

## Discussion comments on “Immigration: trends and macroeconomic implications”

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I would like to begin by thanking Bill White and his colleagues at the BIS for organising this conference in honour of Palle Andersen and for inviting me to participate. As some of you may know, I spent a year as a visitor to the BIS in the late 1990s, and I had the good fortune to be assigned to Palle’s unit during my secondment. In fact, I was the only member of staff assigned to Palle, so he and I comprised his entire unit at that time. As a result, I had the opportunity to work quite closely with him on numerous BIS products, including the notes for the monthly G10 meetings, key chapters of that year’s *Annual Report*, and many other assignments. In addition, Palle and I found the time to collaborate on several research projects on inflation dynamics. In every instance, I found Palle to be an extraordinary colleague, exceptionally knowledgeable about whatever issue was at hand and extremely generous with his time. Perhaps in part because we were both fond of baseball, he and I also quickly became good friends, and I always very much looked forward to seeing Palle and Elsebeth on my return trips to Basel.

Turning now to Stephen Nickell’s paper on the macroeconomic implications of migration, I found it to be interesting reading: it was concise and to the point, and yet it covered most of the salient issues relevant to the topic. In one sense, Professor Nickell’s efficiency makes this paper a difficult one to discuss because I do not really have any specific critical comments to relay. However, he has left room for further exploration of some of the issues he raises, and so what I would like to do is to complement his paper with some additional discussion of the factors that he cites as having important influences on how immigration affects the macroeconomy.

As I read the paper, I came away with four main points. First, although net migration flows to OECD countries appear small relative to flows of goods or capital, they nonetheless can have important effects on economic growth. This is clearly the case in the United States, where immigration has accounted for about half of the growth in the working age population over the past decade and will undoubtedly remain an important source of population growth in coming years. Moreover, given that the United States ranks roughly in the middle of the pack in terms of migration as a percentage of the population, migration flows are likely to be an even more important potential source of growth in some other OECD countries.

Second, Nickell notes that in the long run, migration will raise the level of potential output, but that the size of this boost will depend on several factors related to the nature of immigration. I will return to the two he emphasises – the extent to which immigrants affect the natural rate of unemployment and the skill mix of immigrants relative to that of natives – shortly, along with a couple of others.

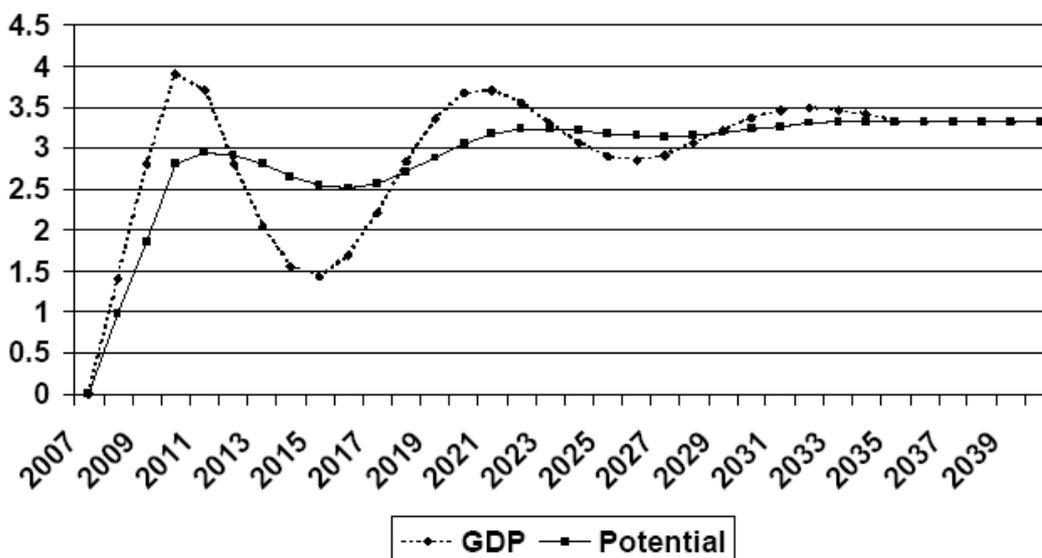
Third, Nickell notes that the short-run effects of immigration on the economy – and on inflation dynamics – depend on the relative influences of immigration on aggregate demand and aggregate supply. He points out, quite correctly, that the evidence on the influence of immigration on wages remains controversial. However, I agree with his characterisation that the weight of the evidence points to small effects.

Finally, what comes across especially clearly in his paper – and in my own casual survey of the literature – is that empirical evidence on the macroeconomic effects of immigration is quite scant.

To illustrate the basic model that Nickell laid out in his paper, I used the Federal Reserve’s FRB/US model to provide a stylised example of what might happen if changes to immigration

policy in the United States led to a temporary increase in the immigration rate.<sup>1</sup> More specifically, I exogenously raised population growth by 1 percentage point per year for the next three years, but made no other changes to the structure or parameters of the model. This shock to population growth is roughly equivalent to tripling the immigration rate over this period.

Graph 1  
**Model simulation of an increase in immigration**  
 Deviations from baseline, percent



Source: Author's calculations

Graph 1 shows the responses in actual and potential output. As Nickell suggests, the main long-run effect is a larger economy. In particular, the level of potential (and actual) GDP eventually rises by a little less than 3½%, in line with the cumulative increase in the population level. There are no long-run effects on potential growth or the unemployment rate. In the short run, however, aggregate demand increases by more than aggregate supply, leading to some near-term inflation pressures. This large demand response occurs both because the new immigrants boost the level of consumption, and because the higher return on capital stimulates investment. Going forward, the higher inflation associated with this supply/demand imbalance induces a monetary policy response (a simple Taylor rule is used in the simulation) that eventually restores inflation to its baseline level.

This simple exercise makes no assumptions about how immigrants might differ from natives. In fact, the characteristics of these two populations typically do differ, but in ways that vary considerably across countries. For example, Nickell notes that on the demand side, immigrants often send remittances back to their home countries or save more of their income than natives, which would tend to reduce the effect of immigration on consumption. On the other hand, immigrants may have greater demand for consumer durables than natives, reflecting a desire by immigrants to quickly build up their stocks of durables from a very low level; if so, the effect would be larger. Some information is available on remittances from household surveys and from official statistics on international transactions (for example, the

<sup>1</sup> I would like to thank Thomas Tallarini for his help in performing this simulation.

IMF's *Balance of Payments Statistics Yearbook*). While such data are incomplete, they suggest that the magnitude of remittances differs considerably across countries and over time. Information on differences in consumption and saving patterns between native and foreign-born households is even more difficult to come by, but again, it would not be surprising to find substantial variation across countries.

Another influence on aggregate demand in the short run relates to the rapidity with which investment responds to the higher returns to capital. As I noted in regard to the simulation shown in Figure 1, this effect is sizeable and occurs quite quickly in the FRB/US model. However, there is considerable debate in the empirical literature about the true nature of that response, and once again, it could differ across countries.

On the supply side, Nickell points out that differences in the skill profiles of potential migrants and native-born workers may influence the effects of immigration on labour productivity. If immigrants to a country are disproportionately comprised of individuals who are less skilled than the native-born workforce, they will tend to lower the average level of productivity, and as a result, the effects of immigration on potential output will be smaller than if immigrants tended to be more highly skilled.

This observation suggests that country-specific policies can influence the macroeconomic effects of immigration. As an example, Table 1 shows the percentages of permanent immigrants to four selected countries in 2001 who were admitted for work-related reasons, for family reunification, or for humanitarian reasons. The variation across these countries in the proportion of immigrants admitted for work-related reasons is considerable, ranging from 20% or less in the United States and France to more than 50% in the United Kingdom and Australia. Because policies favouring economic migration are often targeted at skilled workers, one might expect the skill mix of immigrants to countries emphasising such policies to differ from the skill mix of immigrants to countries that admit a greater percentage of immigrants for family or humanitarian reasons.

Table 1  
**Immigration by reason for admittance, 2001**  
In per cent

Country	Workers	Reuniting families	Refugee/ asylum
Australia	55	33	12
France	20	70	10
United Kingdom	54	36	10
United States	19	71	10

Source: United Nations as reported in World Bank (2006).

The figures in Table 2 offer some support for this hypothesis. In both Australia and the United Kingdom, where policies favour work-related migration, the share of immigrants with less than a high school education is relatively low, while the share with a college education is relatively high, especially when compared to the distribution of educational attainment for the native-born adult population. In contrast, in France, where policy tends to favour family reunification or refugees, more than 50% of foreign-born workers have less than a high school education and only 21% have a college degree.

The situation is a little more complicated in the United States. As can be seen in Table 1, US immigration policy strongly favours potential migrants with family connections to current legal

residents, with more than two thirds of legal immigrants in 2001 admitted under the family-based preference categories and less than 20% admitted for work-related reasons. Consistent with this policy, Table 2 indicates that immigrants are heavily over-represented among the lowest-skilled educational group: 30% of immigrants to the United States have less than a high school degree, as compared with just 8% of the native-born population. At the same time, however, foreign-born workers are well represented at the high end of the educational scale, with 35% having a college degree, roughly the same percentage as immigrants to Australia and the United Kingdom. Moreover, foreign-born workers make up more than a quarter of US workers with a PhD and account for more than 40% of workers with a science PhD.<sup>2</sup> These patterns may in part reflect a tendency for foreign-born individuals to attend graduate school in the United States and then remain after they complete their studies. But, whatever the cause, the productivity consequences of immigration for the United States are more ambiguous.

Table 2  
**Education levels, 2003–04**  
 In per cent

Country	Foreign-born			Native-born		
	<HS	HS	College	<HS	HS	College
Australia	24.1	40.1	35.7	32.3	41.5	26.2
France	51.1	27.8	21.1	32.8	43.6	23.7
United Kingdom	22.1	43.6	34.3	15.9	54.8	29.4
United States	30.1	34.9	35.0	8.5	51.6	39.9

Source: OECD (2007 a).

The second supply side factor that Nickell emphasises is the possibility that immigration influences the equilibrium level of unemployment. In particular, if immigrants help to relieve labour shortages in specific occupations or geographic areas, or if they have lower reservation wages than natives (perhaps because they are less likely to be eligible for unemployment insurance or other government transfers), then a higher rate of immigration may lower the natural rate of unemployment, at least for a time. Here, the evidence from the United States is more favourable. For example, foreign-born workers tend to have unemployment rates that are similar to those of their native counterparts, and there is little evidence that immigration reduces labour market opportunities for native US workers (Card (2005)). One possible explanation is that firms adapt their production technologies in response to an influx of new immigrants. Another interpretation is that immigrants are filling jobs for which vacancy rates were high, thus improving the efficiency of job matching and shifting the Beveridge curve inward.<sup>3</sup>

Along these lines, Borjas (2001) argues that immigrants may help to “grease the wheels” of the labour market because they are better positioned to respond to geographic differences in economic opportunities than are natives. In particular, past research on internal migration among US natives indicates that while migration does respond to differences in regional

<sup>2</sup> See US Council of Economic Advisers (2006, p 200).

<sup>3</sup> These possibilities are discussed in Lewis (2005).

unemployment rates and wage levels, that response is very slow, in part because there are high fixed costs to moving, in both monetary and psychological terms.<sup>4</sup> In contrast, immigrants have already borne those costs when they decided to leave their home country for another, and thus they may be more responsive to differences in economic opportunity in choosing where to live in the destination country. As evidence for this hypothesis, Borjas notes that immigrants tend to settle in cities where they receive higher wages for their skills, and that regional wage differentials tend to converge more quickly during periods of rapid immigration. This issue is also relevant to Europe, where the geographic mobility of native-born individuals has historically been low and where immigration from countries outside the European Union has the potential to play a similar role. However, there is some disagreement over how important these effects might be. For example, one counterargument is the presence of large ethnic enclaves of immigrants in particular cities, which suggests that non-economic factors also have an important influence on the location decisions of immigrants.<sup>5</sup>

As Nickell points out, differences in institutions across countries may be especially important in this regard, because they can influence the speed or the extent to which immigration can supply this “grease”. Nickell cites an OECD study showing that employment protection legislation and product market regulation slow the employment adjustment of immigrants as one piece of evidence. More broadly, Table 3 shows that countries with less regulated labour markets tend to have smaller differentials between native and foreign-born unemployment rates. This suggests that institutions and regulations, including unemployment insurance and welfare policies, minimum wages, and the like, can enhance or impede the ability of immigrants to find jobs, with associated effects on the natural rate of unemployment.

Table 3

**Labour market regulation and unemployment**

Country	Regulation index	Unemployment rates	
		Native	Foreign-born
United States	6.76	5.8	5.1
Australia	5.98	4.8	5.1
United Kingdom	5.15	4.3	7.3
Spain	3.79	9.1	11.3
Netherlands	3.61	4.0	10.8
Sweden	3.45	7.9	14.9
France	2.73	8.6	14.7
Germany	2.45	10.4	17.0

Labour market regulation index is for 2006. A higher number indicates that labour regulations are less likely to hinder business activities. Unemployment rates refer to 2005.

Source: IMD (2006); OECD (2007 a).

<sup>4</sup> See, for example, Blanchard and Katz (1992) or Gabriel et al (1993).

<sup>5</sup> See, for example, Bartel (1989).

A third potential influence reflects differences in the demographic profiles and work tendencies of the foreign-born population. In the United States, immigrants tend to be younger than the average native-born person, and they are more likely to be in the labour force at any given age. As a result, the contribution to the labour force from immigration is probably larger than the population figures alone would suggest. In addition, one might expect the additional impetus from labour force participation to be greater in countries in which immigration policy has a larger employment-based component or where illegal immigration is more common.

To conclude, macroeconomic model simulations such as the one I described earlier clearly need to be calibrated to take account of differences between the native and immigrant populations. In addition, given the varied characteristics of labour market policies and institutions across countries, these calibrations need to carefully consider those specifics as well. Some valuable research using such models has been done at the World Bank and the OECD. In addition, an interesting working paper from the Bank of Spain analyses the macroeconomic effects of immigration in the context of a dynamic general equilibrium model (Izquierdo et al (2007)). But, as Nickell's paper suggests, there is considerable room for additional research on this topic. While the research cited by Nickell on the effects of migration to Israel on unemployment or on the effects of immigration to Spain is interesting, I would be hesitant to draw broad inferences from these studies without further investigation of how differences in institutions and other factors influenced these effects. Likewise, the research pertaining to the United States suggests to me that while immigration is clearly important for longer-run growth, the implications for shorter-run macroeconomic dynamics are not likely to be especially significant given current immigration flows. But here again, the evidence is limited and additional empirical research would be welcome.

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