

## Enlargement Will Bring More Immigrants to the EU Labour Markets



**Kari Alho**  
Research director  
ETLA

*The EU economies and their labour markets will face new challenges in the near future as the Union enlarges to cover the CEE countries and labour is allowed to move freely within the region. This article first discusses estimates made on the likely magnitude of the coming immigration and then turns to derive some basic outcomes with respect to its impacts on real wages in the EU in the long run. It then examines the short- and long-run net benefit from immigration and carries out a numerical simulation where the EU labour force is assumed to increase by one per cent. The simulation results show that the net present value of the accumulated gain to the EU 15, measured by the increase in consumption as a percentage of GDP, is very small. This result is in line with the neutrality proposition predicted by theoretical reasoning, which prevails in the long run with respect to the effects of immigration.*

### Introduction

One of the four basic freedoms of the Internal Market of the EU is free mobility of labour. The incumbent member countries have viewed this, however, as one of the most problematic issues in the enlargement of the Union to include the Central and Eastern European (CEE) countries.

On the other hand, the EU countries will probably face, due to the ageing of their populations

and the likely growing demand for labour, a shortage of labour during the next decades. Therefore, they have to take recourse to greater immigration of labour. The UN (2000) estimates that the EU must receive 1.5 million immigrants each year just to maintain its working-age population at its current level. This would represent 0.4 per cent of the present population and would be clearly bigger than the present flow of immigrants to the EU. One natural source for meeting this demand for labour would be the CEE countries, the population of which is in part well educated and which has a clearly lower living standard than in the Union at present.

Immigration may have large-scale economic and social impacts both on the EU 15 and the applicant CEE countries. A polarisation can already be discerned in the attitudes toward immigration prevailing in the EU. EU firms and employers view the free movement of labour as quite positive for the following reasons.

Immigration is a channel to meet the demand for labour so that European firms are able to carry out that production for which there is ample demand, if and when domestic labour is not available in a sufficient amount.

The use of foreign labour may to some extent be more profitable in comparison to domestic labour – taking into account the differential in productivity – and be conducive to lowering costs of production to competitive levels.

On the other hand, EU labour feels wary about immigration and its possible negative consequences in the labour market. This fear has spread among politicians and the general public in many EU countries, especially in those countries expected to be the primary destinations for immigrants. This fear stems from the facts that the CEE 10 countries are populous (28 per cent in relation to EU 15) and their income level is much lower (on average 40 per cent of the average in EU 15). Moreover, their convergence to the EU 15 average income level will take decades, perhaps taking until the middle of this century in a successful scenario, so that the flow of immigration may be sizeable. Also, only a few of the EU countries are a natural destination for this immigration, implying that these countries will likely face disproportionate immigration pressure compared to the rest of the EU. The EU trade unions have the following three basic concerns associated with allowing free mobility of labour.

Immigrants are a threat to the employment of EU workers.

Immigration will press down wages in the EU.

Immigration is a threat to the welfare states of the EU, as immigrants are typically net beneficiaries of these systems, i.e., they will contribute less to them than they will receive as benefits from them.

For these economic reasons, in addition to the possible negative political and social consequences, some EU countries have reservations, even strong ones, towards the free mobility of labour following the Eastern Enlargement of the Union. Some member states are demanding at least a long transition period entitling them to use the option to limit temporarily the free movement of labour, if labour market disturbances occur. In 2001, the EU adopted the so-called 2+3+2 model formulated by the Commission, according to which the movement of labour would be limited for 2, 5 or at most 7 years from accession, although a Member State could liberalise it immediately already at the outset.<sup>1</sup>

In the following, we analyse and make observations on immigration in the light of some recent studies and present some basic calculations of our own related to the gains from immigration. The general approach is to shed light

on the benefits from immigration that may compensate for the negative effects outlined above. It should be noted that the CEE countries are only one source of labour immigration and there may possibly be a need to recruit labour mainly from other countries, if the aforementioned labour shortages do indeed emerge. Immigrants from the CEE countries will, however, be in a special position compared to those migrating from other countries; after a possible transition period, CEE workers will be able to move freely within the EU without work or residency permits.

### *Immigration from the CEECs to the EU likely to be limited*

The EU countries differ markedly with respect to their foreign resident populations, as shown by table 1. It is worth noting that countries like Austria and Germany already have large foreign populations, and these are also the countries seen as the main destination for CEE migrants. Some countries like Finland have a much smaller foreign population, but in this country this share has risen very rapidly, quadrupling from 1988 to 1998 (Coppel et al. 2000, 10).

The OECD (1998) pays attention to the fact that the immigration flow from the CEECs to the EU is currently not very big, even though the majority of the OECD countries do not require an immigration visa from a CEE national staying less than three months in the country. OECD statistics show that citizens of the CEECs (although excluding the Baltic countries, which were, without distinction, included in the group of the former Soviet Union) in nine EU countries<sup>2</sup> numbered 735 000 in 1996, of which 505 000 resided in Germany (OECD 1998, 48). In total, the number of foreigners in these countries amounted to 15 million, which reveals that immigration from the CEE countries has at least so far been a minor part in the total immigration to the EU. This is confirmed further by the fact that immigration from the CEECs to the EU markedly diminished during the 1990s. In the first year of transition (1990), 300 000 persons moved from the CEECs to the EU. However, this figure has steadily declined to reach almost zero from 1993 onwards. Total migration to the EU has also fallen markedly during the 1990s: it dimin-

**Table 1. Share of Foreigners in Population and of the Labour Force in 1996, %**

| EU country  | Share of foreigners in population | ...of which coming from the EU countries | Share of foreigners and born abroad in the labour force |
|-------------|-----------------------------------|--|---|
| Luxembourg  | 34.1                              | ..                                       | 53.8  |
| Austria     | 9.0                               | ..                                       | 10.0  |
| Belgium     | 9.0                               | 61.4                                     | 6.5 <sup>1)</sup>                                       |
| Germany     | 8.9                               | 25.2                                     | 9.1   |
| France      | 6.3 <sup>2)</sup>                 | 36.5                                     | 6.3   |
| Sweden      | 6.0                               | ..                                       | 5.1   |
| Denmark     | 4.7                               | 20.6                                     | 3.0 <sup>3)</sup>                                       |
| Netherlands | 4.4                               | 27.7                                     | 3.1   |
| UK          | 3.4                               | 39.2                                     | 3.4   |
| Ireland     | 3.2                               | ..                                       | 3.5   |
| Portugal    | 1.7                               | 25.3                                     | 1.8   |
| Italy       | 2.0                               | 13.9                                     | 1.7 <sup>3)</sup>                                       |
| Finland     | 1.4                               | 19.1                                     | ..  |
| Spain       | 1.3                               | 46.7                                     | 1.0   |

<sup>1)</sup> 1989, <sup>2)</sup> 1990, <sup>3)</sup> 1995.

Source: Trends in International Migration 1998, OECD.

ished from 800 - 900 000 persons in 1990-92 to a level of 200 000 in 1997 (European Integration Consortium 2000, 51).

Bauer and Zimmermann (1999), summarising their study evaluating the methods used to estimate the likely magnitude of immigration to the EU from the CEECs, concluded that within 10 years three million immigrants would move into the present EU countries. This would represent less than one per cent of the population of the EU 15.<sup>3</sup> In mechanical terms, this would mean that in Finland the foreign population would rise by one half, approximately by 40 - 50 000 persons, within this time span. The European Integration Network (2000) estimated, with the aid of an econometric model of migration, that the cumulative amount of migrants from the CEE 10 would rise to 2.9 million in 2010 and to 3.9 million within 30 years. The EU Commission (2001), in its study on the effects of enlargement, estimated that the net migration flow from the CEECs will gradually rise after accession and peak at around 180 000 immigrants annually, after which it will slowly

decline. This result is similar to those reported above.

All these estimates are uncertain, and there may even be big surprises in this respect in the future. Labour market imbalances comprise the key factor behind migration, and it can even be argued that producing definite numbers on the magnitude of migration is to some extent unnecessary, as this imbalance will dictate the actual amount of immigration. If there is a strong demand for labour in the future, as seems to be the likely outcome according to current projections, there will also be a need for the EU to attract labour from the east. This channel is a natural way to smooth the adjustment to the excess demand situation. The reverse holds if the projected labour shortage does not materialise. It should be noted that these immigrants will not be eligible for unemployment insurance benefits paid by the EU 15 countries, if they do not first have a work history in the EU 15.

As to Finland, the European Integration Consortium (2000) concluded that the number of people from the CEECs would rise from 12

000 in 1998 to 41 000 in 2010 and further to 54 000 in 2025-30. These estimates do not, however, include a separate evaluation of the balance in the Finnish labour market.

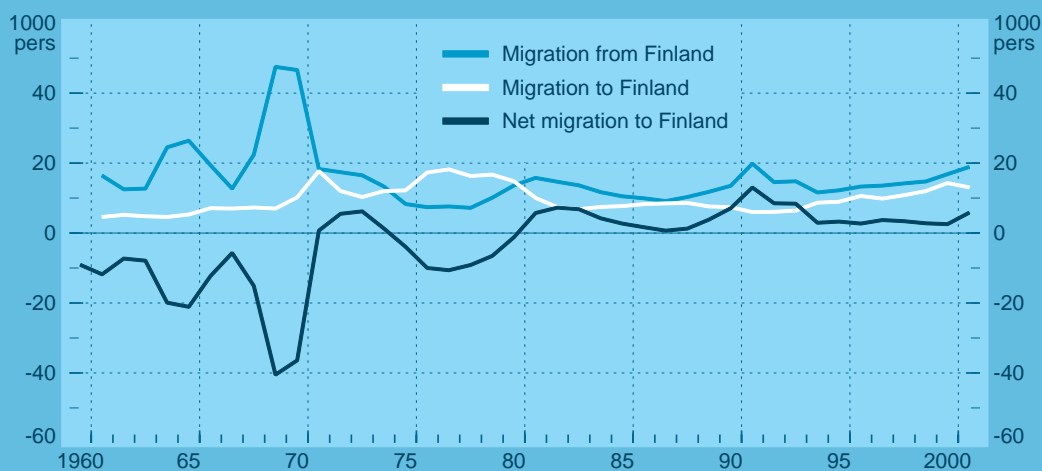
Kiander and Vartiainen (2001) (see also Kiander and Mäkelä, 1999) estimated that the annual flow of migrants from the CEECs to Finland would be 0.1-0.2 per cent of the Finnish population, i.e., some 5 000 persons, given free movement of labour. This would be a rather limited amount, with no marked effect on the balance in the labour market. Rantala (2001) has specified a precise econometric model of net migration of the gravity type, where income differentials and the distance between the source countries of migration and Finland are used as explanatory variables. Assuming convergence of the CEE income levels towards that in the EU 15, the model's projections show that the migration flow may be bigger, on the order of 18 000 persons annually, at its highest, around 2015.

The balance in the Finnish labour market has also been studied by the Ministry of Labour in its report "Labour Market in 2017" (see Ministry of Labour, 1999) and an updating of it by

Tiainen (2001). Annual migration to and emigration from Finland in the 1980s and 1990s averaged 12 500 and 10 500 persons, respectively, yielding net immigration of 2 000 persons per year. According to the basic alternative by the Ministry, the future enlargement of the Union would result in net immigration of around 4 000 persons per year. The foreign population would grow to 130 000 persons by 2010 and to more than 200 000 persons by 2017. It should be noted that these estimates cover total migration, of which immigration from the CEECs is only one part. Hietala (2001) estimated that the number of immigrants from the applicant countries to Finland would be only 2 500 persons, at most, while the total net immigration flow would rise to 10 000 persons in 2010-14.

The Finnish debate on EU enlargement has also referred, as a basis for comparison, to the large migration from Finland to Sweden that occurred during the late 1960s. At that time, some 150 000 persons, i.e., around 3.5 per cent of the Finnish population, moved to Sweden in a short period. It should be noted, however, that the free movement of labour has been possible between Nordic countries (Fin-

### Total Immigration to and from Finland



Sources: Ministry of Labour, Statistics Finland.

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land, Sweden, Norway, Denmark and Iceland) already since 1954 and that migration flows did not react at all to this liberalisation in the 1950s and early 1960s (see Koivukangas, 1988). It was only when the “push” emerged in Finland as a consequence of the recession in the late 1960s and the devaluation of the Finnish markka, combined with the “pull” in Sweden resulting from the vigorous demand for labour, that “excess” labour employed at small farms in rural Finland started to migrate to Sweden.

### *The effects of migration on the EU labour market*

According to the popular view referred to above, migration will lead to an increase in unemployment and depress wages. Many developed countries, like the US, Canada and Australia, have, however, experienced and promoted sizeable immigration. At the same time, their structural unemployment has not risen, quite the contrary. It should be noted that in models of structural unemployment there is usually no role given to demographic features. In connection with the fears related to migration, emphasis is usually placed only on the short-run effects and no weight is given to the fact that the market economy adjusts in the medium and long run as a result of migration. Let us thus first make an evaluation of the effects of migration on the labour market in the long run.<sup>4</sup>

In many recent analyses of the labour market it has become a custom to separate the high-skilled, or skilled, labour from the non-skilled labour. The basis for this separation is that the technological progress observed recently is seen to be skill intensive, implying that the productivity of skilled labour has risen more than that of non-skilled labour. At this point, it is vital to recognise that the effects of migration also depend on the type of labour that will move to the EU, which in turn depends on the structure of labour demand and the possible selective policies towards immigration.

Output (GDP) is produced in the present EU countries using three factors of production: capital, skilled labour and unskilled labour. The production factors are cooperative, i.e., a rise in the amount of other factors of production will raise the marginal product of the remaining factor. The rewards to the factors of production

are equal to their marginal products in the case of perfect competition in the labour and capital markets.

Let us first start with the case where labour is homogeneous and the distinction between skilled and non-skilled labour is for a while omitted. Let us further assume that the CEE labour migrating to the EU has characteristics similar to those of the indigenous labour force, such as productivity. We have the first result,

*Outcome 1. If labour is homogeneous and the rate of return required on capital (the real interest rate) is unchanged, the real wage rate in the EU does not change in the long run as a result of immigration of labour to the EU.*

The intuition behind the result is that the profitability of the firms increases in the short run as the inflow of workers from abroad pushes real wages down. This will lead to an expansion in the capital stock until the marginal product of capital returns to its initial level. The rise in the capital-labour ratio will also lead to a rise in the marginal productivity of labour, which raises the real wage back to its initial level.

Let us then return to the more general case outlined above where we have two kinds of labour. The EU labour force will increase by different amounts, but the immigrants do not bring with them any capital. Now Outcome 1 can be generalised to hold for real wages on average. We can now prove,

*Outcome 2. If the required rate of return on capital (real interest rate) remains unchanged and immigration consists basically of unskilled labour, the real wage of unskilled workers will be pressed down in the long run in the EU countries. The same holds, mutatis mutandis, if the immigrants are predominantly skilled. On the other hand, the real wage will rise in the EU for that type of labour whose quantity remains unchanged or increases only slightly.*

The intuition behind this result is the following. Firms may again expand their production, as their profitability will rise if the rate of interest does not change as a result of immigration, as we assume here throughout. Again, as in Outcome 1, investment and the capital stock rise in the EU countries. Since the average real wage does not change in the long run, the real wage of those workers whose amount increases less than the capital stock has to rise and the wage rate of the other type of labour has to go

down. Those workers who are scarcer in production will gain while others lose.

EU GDP will, of course, increase directly in response to the higher quantity of input, but also indirectly since the amount of capital also rises. In the short run, however, the capital stock is fixed. The above results can be criticised from the point of view that they do not pay attention to, and even omit, the short-run pressure placed on the labour market. Let us now examine the short run more closely.

The EU-15 countries' total labour income and capital income will rise in net terms by an amount, which is called the *immigration surplus*. The destination country of migration reaps a benefit in the form of labour being available at a price below its average marginal product. Specifically, as a result of immigration, the real wage will be pressed down to the level of the marginal product of the "last" immigrant, while the immigrants contribute to the host country's GDP by the marginal productivity of each immigrant, which is higher than the new level of the real wage. Thus, the EU 15 countries benefit. This holds in well behaving competitive markets and will be qualified below.

We get the following paradoxical result, see also Borjas (1995),

*Outcome 3. The higher is the short-run pressure to lower the real wage in the EU countries as a result of immigration, the bigger is the net benefit from immigration to the incumbent EU countries.*

Capital owners in the EU benefit from immigration and workers lose, but the net gain to the economy is positive. It is possible to compensate the losers by transfers through the public sector so that all natives of the EU will benefit from migration. In this alternative, however, such a transfer must not distort (even more than at present) the allocation of resources in the EU countries, i.e., the demand for and supply of labour, and investment and saving. Therefore, the transfers have to be neutral in these respects. Otherwise, they only result in a rise in inefficiency and could easily lead to a situation where all of the net benefit is lost during this transfer process.

Borjas (1995) estimated the net gain from immigration if the labour force increases by 10 per cent as a result of immigration and concludes that the net gain would be around only

0.1 per cent of GDP in the US case. This involves quite a marked change in the functional distribution of income so that capital income rises and labour income declines by around two percentage points in relation to GDP. Based on this, and combining to it the above estimates of the size of immigration in connection with the eastern enlargement of the EU, we come to the conclusion that the size of the gain to the EU 15 is very small, as we shall also see below. However, this is not a surprise as in general the overall gain to the EU is quite small from enlargement, see, e.g., EU Commission (2001), Lejour et al. (2001), Alho et al. (2001), and Kiander and Vaitinen (2001).

The EU Commission (2001) provides an estimate of the effects of free mobility of labour based on the above concept of immigration surplus, taking recourse to the analysis by Bauer and Zimmermann (1995). They calibrated the above framework with the distinction made above that the labour force is composed of skilled and non-skilled labour. Their calculations show that in the short run both types of labour may lose if the skilled/non-skilled composition of immigrants is near equality, while at both ends of distribution, the other type of labour gains. The net gain to the incumbent EU countries varies between 0.04 and 0.20 per cent in relation to national income from immigration (assumed at 5 per cent of the labour force), i.e., it would be quite big in comparison to the estimates reported above. The immigrants gain a lot from migration, see e.g. EU Commission (2001, 44).

Trade unions in Finland and elsewhere in the EU are demanding that future immigrants be employed at the going terms and rates of pay. In this case, migration would not have an immediate effect on nominal wages nor real wages. This would not be desirable as the economy would not start to adjust through capital accumulation and unemployment would rise. There would be no net benefit to society, only an additional cost in the form of an increase in social expenditure.<sup>5</sup>

Firms' positive attitude towards immigration, referred to in the Introduction, is basically based on a simpler reasoning than above. They think that they will have ample demand for their products, but the likely shortage of labour (as the EU indigenous labour force may shrink in the future) may prevent their sales from be-

ing fulfilled. For each unit of output produced and sold, they get a positive profit through the mark-up of prices over wages, and so a reduced labour force will lead to reduced profits as well.

Above we have considered the EU as a single unit (country). Let us therefore differentiate the EU countries on the basis of whether they open their labour markets immediately or not. As was discussed above, some EU countries will do this immediately after the enlargement (here Country 1), while some are likely to impose a transition period, up to seven years (Country 2). We assume that the EU countries are, as they basically are today, isolated from each other as to their labour markets and compete with each other through trade flows in their mutual and third-country markets. This differentiation with respect to the initial inflow of immigrants may lead to some asymmetric changes in the countries' relative competitive positions. First, the liberal country may reap the "best" of the CEE workers in the sense that their productivity (in relation to their wage rate) is the highest and that their wage is lower than what it otherwise would be had all the EU countries liberalised their labour markets at the same time.

Immigration by CEE labour, will, as was discussed above, increase the resource base of Country 1, while that of Country 2 will remain unchanged in this sense. In Country 1 there is downward pressure on the real wage. This will, on the other hand, mean that the international competitiveness of Country 1 will improve together with its resource base, causing a shift in global market preferences for the products of Country 1 in the short run. This will also imply indirect upward pressure on unemployment and downward pressure on real wages in Country 2. Country 1 can now attract more immigrants from the CEE countries, based on the stronger demand for its products in the world markets. It will again be able to improve its competitive position, which again leads to a rise in its exports, while Country 2 would again lose. There could be a temporary virtuous circle for Country 1 and a vicious one for Country 2.

### *Simulation of the effects of immigration to the EU*

Let us now try to create a bridge from the short to the long run. The difference between the two is that the capital stock remains unchanged in the short run, while in the long run it adjusts so that the profitability of the firms (marginal product of capital) is eventually restored to its initial level. As mentioned above, this means that, as a result of immigration, profitability first goes up and then returns to its initial level, as we assume throughout that the required rate of return on capital does not react to immigration. The growth of the capital stock has to be saved, however, so that the rise of GDP included in results 1 and 2 is not available for extra consumption as such.

So, again, we reach a neutrality property,<sup>6</sup>

*Outcome 4. As a result of immigration the EU GDP grows in the long run by the relative amount of the rise in the EU labour force due to immigration, which is more than the growth impulse in the short run. However, welfare, measured by the consumption of the indigenous EU citizens, will not rise at all in the long run. Neither is there any harm caused to the indigenous labour nor to capital in the EU countries. Only the immigrants gain by the amount of the income gap.*

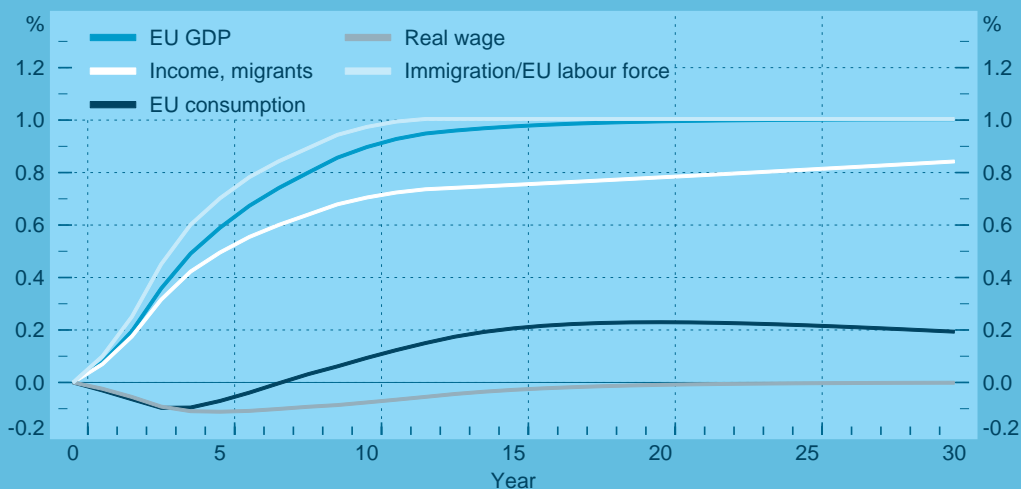
We see that the above sharp distinction between capital and wage income emerging in the short run is not the whole picture; it actually vanishes in the long run, as the capital stock reacts to the shock produced to the economy in the form of immigration. The intuition behind Outcome 4 is that, in the end, immigrants will help to "create" a similar, but larger economy than the original, and everything is just scaled upward from what it was originally. Again, this all crucially depends on the assumption of constant returns to scale. Under increasing returns, created by external effects, there could be a sizeable net gain in the long run, too. The EU countries and their labour may borrow against higher future wage incomes (since wages return to their previous level following the immigration shock) and higher future capital income (since this, too, rises), and thereby prevent, through the capital markets, the temporary fall in their real wages from being reflected in their consumption level.

However, the long run may really be far away, and consumers are not so forward-looking to realise Outcome 4 immediately when immigration starts. Let us therefore study this more carefully. We made a simple numerical simulation of the effects of immigration. The simulation assumes that immigration raises the EU labour force by 1 per cent in ten years, in line with what was reported above. We also imposed the constraint of a current-account balance each year for the EU 15. The capital stock slowly adjusts so that each year 20 per cent of the gap between the desired capital stock and existing stock is filled by a flow of investment, and the saving rate of the immigrants is fixed exogenously at 7 per cent. The details of the model are presented in Alho (2002). The basic results of the simulation are summarised in figure below.

Figure reveals several interesting results. As stated in connection with Outcome 4, GDP grows in the long run by the same amount as the labour force, i.e., 1 per cent. The downward pressure on real wages using a Cobb-Douglas specification for the production function (no

distinction is made here between skilled and non-skilled labour), is very small, at most less than 0.1 per cent and it vanishes in the long run as stated in Outcome 1. In practice, this has to mean that, as productivity rises over time and the economy grows, there are changes in the rates of increase in the real wage rates. The rise in the rate of profit is also very small (not shown in the Figure), with the highest level of the rate of return only 0.04 percentage points higher than the initial level. The consumption level of the incumbent EU countries oscillates, as is to be expected in light of Outcome 4. It first declines as the EU 15 natives save the increase in the capital stock, and then increases as saving by the immigrants and the rise in GDP give more room also for consumption by the EU indigenous population. After some time, consumption begins to decline again, in line with Outcome 4. Over the 30-year time span, the accumulated present value of the net gain in consumption to the EU 15 indigenous consumers is very small, namely 0.1 per cent in relation to GDP. This confirms the theoretical reasoning behind Outcome 4.

### Simulation of the Effects of a Flow of Immigrants to the EU, Percentage Change from Baseline



Source: Own calculations by the author.

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### *Concluding remarks*

Internationalisation of the EU labour markets and their integration with the CEE countries due to the consequent free mobility of labour from the east to the west is an important economic and social issue in connection with EU Enlargement. This has also been of interest to the research community. This article demonstrates that many of these effects are not self-evident and may vitally differ between the short and the long run. A paradox emerges in the sense that the adjustment problems created by immigration (in the form of real wage pressure) are higher, the bigger is the total net gain to the EU in the short run. In practice, it seems that the reaction of real wages to immigration, reported in the many studies on this topic, is quite small indeed, as also demonstrated here.

Because many studies show that immigration from the CEE to the EU 15 is likely to be rather limited, we should perhaps formulate the question to address whether CEE immigration will be sufficient to meet the demand for labour by the incumbent EU countries or whether more active immigration policies are needed. On the basis of the discussion above, the answer to this question is probably yes, if the EU economies are to return to and remain on a stable growth path.

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## Footnotes

- <sup>1</sup> The Finnish government has accepted the Commission's proposed model, opting for the two-year period of transition. Sweden, Denmark, The Netherlands and Ireland, on the contrary, have announced that they will immediately allow free movement of labour after accession.
- <sup>2</sup> The survey by the OECD covered the following EU countries: Germany, France, Belgium, Denmark, Finland, Italy, Austria, Holland and Sweden.
- <sup>3</sup> See on this also Kraus and Schwager (2000).

<sup>4</sup> There is a large empirical body of literature on the links between trade and wages, see the recent papers in a special issue of the *Journal of International Economics*, June 2001.

<sup>5</sup> These would be costs in the form of subsistence income support. There would not be a rise in unemployment insurance costs as the immigrants would not have a working history in the EU and as the UI benefits are not in general portable from one country to another. After becoming EU citizens, CEE migrants would receive benefits from their own UI system for 3 months while searching for a job in another EU country. Angrist and Kugler (2002) present evidence that the negative effects of immigration on employment are bigger in countries with stricter labour and goods market regulations.

<sup>6</sup> See Alho (2002) for details of the argument.

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