Spanish economy to reduce overall unemployment substantially without inflationary consequences.
- (v) In the very short run, a rise in immigration leads to an increase in unemployment which is much enhanced in the presence of high levels of product market regulation. The rise in unemployment lasts longer when employment protection laws are more restrictive.

## References

Angrist, J D and A D Kugler (2003): “Protective or counter productive: labour market institutions and the effect of immigration on UK natives”, *Economic Journal*, vol 113, pp 302–31.

Beaudry, P, M Doms and E G Lewis (2006): “Endogenous skill bias in technology adoption: city-level evidence from the IT revolution”, *Federal Reserve Bank of San Francisco Working Paper Series* no 06–24.

Bentolila, S, J J Dolado and J F Jimeno (2007): *Does immigration affect the Phillips Curve? Some evidence for Spain*, CEMFI, Madrid, mimeo.

Blanchard, O and J Gali (2006): “Real wage rigidities and the New Keynesian model”, *Journal of Money, Credit and Banking*, forthcoming.

Blanchflower, D G, J Saleheen and C Shadforth (2007): “The impact of the recent migration from Eastern Europe on the UK economy”, *Bank of England Quarterly Bulletin*, vol 47, no 1, pp 131–36.

Bonin, H (2005): “Wage and employment effects of immigration to Germany: evidence from a skill group approach”, *IZA Working Papers*, no 1875, IZA, Bonn.

Borjas, G J (2003): “The labor demand curve is downward sloping: re-examining the impact of immigration on the labor market”, *Quarterly Journal of Economics*, vol 118, issue 4, pp 1335–74.

Card, D (1990): “The impact of the Mariel Boatlift on the Miami labor market”, *Industrial and Labor Relations Review*, vol 43, no 2, pp 245–57.

——— (2005): “Is the new immigration really so bad?”, *Economic Journal*, vol 115, no 507, pp F300–23.

Dustmann, C and A Glitz (2006): *Immigration, jobs and wages: theory, evidence and opinion*, Centre for Economic Policy Research, London.

European Commission (2001): *Employment in Europe 2001: recent trends and prospects*, Office for Official Publications of the European Communities, Luxembourg.

Freeman, R (2006): "People flows in globalization", *Journal of Economic Perspectives*, vol 20, no 2, Spring, pp 145–70.

Hatton, T J and J G Williamson (2002): "What fundamentals drive world migration?", *NBER Working Papers*, no 9159, Cambridge, Mass.

Hercowitz, Z and E Yashiv (2002): "A macroeconomic experiment in mass immigration", *IZA Discussion Papers*, no 475, Bonn.

Izquierdo, M, J F Jimeno and A Rojas (2007): "On the aggregate effects of immigration in Spain", *Bank of Spain Working Paper* no 0714.

Jean, S and M Jimenez (2007): "The unemployment impact of immigration in OECD countries", *OECD Economics Department Working Paper* no 563.

Lewis, E G (2004): "Local open economies within the US: how do industries respond to immigration?", *Federal Reserve Bank of Philadelphia Working Paper* no 04-1.

——— (2005): "Immigration, skill mix and the choice of technique", *Federal Reserve Bank of Philadelphia Working Paper* no 05-8.

Organisation for Economic Co-operation and Development (2006a): *Economic Outlook*, no 80, November, OECD, Paris.

——— (2006b): *International Migration Outlook*, Paris.

——— (2007a): "Removing obstacles to geographic labour mobility", Chapter 8 in *OECD Economic Surveys: European Union*, OECD, Paris.

——— (2007b): *International Migration Outlook*, Paris.

Van Houtum, H and M Van Der Velde (2004): "The power of cross-border labour market immobility", *Outlook on Europe*, vol 95, issue 1, Royal Dutch Geographical Society, pp 100–7.