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## International Labor Migration, Economic Growth and Labor Markets - The Current State of Affairs

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Thomas K. Bauer, John P. Haisken-DeNew  
and Christoph M. Schmidt

# International Labor Migration, Economic Growth and Labor Markets

The Current State of Affairs

No. 20



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## **International Labor Migration, Economic Growth and Labor Markets – The Current State of Affairs**

### *Abstract*

Even though European labor markets are characterized by high average unemployment, there is a shortage of high-skilled labor, leading many European economists to argue for an immigration policy directed at actively recruiting highly qualified workers from abroad. It has further been argued that an immigration policy that is tailored to attract young and economically successful migrants can alleviate some of the demographic burden associated with an aging population. We embed this discussion into a systematic classification of economic migration research according to its major conceptual and applied questions. The state of theoretical and empirical research on the migration decision, the literature on the economic performance of immigrants and their economic impact is reviewed briefly, proceeding along the lines of a clear conceptual framework. In addition, the paper discusses expectations on future migration flows and the policy options of immigration countries for dealing with these flows.

JEL-Classification: F22, J61

Keywords: Immigration, European labor markets, Immigration policy

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## 1. Europe as an Immigration Region

The second half of the last century has seen major shifts in the nature and the extent of worldwide migration. While the classical immigration countries such as the United States (US) have remained major receiving areas, their sources of immigration have changed substantially, away from the traditional European origin countries to Latin America or Asia. At the same time, many societies in Europe have been transformed by their intense and multi-faceted immigration experience in the fifty years after World War II. Finally, at the turn of the century the projected enlargement of the European Union (EU) in combination with increasing migration activity worldwide has placed migration high on the European agenda. This does not only pertain to current members of the EU. Central European countries face increasing problems with their new role as transit countries for people heading towards Western Europe. Also the characteristics of these migration flows have become more diverse. Temporary migration of workers, especially high-skilled workers, continuously gains in relevance, while traditional migration networks appear to lose in importance. Moreover, increasingly restrictive migration policies towards asylum seekers, refugees, and unskilled workers have increased the importance of irregular migration and human trafficking.

Despite the existing resistance of many receiving countries towards further immigration, worldwide migration flows have increased since the 1980s and the early 1990s (SOPEMI 1999). In the last decade, the number of sovereign states directly involved in international migration has been rising steadily. According to the IOM (2003), the total number of international migrants in 2000 is estimated at approximately 175 million. In other words, one out of every 35 persons worldwide was an international migrant in 2000 compared to about one out of 45 persons in the 1970s and 1980s. With a stock of migrants of about 56 million, Europe is the most important receiving area (Salt 2002 and Wanner 2002 provide recent surveys of current migration trends in Europe), followed by Asia with a migrant stock of almost 50 million, and North America with about 41 million migrants.

For example, between 1988 and 1997 the share of the foreign population increased from 4.5 percent to 9.1 percent in Austria, from 7.3 percent to 9.0 percent in Germany, and from 5 percent to 6 percent in Sweden (OECD 1999). Measured in per-capita terms, however, the Oceania-Pacific region with a migrant stock of 19% of the total population appears to be the most important receiving region, followed by North America with an immigration share of 13%. Six out of the 10 countries with the highest net immigration from 1970–1995 are either from Europe or North America.<sup>1</sup>

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<sup>1</sup> The other four countries include Saudi Arabia, India, Australia, and the United Arab Emirates.

The overarching theme of the current migration debate is the nature of the economic effects for the receiving economies. Yet, neither are the causes and consequences of migration well understood, nor is it obvious how to predict its development into the future. Most importantly, immigration has become a more variegated phenomenon, making a shift of research particularly to the receiving region *Europe* indispensable. Within Europe the free movement-agreement of the EU, in principle, smoothes the way for labor migration across national borders. Yet, despite the demise of socialism in Eastern Europe mobility within the EU still seems rather low or even negligible, thereby moving migration from outside Europe into the center of the discussion.

The current situation of the European labor markets is characterized by rather high average unemployment. However, there is typically a shortage of high-skilled labor as well. Thus, European economists argue increasingly for an immigration policy directed at actively recruiting highly qualified workers from abroad. Among migration experts there is even a growing perception that the industrialized countries have been involved for a long time in a constant competition for high-skilled workers (for a recent overview on high-skilled migration see Rothgang, Schmidt 2003). In addition, Europe's societies are aging, placing their pay-as-you-go social security systems under considerable demographic pressure. It becomes increasingly well understood that a regulation of future immigration that is tailored to attract young and economically successful migrants can alleviate some of the demographic burden associated with an aging population (Bonin et al. 2003).

We embed this discussion into a systematic classification of economic migration research according to its major conceptual and applied questions. The state of theoretical and empirical research in this literature is reviewed briefly, proceeding along the lines of a clear conceptual framework. Although there is no unique, all-encompassing theoretical model covering the complete spectrum of topics, economic reasoning concerning migration issues can be conceptualized into three broad lines of research. The first research area is concerned with factors determining the *decision* to migrate, and consequently with the magnitude and the composition of migration flows. The analysis of this theme is an important prerequisite for the understanding both of migrant performance and the impact of immigration, which are the other two areas of economic migration research.

Research on the *economic performance* of immigrants in the destination country asks how migrants' wages and employment outcomes or their dependence on the welfare system compares to those of comparable natives, and how this comparison changes as the migrants' duration of residence unfolds. A closely related aspect concerns the *perception* of and the attitudes towards immigrants by the native population in the receiving country. A third line of re-



search analyses the *economic impact* of immigration on the indigenous population and the macroeconomic performance of the destination country. Perhaps most importantly, it is asked whether immigration reduces the wages or employment prospects of natives or already resident migrants of preceding entry cohorts, and under which mechanisms. A mirror image of these research questions is provided by concerns over the possible brain drain emigration from sending countries.

These three areas are interrelated with one another and exhibit a close connection to immigration policy. Migrants' skills are arguably the central theme of all economic migration research. Since immigration policy might influence the composition of immigration flows and since formal and informal human capital endowments mainly determine the economic performance of immigrants in as well as their impact on the destination country, immigration policy plays a decisive role for the consequences of immigration.

Throughout the paper, we will concentrate our discussion on what we will call henceforth *the region* (i.e. all countries of Europe, including Turkey and Israel, Canada and the United States (US), and all countries of the former Soviet Union including the Central Asian Republic). In section 2, we provide a general typology of migration and migrants as well as a critical discussion of the reliability of existing statistical information on international migration. Migration flows in the region before and after 1990 together with the policy responses of the countries under consideration towards immigration are described in section 3. Particular attention is paid to the background of an aging society and the demand for high-skilled workers. Section 4 offers a survey of the economic literature with regard to the performance of immigrants in the economy and their integration into the society of the receiving countries, and provides a discussion of the economic impact of migration. Finally, section 5 discusses our expectations on future migration flows and the policy options of immigration countries for dealing with these flows.

## **2. Typology of migration and statistical information**

Migration is usually defined as the movement of a person or group of persons from one geographical unit to another across an administrative or political border, wishing to settle permanently or temporarily in a place other than the place of origin. Since the movement between two geographical units does not have to occur directly, one further differentiates between the place of origin or sending region, transit regions, and the place of destination or receiving region (IOM 2003: 8). Movements within a country are usually defined as internal migration and, accordingly, movements across international borders are called international migration. Henceforth, we exclusively focus on international

migration. This section introduces the conceptual aspects of the study, and addresses the important issue of data availability.

*Concepts: Migration and migrants*

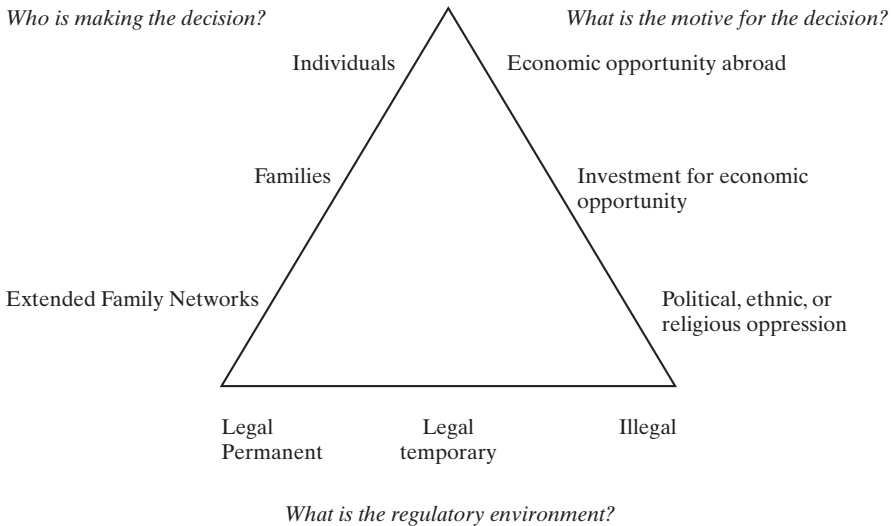
The broad concept of migration comprises many different forms of migration flows and distinct types of migrants. To organize our ideas about this phenomenon, we briefly develop a typology of migrants based on three key characteristics. In contrast to many alternative attempts at the classification of migration flows, different combinations of these three characteristics comprehensively describe the various modes of migration. Figure 1 visualizes this typology of migrants along a triangle whose sides represent three main questions for the characterization of migrants: (a) Who is making the decision; (b) What is the motive for the migration decision; and (c) What is the regulatory environment?

In general, (a) the migration decision could be made by individuals, families, or by an extended family network. Different to individual migrants, the decision of family migrants is only partly driven by their own social and economic considerations (Mincer 1978). Rather, it is the opportunities and restrictions of all family members which matter to the decision. Thus it might not be sufficient to use individual information to understand migration decisions. It might even be the extended family which is making the migration decision. A member of the network might be sent away to work in a location which is characterized by different economic shocks to insure the extended family against adverse shocks at home (Stark 1991).

In terms of (b) the migration motive one can differentiate three types of migrants: those seeking out economic opportunity in the destination economy, migrants who aim to invest into increased economic opportunities at home upon their return by either accumulating savings or human capital, and migrants who move because of political, ethnic or religious oppression in their home country. In most cases, the main driving force behind the migration decision of individuals is the desire to improve their material living conditions. Usually it is assumed that these migrants plan their move and invest in information and those aspects of human capital that are necessary for a successful integration in the labor market and society of the receiving country (Chiswick 1978).

A related motive for working abroad is the accumulation of savings or skills with the objective of returning to the origin and building a better future there. This link between economic considerations and migration activity might not be obvious in the data. By contrast to these two motives, ethnic migrants, asylum seekers, and refugees rather migrate because they are either discriminated against in their country of origin because of their ethnicity, race or gender, or are forced to move because of armed conflicts in their home country.

Figure 1

**Typology of Migrants**

Even though this is coerced migration, empirical evidence suggests that their choice of the receiving country is determined at least partly by economic considerations as well (Rotte, Vogler 1998).

Regarding (c) the regulatory environment, one can differentiate between legal permanent migrants who wish to settle in the place of destination indefinitely, legal temporary migrants who aim to stay in the receiving region only for a limited period before returning back to the place of origin or moving on to another destination area, and illegal migrants. The legal status has direct consequences for the living situation of a migrant in the receiving area. Illegal migrants are often not eligible for social and medical assistance and will have a difficult time securing certain civil rights. They may also be subject to detention, expulsion, deportation, and prosecution. In addition, illegal migration, especially of women and children, is increasingly associated with trafficking and smuggling of human beings (see IOM 2003 for a more detailed discussion and some estimates on the size of this type of migration).

The above typology of migrants naturally comprises the most important groups of migrants observed. The migration decision of guest-workers and so-called target savers, for example, usually is an individual decision to migrate temporarily on a legal basis to another country for economic reasons. For asylum seekers, the decision to migrate is most often made by families because of some form of oppression in their home country and – upon the approval of

their asylum status – they stay permanently in the receiving country on a legal basis. Despite its high conceptual appeal, a typology based on three characteristics cannot be completely exhaustive. The same person could change classifications depending on the place of origin and/or destination and with time of residence in the receiving country. Motivations are not clear cut, either. Even though the migration decision of asylum seekers and refugees is due to the political and social situation in their place of origin, the choice of the destination area may be determined by economic reasons or family networks.

Hence, according to the migration motive it may be unclear from the viewpoint of the receiving area whether to classify an asylum seeker or refugee as humanitarian or economic migrant. Furthermore, the experience of many guestworker countries in Western Europe has shown that migrants who originally intended or were supposed to stay only temporarily often change into permanent migrants. Migrants who entered a country by overstaying their visa or by immigrating without valid or with forged documents often have the opportunity to obtain legal residence status in the receiving region, for example by regularization programmes. In addition, changes in residence or work permission laws in the destination regions often result in changes of the legal status of the migrants already residing in these countries. Because of different regulations across countries concerning residence and work permissions the same migrant could hold a different legal status in different destination regions.

*Paucity of reliable statistical information on migration and its characteristics*

Unfortunately, the main source of statistical analyses in migration research has been aggregate data, either in form of time series or as regional cross-sections. Time series are more prevalent. This could be explained by the availability of data provided by the statistical offices in the respective countries or by international organizations such as the OECD. In addition, in principle the econometric tools for analyzing aggregate time series data are sufficiently developed to allow a sound analysis. The quality of such studies, however, is impaired by the low quality of the data. Even in single countries the material is often flawed by measurement problems. For instance, it is often difficult to obtain reliable numbers for out-migration even in countries with a tight registration system: emigrants are often not compliant when it comes to deregistration.

Because international migration statistics are produced at the national level, cross-country studies almost exclusively suffer from low data comparability. There are substantial differences across countries in the measurement of migration flows, which could be largely explained by different institutions, different definitions of migration and migrants, and a persistent lack of cooperation between the responsible national statistical institutions (see IOM 2003, Chap-

ter 16, for a very detailed discussion of these problems). One major problem is that many European countries only collect information on persons that do not hold the citizenship of the country of residence. Researchers are often forced to use this information as a proxy for the number of migrants in a particular country, because separate statistics on foreign-born people are not available. These studies do not properly capture naturalizations, second generation immigrants, and ethnic migrants.<sup>2</sup>

Furthermore, migration studies using time series data often suffer from the problem that they are unable to discriminate between migrants moving for purposes of seeking out economic opportunity, and coerced migrants. Econometric studies on the determinants of international migration often need to maintain, explicitly or implicitly, severe identification assumptions in order to be able to assess the impact of explanatory demographic and economic factors on the magnitude of migration flows (Fertig, Schmidt 2001) or they suffer from measurement error resulting from the low quality of the underlying data (Bauer, Zimmermann 1998).

Since the last decade, researchers in economics have increasingly analyzed individual-level data. Because of the availability of the necessary data, this trend has been much stronger in the US than in Europe. The investigation of individual-level data was hampered in the past by limited computer facilities and the lack of econometric techniques to deal with the often discrete or only partly continuous nature of the data, if such data was available at all. Due to the tremendous speed in the improvement of the main frame and micro computer technologies the situation has changed dramatically since the 1980s, making it possible to handle large data sets on PCs or workstations. Currently the provision of such data remains more and more the real problem, at least in Europe, because this type of data is often made not available to researchers with the argument that this would endanger the privacy of respondents.<sup>3</sup>

To summarize, long-run consistent and reliable time-series of stock and flow data of migrants across countries are not available yet, although there is a long-standing recognition of the importance of better international migration statistics. Reliable statistics on irregular migration and the social and economic situation of undocumented migrants are (partly by nature) non-existent. To a large extent, illegal migration is measured using border apprehension data, which is widely recognized to be unreliable and for cross-country

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<sup>2</sup> For instance, Germany has received millions of ethnic German migrants in the last decades, which are all not covered in the official stock statistic of migrants. As a result of the rather restrictive German naturalization laws, many second generation immigrants are still counted as foreigners, even though they have been born in Germany. There are similar problems in many other European countries.

<sup>3</sup> A detailed discussion of the methodological problems arising through the use of individual data is provided by Bauer, Zimmermann (1998).

comparisons because of differences in national definitions. In addition, individual-level data could be made available to researchers by invoking modern approaches to data security and confidentiality. Further efforts to improve international migration statistics (for example along the lines of the *United Nations Recommendations on International Migrations Statistics*) and better access of researchers to individual-level data of migrants should be high on the current policy agenda.

### 3. Labor Migration

Among the three central topics of migration research “decision – performance – impact”, the economic analysis of the migration decision and the corresponding migration flows has the longest intellectual history (e.g. Ravenstein 1889). The standard neoclassical model of the migration decision perceives migration as an individual investment under certainty. Within this cost-benefit framework the individual compares the present value of the expected present and future costs and returns to migration (Sjaastad 1962). The returns comprise monetary returns, mainly induced by a change in labor earnings, as well as non-monetary returns associated with amenities such as an attractive climate and environment. The costs of migration consist of monetary cost like travel expenses and search costs for finding an occupation in the host country, as well as non-monetary costs of migration, such as foregone earnings and the psychic costs arising from the loss of the familiar environment and the confrontation with another culture. Migration would be worthwhile in case these costs are exceeded by the returns to migration.

Aggregate migration flows then comprise all candidate individuals who display such a positive net return. While this traditional reasoning provides the intellectual basis for virtually all aggregate-level empirical studies, their actual performance has been disappointing throughout. Typically, these empirical analyses regress a measure of aggregate migration intensity on a kitchen-sink set of aggregate explanatory factors comprising wage or income information, and perhaps employment rates (Fertig, Schmidt 2001). Unfortunately, no stable patterns emerge from these studies whatsoever, mainly as a reflection of data limitations. Therefore, the precise economic determinants of aggregate migration flows are still discussed. Since there are several recent surveys of the literature on the determinants of migration (see, among others, Molho 1986; Bauer, Zimmermann 1998, 2002), this section will concentrate on a description of the migration flows and important developments of migration policies in the region.

#### *Migration in historical perspective*

In the nineteenth and twentieth century, international labor mobility played a central role for many countries in the development of their societies, in inter-

national economic integration and in economic growth. At the turn of the nineteenth century, migration experienced a temporary high, as the overall attitude towards immigration used to be quite liberal. Similarly, in the 1960s and early 1970s many receiving countries in the region actively recruited labor from other countries to deal with their perceived lack of unskilled labor. Starting with the first oil-price shock, the attitudes of most receiving countries changed towards the limitation of immigration, resulting in a “zero-immigration” policy in many European countries.

In most cases, this change in attitudes reflected age-old anxieties that immigration of unskilled individuals exerts detrimental economic effects on natives by increasing income inequality and unemployment. In addition to these economic arguments, opponents of immigration fear that it may increase social tensions and endanger national identities. Because of these arguments, and high and persistent unemployment, public pressure to tighten immigration possibilities has been very strong during the last couple of years, especially in Europe. Even though there is little public support for further immigration, many European countries more recently initiated modest attempts to admit more high-skilled migrants, reflecting a worldwide increasing demand for skilled labor.

The increasing mobility of individuals throughout the world could be traced back to a variety of factors. These include the collapse of the socialist regimes in Eastern Europe, rising income differentials between rich and poor countries, and armed conflicts and human rights violations. Falling communication and transportation costs increased the information about economic conditions in potential receiving areas and reduced problems in financing the costs of migration. The worldwide globalization process also resulted in a change of the migration experience of many countries. By contrast to earlier decades, not only the traditional immigration countries, Australia, Canada, New Zealand and the US but also most other countries in the region are affected by increasing migration flows.

For the traditional immigration countries, immigration was an essential ingredient in the early development of the society. There are significant differences in the migration policies adopted by these countries. The US rely to a large extent on family migration, while other traditional immigration countries follow a mixed strategy by managing immigration through quotas for different types of immigrants and a selective policy towards labor migrants by the means of a point system. Nevertheless, these countries share a common characteristic in that they still encourage immigration for permanent settlement on a significant scale. European countries with either post-colonial immigration, predominantly the United Kingdom, France and the Netherlands, or active recruitment of temporary workers, for example Austria, Germany, and Sweden, define the second important type of immigration countries in the region.

Even countries that historically have been emigration countries, such as Italy, Spain and Ireland, recently became immigration countries. Apart from return migration, these countries do not have a long experience with the inflow of foreign workers and are just developing immigration policies. In the case of the Southern European countries, the increased inflow consists mainly of irregular migrants. Together with some countries in Central and Eastern Europe (CEE), such as for example the Russian Federation, the Caucasus, the Czech Republic, and Poland, they further act as important transit countries for irregular migrants heading towards the North-West. Estimates suggest that hundreds of thousands of irregular migrants from Africa, Eastern Europe, the Middle East, Central Asia and China try to enter the EU via these transit countries (IOM 2003).

Provoked by the fall of the iron curtain, some countries in Eastern Europe have become important emigration countries. Many ethnic migrants returned from their East European home country to West European countries. For example, 300,000 Bulgarians of Turkish origin have returned to Turkey since 1989. Finland faced immigration of ethnic Fins from the Balkans and the former USSR (IOM 2003). The most important receiving country for ethnic migrants is Germany. Between 1989 and 2001, more than 2.5 million ethnic Germans from the former USSR, Romania, and Poland arrived in Germany (Bauer et al. 2003). In addition, some CEE countries became a major source for temporary labor in the EU. Again, Germany acts as the main receiving country for this type of workers. Especially Polish and Czech workers migrated as contract workers or seasonal workers over the eastern borders of Germany (Bauer et al. 2003).

The political changes after the fall of the iron curtain further initiated large scale migration flows within the CEE countries, with migration occurring mainly between neighboring countries (Romanians to Hungary, Czechs to Slovakia, Ukrainians to Poland or Bulgaria). Finally, the war in the former Yugoslavia resulted in a huge number of refugees in the EU.

#### *Flows of labor migrants in the region*

Apart from migration for humanitarian reasons, such as political asylum or family reunification, the countries of Europe and North America have been perceiving migration recently as an answer to medium-term labor supply shortages and an overall aging of the population. Indeed, many countries have recently focused on expanding immigration to fulfill labor market requirements of specific industries or labor market segments, such as Germany with its intensely debated “Green Card” program. Here we examine the various motives for and recent experiences with migration in Europe and North America.



Table 1

**Cumulative Net Migration Flows in Europe**

1960–2000; in 1000

Country	1960–1990	1990–2000
Austria	308	294
Belgium	247	153
Denmark	97	129
Finland	-140	64
France	3,270	585
Germany	4,857	3,638
Greece	27	442
Iceland	-9	-1
Ireland	-285	91
Italy	-904	1,177
Luxemburg	58	42
Netherlands	644	360
Norway	98	88
Portugal	-1,197	35
Spain	-286	358
Sweden	476	194
Switzerland	569	235
United Kingdom	114	827

Source: IOM 2003: 240.

Table 1 illustrates the cumulative net immigration flows for selected Western European countries before and after 1990. It is apparent from this table that overall immigration into these countries has increased in the 1990s. Apart from Iceland, all countries in Europe experienced a positive net inflow of migrants between 1990 and 2000. Traditional emigration countries, such as Finland, Ireland, Italy, Portugal and Spain became important receiving countries in the 1990s. Italy, for example, entirely reversed its experience as a country of emigration, with approximately 900,000 people emigrating to other countries between 1960 and 1990, to a receiving country, compensating its population loss due to emigration within a single decade (between 1990 and 2000 Italy experienced net immigration of 1.2 million people). A similar development could be observed for Ireland. Whereas this country experienced a net outflow of almost 300,000 people between 1960 and 1990, it faced net-immigration of nearly 100,000 individuals between 1990 and 2000.

With the exception of France, all countries in Europe show an acceleration of their immigration rates in the 1990s in comparison to the previous three decades. In Denmark, net immigration increased from an average of 3,000 individuals per year in the period from 1960 to 1990 to an average of almost 10,000 in the 1990s. In the United Kingdom, the average annual net immigration in-

Table 2

**Inflows of Permanent Residents**

1991–2000

Country	1991–1995	1995–2000	Composition of Admissions 2000	
			Family	Employment
share in %				
Australia	462,600	438,600	32	42
Canada	1,176,200	1,033,300	27	59
United States	5,230,400	3,865,200	71	13

Source: OECD 2003: 299, 301, 310; last two columns: IOM 2003: 156.

creased by more than 21 times. Finally, in Germany, the most important receiving country in Europe, the average annual immigration increased from about 160,000 in the period from 1960–1990 to slightly more than 360,000 in the 1990s.

Table 2 reports the inflows of permanent residents of the traditional immigration countries Australia, Canada and the US over the 1990s<sup>4</sup>. Comparing these levels to that of a large European immigration country such as Germany (3.6 million people), one sees the relatively small absorption of migrants in the United States (9 million individuals) in terms of population size. The last two columns of Table 2 show the composition of total immigrant admissions for the year 2000, broken down by migrants immigrating through family reunification programs and employment-based immigrants. The excluded category is the group of all other immigrants (humanitarian entries, refugees, privately-assisted and government-assisted migrants and asylum seekers).

Table 2 clearly indicates the main difference in the immigration policy between the US on the one hand, and Canada and Australia on the other. Whereas the latter predominantly rely on the immigration of workers which are selected through the respective point system, US policy focuses to a large extent on the reunification of families. Note, however, that the numbers for the US do not include illegal migrants, which also immigrate predominantly in order to work in the US. Hence, considering also illegal migrants, the above picture might change somewhat.

Obtaining similar data for European countries is very difficult. Table 3 displays the inflows of migrants for selected European countries from 1997 to 2000 and – where available – by composition or reason for inflow. In France, family related immigration dominates immigration for employment reasons by a factor of 3 to 1. The numbers for Germany indicate that immigration for employment reasons dominate, too. Note, however, that the number of work

<sup>4</sup> These figures do not include temporary migrants, as this information was not available for all countries over this time period.

Table 3

**Composition of Inflows of Migrants**

1997–2000

Flows/Stocks in 1 000	1997	1998	1999	2000
France				
Total Inflow	80.9	116.9	86.3	95.2
For Family Reasons	31.1	38.3	38.0	38.5
For Employment	11.0	10.3	10.9	11.3
Germany				
Total Inflow	615.3	605.5	673.9	648.8
New Work Permits	451.0	402.6	433.7	473.0
Ethnic Germans	134.4	103.1	104.9	95.6
Italy				
New Work Permits	166.5	182.0	219.0	145.3
Residence Permit:				
Stock, for Employment	782.3	588.7	747.6	850.7
Stock, for Family	243.4	251.9	308.2	354.9
Stock, total	1240.7	1250.2	1252.0	1388.2
United Kingdom				
Total Inflow, non EU	172.7	212.6	266.2	314.0
Acceptance for Settlement:				
Own Right	7.6	10.3	31.7	39.9
Family	46.2	53.0	65.2	84.9

Source: OECD 2003: 174, 180, 201, 223, 273.

permits issued for the first time may be a misleading indicator for the structure of immigration, since some groups such as family migrants need to have a residence permit for some time before being eligible to obtain a working permit.<sup>5</sup> Noteworthy in the case of Germany is the substantial inflow of ethnic migrants from the former USSR, dwarfing the volume of immigration experienced by France.

For Italy information on inflows is not available. The stock of residence permits issued in Italy for employment reasons more than doubles those issued for family reasons. In contrast to these countries, the numbers of immigrants accepted in the United Kingdom for settlement based on family reasons outweigh those accepted for employment considerations dramatically.

Due to the political changes starting in 1989, the accompanied ethnic conflicts and an uneven economic development, migration in the countries of CEE and the Commonwealth of Independent States (CIS) changed dramatically in the 1990s. Even though migration in this region took place also in the pre-1990s (e.g. Zaionchkovskaya 1996), these migration flows were largely controlled by

<sup>5</sup> See Bauer et al. (2004) for a detailed description of the current German regulations for immigration.

the respective states and consisted to a large extent of military personnel and ethnic migration both within the region as well as towards West European countries. The latter consisted mainly of ethnic Germans from Poland, Rumania, and the former Soviet Union to Germany, and Russian Jews migrating either to Israel or the US.

In the 1990s, the CIS and countries of CEE witnessed major population movements (IOM 2002a). Especially in the early 1990s, the CIS region experienced increased interstate migration flows towards Belarus, Ukraine and Russia. Most migration to Russia in the 1990's was ethnic and political, linked to the collapse of the Soviet Empire, de-colonization and the emergence of independent states in Central Asia. The main sources of these flows could be seen in the migration of Russians from the previous republics of the USSR to Russia (in particular from the states of Central Asia, especially from Kazakhstan), a large number of displaced persons and refugees in the Caucasus and Russia, and an increased interstate temporary migration flow of workers (Subhan 1998; Zaionchkovskaya 1996, 2000). Mainly due to stricter border controls, these migration flows have generally dropped since. Current migration trends indicate that Russia remains the most important receiving region of migrants in the CIS, followed by the Ukraine, Kazakhstan, and Belarus. Repatriates are the most important group of migrants in Russia, Ukraine, and Belarus. Kazakhstan does not only face large emigration rates (especially towards Russia) but also accommodates the largest number of migrants from Central Asia.

Due to inter-ethnic conflicts and a poor economic development, the three countries of the South Caucasus (Armenia, Azerbaijan, and Georgia) still face large emigration rates, both towards other former republics of the Soviet Union as well as Western Europe and North America. In addition, these countries became major transit countries for asylum seekers and refugees from Afghanistan, Chechnya, and Iraq (IOM 2003). Rather surprisingly, emigration towards countries outside the CIS is rather low. It reached its peak in the early 1990s and has entered a decreasing trend since. Together with asylum seekers from the Caucasus countries, and asylum seekers and refugees as well as economic migrants from the Middle East and Asia, these migrants use this area as a transit region on their way to Western Europe or North America. Important shares of the emigrants are ethnic migrants heading predominantly to Germany and Israel. Finally, a major problem of this region is the growing trafficking of human beings towards Western European countries, especially of women who are often forced into prostitution (see, for example, the reports by Galiana 2000; IOM 2002b).

Many CEE countries experienced major changes with regard to migration in the last few years. In the early 1990s, most of these countries have been major source countries for migrants moving to West Europe and North America.

This flow consisted to a large extent of ethnic migration, such as the movement of ethnic migrants from Poland and Romania to Germany, ethnic Fins from the Baltic States and former USSR to Finland, and ethnic Turks from Bulgaria to Turkey. In addition, the political changes in the early 1990s created substantial migration flows between neighboring countries such as between Romania and Hungary, the Czech Republic and Slovakia, and between Ukrainian and Poland and Bulgaria. Furthermore, large numbers flows of temporary workers moved from the CEE countries to Western Europe, especially from Poland to Germany (Bauer, Zimmermann 1999). Finally, the civil war in the former Yugoslavia resulted in large flows of asylum seekers and refugees heading towards the EU as well as involved movements among the former Yugoslav republics. Some of those who were accommodated as temporarily protected persons in some Western European countries were later repatriated.

With the start of the negotiations with respect to the potential EU-membership of ten CEE countries (Bulgaria, Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia) and the associated adaptation of EU “acquis” in the fields of asylum and immigration, some of these countries transformed into transit and immigration countries. CEE countries which displayed a relatively fast economic development, such as the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia now experience positive net migration rates, whereas countries that stayed behind in their economic development, such as Bulgaria and Romania, have remained emigration countries (Subhan 1998). The immigrants comprise both economic migrants and asylum seekers and refugees from the CIS countries, the Middle East, and Asia, as well as migrants who use these countries as a transit region. Some of them become stranded in these countries. Their number tends to increase because of increasing difficulties of reaching their final destination region erected by tighter admission regulations.

Similar to the CIS region, the CEE countries face increasing problems of irregular migration and trafficking of human beings. This is partly due to external factors, especially Western European migration policies. The Schengen rules for the enforcement of external borders to curb illegal migration, for example, inadvertently promote trafficking. Similarly, the development of asylum systems in the CEE countries together with the “safe third country rule” adopted in the EU-member countries shifted part of the asylum flow directed at Western European countries back to the associated CEE countries.<sup>6</sup>

Another trend in worldwide migration is the increasing importance of high-skilled migration. Due to the lack of data on migration by skill groups and to the changing nature of migration (permanent vs. temporary migration), the

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<sup>6</sup> A more detailed discussion of issues related to the “acquis” of EU-rules on asylum and immigration will be given below.

movement of individuals across borders, skilled as well as unskilled, is not a well-documented phenomenon. The seminal paper on recent high-skilled migration is Carrington/Detragniache (1998). Based on US census and OECD data on stocks of foreign-born for 1990 they demonstrate that high-skilled migration dominates recent international migration flows, and that high-skilled emigration is a considerably more important issue for small origin countries. Rothgang/Schmidt (2003) augment the data used by Carrington/Detragniache (1998) with additional variables focusing on high-skilled migration rates. They tend to confirm the results of Carrington/Detragniache (1998) by concluding that smaller countries but not necessarily the low income economies tend to become deprived more and more of some of their best talents.

Moreover, there are active recruitment policies for high-skilled workers in operation in major advanced economies such as the US, the UK, and Germany. These policies will be described in more detail below. In addition, across the major advanced economies, there seems to be an increasing tendency to attract and, later on, retain students from less developed countries. Rothgang/Schmidt (2003) further show for several industrialized countries that foreign employment in the university sector and IT has caught up and often even outruns health care which has been the traditional sector of high-skilled migration. The importance of foreigners for high-skilled employment in these sectors differs substantially between the countries included in their study, with variations from 2.2 percent of foreign high-skilled professionals in the health care sector in France up to 19.5 percent for foreign university and college teachers in the US. In the UK, the share of high-skilled workers is particularly high in the health and the university sector. These numbers are smaller in the bigger European countries Germany and France. In absolute numbers, the IT sector represents by far the most important of these sectors.

#### *Regional demand for labor based on demographic processes*

In many countries of the region, persistently low fertility rates, an increasing life-expectancy and the associated aging of the population give rise to fears about pressures on public budgets, and the viability of pay-as-you-go social insurance systems. Existing population projections indeed suggest that countries such as Germany, Italy, Spain, and Poland will experience a substantial decrease in their working age populations in the next 50 years. Germany, for example, is expected to have an 11% smaller working age population by 2025, decreasing by a further 28% by 2050. Even more noticeable is the decrease expected to be experienced by Italy and Spain: 15% by 2025 and 42% by 2050. Such a dramatic decline of the working age population may have severe macro-economic consequences if the future work force is unable to meet the quantitative and qualitative need for workers to sustain satisfactory economic expansion. The associated growing number of retirees depending on benefits

Table 4

**Projected Population Decline and Labor Force Participation Rates**

Projected Population Decline 2000–2025	Labor Force Participation Rate, 2000 of Ages 15–64		
	> 75%	66–75%	< 66%
> 10	Switzerland	Austria, Finland, Germany, Czech Republic	Italy, Spain, Hungary
5–10	Denmark, Sweden	Portugal	Belgium, Greece, Poland
< 5	United Kingdom	France, Netherlands, Ireland, Slovak Republic	n/a

Source: IOM 2003: 246.

and pensions may further put the social security systems in these countries at risk.

It should be noted, however, that not all European countries face the same gloomy prospects. Countries such as the UK, France and the Netherlands are expected to experience only a moderate decline of their working age population, if any. The aging process is also less severe in the traditional immigration countries in North America and Australia, partly because of the active role of immigration for the development of these countries and the explicit policy goal to increase the population through immigration. Only a few countries, such as Albania and Ireland, which are characterized by relatively high fertility rates, are expected to experience an increase in the working age population (IOM 2003), though.

Table 4 emphasizes the dilemma faced by many countries such as Italy and Spain. Should these countries' participation rates remain low (typically women in most of these countries have remained largely out of the labor market) and the active population financing the social security system continues to shrink, a crisis of their system of social security seems unavoidable. One possible remedy would be the implementation of structural changes of the current social and pension system in these countries. Other proposed solutions are to actively increase female participation rates by improving access to day-care facilities and the compatibility of family and work, and to increase effective retirement ages. This could be achieved by discouraging early retirement and even increasing the mandatory retirement age.

Increased immigration is often considered to be another potential solution to the aging problem (see below). However, the effectiveness of such a migration policy may be limited for several reasons. The OECD (2003: 106–107) argues, for example, that migrants from nearby economies may not find it attractive to migrate to a receiving country. Thus, future migrants will predominantly be people from quite different cultures. The migration of Turkish “Guest Workers” to Germany in the 1960’s is an illustrative historical precedent.

It may also be postulated that foreigners integrate more successfully in countries that are naturally expanding demographically. IOM (2003: 245) cautions that even while there might be an appropriate match to a labor market vacancy in the short run, it remains unclear, whether these new migrants will be able to adapt to changing economic and social situations. The relatively high unemployment rates of foreigners in Germany may act as a good example for this objection. Still many of them are part of the guestworker system of the 1960s and early 1990s which aimed at recruiting unskilled workers from Southern European countries. Yet, after the initial phase of recruitment demand for unskilled labor was continuously reduced by technological progress. Typically native workers had a better chance to switch to more promising sectors of employment, while the guestworkers remained in declining sectors.

Even abstracting from problems of immigration, it is not clear by how much the age composition of the influx can be influenced effectively. After all, as long as family reunification is not precluded, even a migrant fulfilling all demographic requirements (as in the Canadian point system, where age accounts for 10% of all awarded points and language 24%; Immigration Canada 2003) may eventually apply to bring his parents or grand-parents, thus negating or at least reducing the intended demographic impact.

Finally, estimates of the fiscal contribution of immigrants suggest that increased immigration can contribute to a solution to the aging problem, but is by itself no sufficient remedy for it. Bonin et al. (2000) and Bonin (2001), for example, use the generational accounting method developed by Auerbach et al. (1991, 1992) to analyze the effects of immigration on the long-term sustainability of public sector finances in Germany. Their results suggest that because of the immigrants' favorable age composition the fiscal gain from admitting labor migration is potentially large. Moreover, the descendants of these immigrants share in the additional tax burden required to meet the intertemporal public budget constraint.

This positive fiscal contribution of immigrants could potentially be increased through a selective migration policy that screens potential immigrants by their skill level and promotes the labor market integration of migrants. Nevertheless, despite the significant positive net contribution of immigrants to the public sector, even very high levels of immigration are insufficient to eliminate the fiscal burden that is associated with demographic aging. Auerbach/Oreopoulos (1999) provide a similar analysis for the US. Different to Germany, however, their results suggest that the fiscal contribution of immigrants could be extremely small, reflecting the much less dramatic aging process of the population and the already large share of foreign-born residents in the United States.



*Policy responses to the demand for labor*

Those countries in the region that face an aging population have become increasingly aware of the economic problems resulting from this process, leading to a debate whether immigration could provide an alleviation of these problems. The introduction of several recent initiatives to attract immigrants have partly been justified with the upcoming demographic problems. Most of these programs have been initiated because of an apparent shortage of high-skilled workers resulting mostly from an increased demand for high-skilled labor. This shift in relative demand arises because of the boom of the new economy, accelerating technological process, and a re-organization of the working environment in many firms.

Therefore, almost all migrant-receiving countries differentiate strongly between the immigration of high- and low-skilled labor, with typically only high-skilled workers being eligible for permanent work/residence permits, whereas the legal immigration opportunities for low-skilled workers are tightened more and more. OECD (2002) and IOM (2003) outline several of the Western European initiatives focusing on a selective policy based on higher skills in the information technology and health industries. This skill-based entry system in fact is currently the main mode in which non-EU citizens can come to live and work in the EU, whereby the employer is granted a permit for a foreign worker if it can be shown that no appropriate native worker can be found. The conditions under which the foreign workers are employed must be identical to those of native workers with respect to payment and general working conditions.

In the UK, there was some reduction in the skills requirements for highly educated workers, such as little after-graduation labor market experience being required, to enable employers to gain access to a wider range of work permits. Currently, work permits can be applied for electronically, thereby reducing transactions costs. Furthermore, if a foreign worker were to change employers in the same field, the worker would not be required to apply for a new work permit. In Germany, the “Green Card” scheme was established in August 2000 to induce highly trained computer related workers to come to Germany for a limited 5 year period. Those that did arrive on this entry scheme were mainly from India, Russia, the Ukraine and central Europe (see Bauer, Kunze (2003) for a detailed description). Similar to the UK and Germany, France established a system in January 2002 to induce highly skilled workers from outside the EU to live and work in France. The French Labor Ministry handled the approval procedure and, if successful for the foreign applicant, the employer’s application was approved by the Labor Ministry and Ministry of the Interior promptly. Finally, the US increased the annual number of H1B-visas (temporary visas for high skilled workers) several times.

The introduction of a “Green Card” for IT-specialists in Germany started a heated debate on immigration policy. This debate resulted in the establishment of an immigration commission requested to produce a report with recommendations for a more coherent and comprehensive German immigration law. The commission published its final report in July 2001. It proposed that Germany should officially acknowledge itself as an immigration country. One of the main arguments of the commission for the need of increased immigration to Germany were the ensuing demographic problems.<sup>7</sup> The major practical recommendations of the commission were to introduce a coherent flexible migration policy that allows both the immigration of temporary and permanent labor migrants by applying a point-system similar to the one used in Australia and Canada, and to introduce measures to foster the integration of immigrants.

It also called for measures to speed up the German asylum procedure while recognizing Germany’s obligations arising from the Geneva Refugee Convention and the European Human Rights Convention, and to implement measures to combat illegal immigration. The report by the commission formed the basis for initiating a new German immigration law. Its actual implementation has become a lengthy process, though, laden with compromise. Its proponents have been confronted by growing security concerns emerging in the aftermath of September 11, 2001.

Apart from the fact that all these initiatives are driven mainly by economic considerations, the boom of the new economy, and the perception of an increased global competition for high-skilled labor, the main policies differ across countries. Whereas the European countries and the US focus mainly on the temporary inflow of high-skilled workers, Australia, Canada, and New Zealand increased their quotas for migrants selected according to the respective point systems.

Implementing these measures, the countries are in line with parts of the recommendations of international institutions, such as, for example, the recommendations of the European Population conference (United Nations 1994). These new opportunities are used by many Asian migrants as well as by individuals originating from the CEE and CIS, creating not only potential problems of a brain drain in these regions. Together with an increasing standard of living, the emigration of mainly young workers from these countries may also contribute to an increasing aging process in these countries.

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<sup>7</sup> Recently, for example, the Süßmuth Commission (2001) on Migration, installed by the German government in 2000 in order to propose a potential coherent immigration law for Germany, stated: “*We need immigration to Germany because the population here is getting older: life expectancy is increasing while the number of children born per family remains low and the number of births is decreasing*”. See [www.bmi.bund.de/Annex/en\\_14625/Download.pdf](http://www.bmi.bund.de/Annex/en_14625/Download.pdf) for a full English version of this report.

Even though the aging process in many countries of the region indicates also an increasing need for unskilled labor, especially with regard to personal services such as the health care sector, the general policy direction still goes towards the prevention of the immigration of this type of workers. This trend is leaving unskilled migrants only the possibility of irregular immigration or the (mis)use of the existing asylum systems. In addition, increased efforts to tighten border controls and increased restrictions of the asylum policies makes trafficking of human beings more profitable.

Italy could serve as an example for the increased difficulties for low-skilled workers to move to and work in Western European countries. Italy approved tougher laws dealing with migrants in June 2002 (OECD 2003: 203). Non-EU foreigners are fingerprinted and should a foreigner become unemployed, his residence permit would expire, requiring him or her to leave within 6 months (reduced from 1 year). The Italian employer would be required to provide the unemployed migrant worker with housing and pay for the costs of expelling the worker, clearly disfavoring the recruitment of low-skilled foreigners. In addition, foreigners leaving Italy are no longer able to reclaim pension contributions made under the social security administration.

Note that both illegal immigration and trafficking very often imply severe violation of human rights. International organizations, such as the UNHCR and *Human Rights Watch*, often point to the fact that the asylum policy of the EU and the CEE countries that want to join the EU, but also of the traditional immigration countries falls short of the standards embodied in the U.N. Convention of the Status of Refugees and UNHCR's interpretation of the convention. They also criticize that many immigration policy initiatives of the EU focus almost exclusively on combating illegal immigration in the forms of smuggling and trafficking but fails to recognize the victim protection rights of persons who are trafficked into the union.<sup>8</sup>

#### **4. The Performance of Migrants and the Economic Impact of Migration**

Any reliable assessment of the economic impact of migration necessitates an understanding of how immigrants contribute to the economic process at their destination. It is certainly different whether immigrants are among the top performers in the economy or whether they constitute a persistent economic underclass. This section will provide a brief survey of the existing economic literature on the economic performance of immigrants. A more detailed description of the literature is provided by Borjas (1999) and Bauer/Zimmermann

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<sup>8</sup> See, for example, the statement of Elizabeth Andersen "Fix it First: A Human Rights Agenda for Extending E.U. Asylum and Migration Policy" on the occasion of the CEPS/ERA/Sitra/Transcrime Conference *Extending the Area of Freedom, Justice and Security through Enlargement: Challenges for the European Union* ([www.hrw.org/press/2002/08/euasylum0820.htm](http://www.hrw.org/press/2002/08/euasylum0820.htm)).

(2002). We then proceed to discuss the central aspects of the economic impact of migration, on the sending and the receiving region, and concerning different outcome variables. Unavoidably, performance and impact are to be discussed as two facets of the same phenomenon, as successful migrants generally tend to foster economic prosperity among the indigenous population.

#### 4.1 Economic Performance of Migrants

The process of economic assimilation of migrants in their destination country has been of central concern to much of economic migration research (Bauer, Zimmermann 2002). The focus of this literature has been on a single aspect of this process, the relative wage dynamics of migrant workers throughout their labor market career. Much less attention has been placed on other indicators of the economic and social assimilation, such as the welfare dependence of migrants or their accumulation of savings. Irrespective of the particular outcome considered, it has been demonstrated in numerous studies that skills play a dominant role for immigrant performance, whether acquired in formal curriculae as secondary or post-secondary schooling and vocational training, or informally as experience in the labor market, or as the manifestation of intrinsic personal traits such as cognitive ability or motivation.

##### *The labor market assimilation of immigrants*

Following the seminal study by Chiswick (1978), the economic literature usually discusses the labor market assimilation of immigrants within a human capital framework. In general, migrants acquire productive capacity in their origin country, but only part of this human capital can be transferred to the labor market at the destination. Therefore, migrants arriving at their new home possess a lower earnings capacity than comparable natives. With time of residence, they tend to acquire the lacking human capital, such as the language spoken at the destination – their low initial earnings capacity implies that the opportunity cost of their investment are relatively low, making substantial human capital investments likely. As the human capital of the migrants increases, their earnings adjust towards those of comparable natives.

Most empirical analyses of the economic assimilation of immigrants are based on US data (see Borjas 1999 for a survey). Overall, the results of these studies are mixed; the majority tends, however, towards the conclusion that immigrants assimilate to comparable natives. Most empirical evidence on the assimilation of migrants in Europe use German data.<sup>9</sup> For guest workers, the existing studies suggest an initial earnings gap to natives and no, or only very slow assimilation of the earnings of guest workers to those of similar natives. The empirical evidence on the labor market performance of ethnic German

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<sup>9</sup> See, among others, Dustmann (1993) and Schmidt (1997). A survey is provided by Bauer et al. (2000).

immigrants suggests that there is neither an initial earnings gap nor any assimilation pattern. Studies for the UK tend to conclude that there is no earnings disadvantage of white immigrants and that non-white foreign-born earn substantially less than white natives. With regard to the earnings assimilation with time of residence the results are not conclusive.<sup>10</sup>

Winter-Ebmer (1994) finds that guest workers in Austria display an earnings disadvantage and a flatter experience-wage profile than natives. Immigrants who arrived in Sweden during the labor recruitment period appear to have performed quite well in the Swedish labor market (see, e.g. Ekberg 1994). Recent immigrants to Sweden, however, appear not to assimilate to the earnings of otherwise comparable natives (Edin et al. 2000). Assimilation studies for other European countries are rather rare, which could either be explained by the lack of appropriate data or the lack of experience with substantial immigration.

Four main lessons can be learned from existing assimilation studies (Bauer et al. 2000). First, the skill endowment of migrants and investments into the specific human capital of the receiving country, such as language abilities are important factors for a fast assimilation into the labor market of the receiving region. Second, country-of-origin differences and admission criteria have a strong influence on the labor market performance of immigrants. Third, nearly all countries recently experienced a decline in the so-called “quality” of immigrants, as measured by the upon arrival immigrant-native wage gap. This holds true for countries with a focus on family reunification, as well as countries with a selective immigration policy. In almost all cases the decrease in the “quality” of the migrants is related to a change in the country-of-origin-mix of the immigrants. The evidence indicates that especially migrants from different cultural background and from different schooling systems, compared to the culture and schooling system of the receiving country, are responsible for the quality decrease. Examples are Mexicans and Asians in the US, Asians in Canada and New Zealand and refugees in Europe. Fourth, even though all countries face a decrease in the “quality” of immigrants, an assimilation of immigrants labor earnings up to the level of wages of native workers can only be observed in those countries that are selecting their migrants according to labor market characteristics such as in Canada and New Zealand.

The empirical controversies remaining are mainly of technical nature. Most existing econometric analyses on the relative labor market performance of migrants rest their interpretation on a crucial identification assumption, namely that wages perfectly reflect productive capacities. Wage differences can only be used as a perfect measure of disparities in economic productivity, though, if the labor market functions without any trace of discrimination and any legal

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<sup>10</sup> See Hatton/Wheatley Price (1999) for a survey of the literature on migration in the UK.

barriers to wage parity. On the other hand, following some recent analyses in interpreting any unexplained wage differential as a reflection of discrimination would require an equally strong and hardly more plausible implicit identification assumption – the absence of migrant-native differences in productive capacity once formal characteristics are controlled for. However, both interpretations rest on empirically untestable identification assumptions, i.e. they rest on assumptions maintained to hold true to allow the interpretation of reduced-form wage dynamics in terms of structural ideas (assimilation or discrimination). Therefore, the decisive problem is: what is the valid identification assumption? This question cannot be answered unequivocally and must remain a matter of economic reasoning alone.

Similar considerations pertain to the role of cohort effects, or the observed decrease in immigrant quality. It has been argued adamantly by Borjas (1987, 1991) and discussed intensely by subsequent analysts (see, e.g. LaLonde, Topel 1991) that the inherent productive capacity of immigrant cohorts to the US varies drastically over time. Specifically, the extent of this variation and its link to changes in the legal setting are at issue. Again, a fundamental identification problem arises, since the impact of economic assimilation, the affiliation with varying cohorts, and the effect of a changing wage distribution cannot be identified separately without further identification assumptions. Based on the literature we can only conclude that the country-of-origin composition of recent migrants has become more diverse, a pattern which is associated with a strong decline in relative education levels of migrants compared to natives in some destinations. The evidence on the distribution of unobserved traits is inconclusive, though, and this issue promises to remain controversial in years to come.

#### *The welfare dependence of immigrants*

One of the most contentious issues in the context of immigration and immigration policy regards the welfare state. Indeed, Borjas (1999) places the debate on immigration welfare dependence on equal footing with the “classical” topics of immigrants’ labor market performance and their labor market impact. The concern over this problem in principle reflects legitimate reservations about the fiscal and political viability of a welfare state potentially acting as a magnet to migrants, yet being underwritten by a native electorate.

Neither the empirical results regarding the trends in immigrant welfare nor the institutional arrangements shaping the environment for immigrants’ welfare use are easily translated from the US (Blau 1984; Borjas, Trejo 1991, 1993; Borjas, Hilton 1996), Canada (Baker, Benjamin 1995) or the UK (Blundell et al. 1988) to the context of other countries in the region. Most of all, the historical developments governing size and composition of immigrant influx to the countries were quite distinct.

An interesting piece of evidence for the case of the US is provided by the study of Levine/Zimmermann (1999). They utilize the quasi-laboratory nature provided by the idiosyncratically acting US states to approximate as closely as possible an appropriately designed experiment. In sum, they find little evidence for the welfare magnet hypothesis. Unfortunately, despite its importance for the assessment of the impact of immigration, the empirical literature for Europe is rather scarce, with Blundell et al. (1988) for the UK, and Riphahn (1998) and Fertig/Schmidt (2001) for Germany being three out of a small list of exceptions. In particular, the latter study suggests that, while the population of non-citizens in Germany indeed displays relatively large welfare dependence, this relative pattern is turned on its head when one compares genuinely comparable individuals.

That is, the apparently high welfare dependence of migrants is a reflection of the guest-worker recruitment policy of the late 1960s and early 1970s – which was mainly seeking to attract unskilled workers and their families. Thus today's high welfare dependence is not a reflection of low intrinsic qualities among migrants, but rather of the continuing importance of formal skills on the German labor market. If this pattern holds true for all future immigration, the message for immigration policy is clear and unmistakable: pursuing a deliberate and systematic immigration policy which balances human rights and the country's human capital requirements is the best option to assure that future immigrants will not become clients of the welfare system in any disproportionate fashion.

#### *The descendants of immigrants*

The European migration experience of the 1960s and 1970s has been dominated by labor migration from Europe's South to Western and Northern Europe. Since then, the ethnic composition of immigration to Europe has changed dramatically over time. Europe as a whole has become a net receiving region, and the geographic, economic, and cultural distances to the immigrants' countries of origin have increased significantly. As a consequence of the continuous influx from these different sources, many European societies today contain large immigrant populations. Moreover the children of immigrants are a sizeable fraction of the younger European population. A casual glance at the low economic status of second-generation foreigners might suggest that we currently observe a process of transition from immigrant communities to persistent ethnic minorities.

Yet, despite its relevance for all European countries almost no research has targeted the question of their integration into the society, neither in comparison to the integration of their fathers' generation nor to natives of the same age, nor are the potential consequences of different policies regarding their integration fully understood. One exception is a recent symposium published in

the *Journal of Population Economics*, which addresses the interplay between immigrant economic attainment across generations and the economic and regulatory environment (Card, Schmidt 2003). From an empirical and a theoretical perspective the symposium covers two connected themes, (i) the skill acquisition, entrance into the labor market, and subsequent labor market success of second generation foreigners, and (ii) return migration and integration policy.

As outlined already above, the question of wages and standards of living dominates the existing economic literature on migrants. The general understanding is that the 1960s and 1970s saw a fairly good economic integration of immigrants into the receiving economies. In Europe, this process of assimilation has been weakened during the post-1970 period. The unsatisfactory performance of the descendants of immigrants accounts for a substantial part of this deterioration. In contrast to the European countries, the good performance of second-generation immigrants in the US labor market can mostly be traced to their disproportionately high educational endowments. These differences suggest that investment into human capital and their subsequent transition from school to work differ between the children of immigrants and comparable natives or first-generation immigrants.

The available papers overwhelmingly identify parental education as an important factor for the educational attainment and, consequently, the economic performance of second-generation foreigners. This result should be the basis for any educated immigration policy. A receiving country which manages to attract immigrants with a high education profile will tend to experience well integrated and economically successful generations of these immigrants' children. In addition, several papers have demonstrated that there is also an important feedback from the second to the first generation. In their location decision, potential migrants are concerned of their children's future opportunities. Thus, if immigration policy attempts to generate a favorable composition of the influx of first-generation immigrants, it should offer sufficient integration opportunities for the migrants' children.

#### **4.2 Impact of Migration**

The third area of migration research is concerned with the impact of migration on both the economy and population of the receiving region and the economy and population of the sending region. As discussed in section 2, there is also a third group of countries that experience transit migration. To the extent that transit migrants enter the labor market of the transit regions in order to obtain the financial resources to move, all the considerations of the impact of migration on the receiving country in principle also applies to these transit countries. Therefore, we will only differentiate between sending and receiving regions



for the rest of this section. In addition, following the economic literature on the impact of migration we also do not explicitly differentiate between economic and non-economic migrants. Finally, to our knowledge there exist no studies on the economic impact of migration for the CEE countries of the region. Therefore, concerning the economic impact on the receiving country this section concentrates only on North America and the EU. However, the discussion on the economic effects of migration on the sending region in principle also applies to the sending regions among the CEE countries.

We start with a brief survey of the existing literature on the economic impact of migration on the receiving region taking a microeconomic and macroeconomic perspective. Then we discuss the so-called brain drain discussion pertaining to the consequences of international migration for the sending countries. Note that we have already covered some other important issues on the effects of migrants on natives by discussing the effects on migrants on the welfare system in section 4.1 and the fiscal contribution of immigrants in section 2.

#### *The economic impact on the receiving region*

The empirical assessment of relative individual economic performance appears to be straightforward as a conceptual issue. It is a matter of direct comparison of an appropriate outcome measure, i.e. wages or employment success, between the individuals of interest – migrants – and a comparison group – natives. By contrast, the economic impact of immigration unfolds in an indirect fashion via market reactions, and is therefore much more complex as an object of investigation. Friedberg/Hunt (1995), and Bauer/Zimmermann (2002) offer surveys of the theoretical and empirical literature on the economic impacts of migration.

Conceptually, additional immigration shifts the relevant labor supply curve outward – with the first problem for any empirical strategy arising as the question what exactly is “relevant”, the local labor market, the skill group etc.? The consequences, in terms of employment and wages for this relevant group, as well as for all other groups of labor (with unskilled native workers being the most prominent case in the public debate) are first of all a matter of their own elasticities of demand and supply and of the set of elasticities of complementarity with all other production factors. Equilibrating migration that reacts to imbalances of supply and demand of specific skills is likely to be beneficial on two accounts. Firstly, since it reacts to skill shortages, it is unlikely to crowd out comparable native labor. And secondly, skilled workers often tend to be complementary production factors to unskilled native workers, lifting their labor market prospects as well.

The additional labor supply is, however, only part of the story, since product demand, and thus labor demand (on all other sub-markets) tend to be affected positively. On balance, it might not be the case at all that immigration harms

any group of native workers, even if migrants are close substitutes to native workers. In fact, the matter is entirely empirical. Nevertheless, even at the theoretical level many facets relevant for the real world might complicate the analysis, for instance the necessity to account for an increasing variety of products via immigration, or the consequences of institutionalized wage rigidities (Schmidt et al. 1994).

The main empirical problem confronted by this line of research is to isolate immigration-induced shifts in labor supply which can be treated as if they were set in an ideal experiment, in other words as exogenous. Several strategies can be found in the literature regarding the definition of the appropriate sub-market. All these analyses face the common problem of non-experimental research: the extent of additional immigration does not vary randomly across time and space, as in a laboratory experiment, but is rather the outcome of systematic forces. Specifically, more attractive destinations will typically generate a larger influx of immigrants. Comparing the relevant economic outcome measures, native employment rates say, across regions will typically confuse the impact of immigration with the underlying reason making the area particularly attractive.

Two main approaches have been used to estimate the impact of immigration on the labor market outcomes of natives. Several studies estimate a production function to calculate the elasticity of substitution between immigrants and natives. Most existing studies, however, look at the labor market effects of immigration on natives by estimating a reduced-form wage or unemployment equation, where the share of immigrants in a region or an industry is the main explanatory variable of interest. To circumvent the potential endogeneity problem mentioned above, most authors rely on instrumental variable estimations. Another approach to avoid biases in the analysis of the wage and employment effects of immigration is to analyze *natural experiments* in immigration, where the timing and the location of immigration is not economically motivated. These natural experiments provide interesting evidence on the labor market effects of immigration, because they utilize events that resulted in exogenous migration flows to approximate as close as possible an appropriately designed experiment. Examples of such studies are Card (1990) who investigates the migration of Cubans to Miami around the May 1980 Mariel boatlift, Hunt (1992) who looks at the repatriation of Algerians to France resulting from the Algerian independence in 1962, and Carrington/de Lima (1996) who investigate the return of colonialists from Africa to Portugal after the revolution in 1974. All of these studies suggest only a negligible impact of immigration on natives.

Existing empirical evidence on the economic impact of immigration suggests that the derivation of robust qualitative results is a difficult, if not hopeless

task, given the nature of the data material, and the inherent heterogeneity of the phenomenon. As a tentative summary, it seems apparent that any displacement effects of additional migration are small in magnitude, with zero being a plausible point estimate. Reviewing the North American literature on this issue, Friedberg/Hunt (1995, p. 42) conclude: "Economic theory is equivocal, and empirical estimates in a variety of settings and using a variety of approaches have shown that the effect of immigration on the labor market outcomes of natives is small. There is no evidence of economically significant reductions in native employment." Reviewing the European literature, Bauer/Zimmermann (2002) come to a similar conclusion. So far it has not been possible to quantify any of the presumably positive demand side effects working via goods markets, let alone indirect (positive) effects of increasing variety of products and services, or (negative) effects of excessive crowding on the housing market.

Recent theoretical work has made substantial progress in providing explanations for the link between migration and economic growth in the receiving country.<sup>11</sup> In a simple neoclassical growth model, where production is a function of labor and human capital which are internationally mobile, and physical capital which is immobile, where there is no trade between countries, and where exogenous technological progress is the principal driving force of economic growth, the human capital endowments of migrants turn out to be a decisive factor of economic growth. The key is whether immigrants bring enough human capital along with them to compensate for the attenuation of physical capital in the receiving country. In this setting, immigrants with a little human capital endowment slow down per capita growth while immigrants with a sufficiently high endowment of human capital will speed up per capita growth. This argument would even be emphasized in models of endogenous growth.

Compared to the theoretical literature, there are only a few empirical studies on the link between immigration and growth. Overall the results of these empirical studies come to conflicting results (Friedberg, Hunt 1995). Barro/Sala-i-Martin (1992), for example, find for the US and Japan that migration has a positive, though small effect on growth. Concluding that migration is negatively related to the convergence between regions, which could be interpreted as recovery from shocks or as short-term growth, the empirical results of Blanchard/Katz (1992) and Dolado et al. (1993), however, are at odds with those of Barro/Sala-i-Martin (1992). The lack of evidence and the conflicting results indicate that much more research is needed on this important issue.

#### *The economic impact on the sending country*

After a few decades of relatively limited attention to the issue, recent years

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<sup>11</sup> A detailed discussion of this issue is provided by Barro/Sala-i-Martin (1995). See also Rothgang/Schmidt (2003) and the survey by Friedberg/Hunt (1995).

have witnessed an intense debate on the extent and the consequences of so-called brain drain migration. This growing attention can be explained by various factors such as the increased importance of high-skilled migration, together with an increased competition by industrialized countries for high-skilled labor, by the increasing importance of the New Economy and the internationalization of multinational firms' internal and external labor markets. An additional reason is the increased demand for workers in the health care sector which results from an aging population in many developed countries (see also the discussion in section 2).

Despite the intensity of the debate, the precise nature of the migration of high-skilled labor is far from well understood. While the increasing importance of high-skilled migration seems indisputable, we don't know whether this trend will accelerate further. Similarly, the prevalence of temporary spells of migration might even increase. Beyond the necessity of predicting these trends into the future, their effects are relatively unclear. Despite a large series of theoretical contributions to the brain drain literature, it is not even transparent whether there is indeed a negative effect of the brain drain on the countries of emigration. Certainly, the loss of educated workers tends to harm origin countries, but the possibility for future migration might establish an incentive for increased accumulation of human capital, a countervailing effect. This may be as beneficial as migrant remittances and the effects of return migration of skilled workers. Finally, the presence of high-skilled workers may have considerable implications for the speed of technological diffusion, the location of new business ventures, and more generally on economic growth. Similarly, flexible labor may play an important role in alleviating the detriments of structural change and unemployment (Rothgang, Schmidt 2003).

Static models on international migration, which dominated the earlier debate on brain drain in the 1960s, are set in terms of perfectly competitive markets, with wages equal to marginal products and no externalities. In a basic framework, only negligible adverse welfare implications arise for the non-migrants left behind (Grubel, Scott 1966). However, with international mobile capital, this conclusion has to be modified (Berry, Soligo 1969). When there are distortions in wage setting (Bhagwati, Namada 1974; Schmidt et al. 1994), international migration of the skilled is likely to imply negative welfare effects for unskilled workers in the sending country. If education is subsidized, international integration of the skilled labor market imposes a cost on the sending country, as more workers acquire skills and emigrate thereafter. Despite a weak empirical foundation – the analysis focused on the distinction of skilled and unskilled workers at the aggregate level, yet never at the level of individual agents or firms – the policy prescriptions emerging from this literature are clear-cut: Developed economies as the recipients of skills should compensate the sending LDCs by way of a brain drain tax (Bhagwati, Hamada 1974;

McCulloch, Yellen 1975). Different from the health care sector, there is evidence for more private investment in human capital into ICT skills which would lessen the problem in the latter case.

However, these static models do take into account several dynamic aspects in the migration decision that are of special importance for the analysis of the effects of high-skilled migration. Some of the dynamic models of international migration emphasize that the possibility of later emigration encourages individuals in the sending regions to invest in human capital. In that case, the international integration of the skilled labor market might generate an excess of skill formation over the loss of emigrating skills. Thus, positive externalities of skill acquisition arise also for those not acquiring the skills (Beine et al. 2001; Stark et al. 1997, 1998; Vidal 1998). Not all of the additional skilled workers do indeed migrate – *ex post* they might not have invested into skills, since they did not migrate after all. A positive effect of integrating international markets for skilled labor is that the marginal individual in education faces a positive probability for emigrating later on. Stark et al. (1997) presume that only after the initial migration of skilled workers, firms in the receiving regions are able to screen their new workers for unobserved ability; yet even the returning workers have acquired the skills in the first place. However, it is extremely difficult to generate empirical evidence for these arguments, due to the simultaneous nature of education, migration and economic activity. Attempts have been made by Beine et al. (2001), Faini (2002), and Rothgang/Schmidt (2003).

Another important channel for a brain gain effect is provided by return migration. Specifically, migrants returning to their origin may bring elements of productive capacity to the origin economy which they could only have acquired abroad. This is most obviously the case for skills such as techniques, business strategies, or modern forms of work organization. Some of these aspects will be acquired through simple inspection; others require a longer exposure and the active accumulation of experience during their operation. Migrants frequently return to their origin country at an advanced stage of their career, but before ultimately entering retirement. Such return migrants often intend to start their own business, having acquired relatively considerable financial resources during their stay abroad. Indeed, the accumulation of these resources may have been the original incentive to emigrate (Dustmann 1996). This argument applies particularly to origin countries with underdeveloped markets for venture capital.

## **5. Future Prospects**

Since migration arguably entails important effects, both in terms of economic growth and the distribution of economic prosperity, and for the social fabric of receiving populations, it is important to gather information on the future de-

velopments. The assessment of worldwide migration potential will shape future migration policy, but in turn migration policy will influence how this potential is translated into actual migration, and to which destinations. Here we briefly discuss these future prospects.

*Newly emerging concerns of existing migration flows in the region*

The region is facing several new concerns regarding the further liberalization of migration flows. Many of these concerns are nurtured by the events of September 11, 2001 which initiated a debate about internal and external security issues. With the exception of the North American countries, these concerns have had only a small impact on immigration policies yet, although in general, many countries have tightened their immigration systems. Most measures implemented after September 11 aimed to improve the controls of persons entering a particular country, including stronger security measures at the borders and at the domestic and international airports. Since tighter borders controls are only of limited value in preventing international terrorism, there is an ongoing debate in most important destination countries on the potential to improve the existing identification systems and to increase the effectiveness of information-sharing and data-exchange between the immigration authorities and the police.

A second important issue focuses on the increasing importance of illegal migration and trafficking. Countries are affected by illegal migration in very different ways, determined largely by geographical characteristics. The US, for example, is facing mainly illegal migration from Mexico, whereas geographical peculiarities make illegal immigration and trafficking of migrants a rather negligible problem in Canada. In Western Europe, mainly the Southern European states Italy and Spain face increasing problems with illegal immigration and trafficking. These countries are both, a major destination country for illegal migrants, asylum seekers, and refugees as well as a transit country for migrants who aim seek their fortune in Northern Europe. A prominent example of a country with increasing illegal immigration despite its limited geographical accessibility is the UK, which faced an increasing influx of asylum seekers and illegal migrants via the Eurotunnel. Finally, many CEE countries as well as the Balkan states became major crossroads for illegal migrants seeking their way from East to West.

The major policy reaction to the increased inflow of illegal migrants has been the tightening of border controls. A number of countries introduced stiff penalties for traffickers, including prison sentences; others (Italy, Belgium and the Netherlands) have addressed the issue by granting victims some form of residence status while serving as witnesses against the traffickers; and a third group of countries (Belgium, France, Greece, Portugal and Spain) have used regularization programs to change the status of irregular migrants.

In many Western European countries there are further concerns about the potential increase of East-West migration that may result from the enlargement of the EU towards CEE countries. Existing studies on potential migration flows from the East to the West after an enlargement of the EU arrive at rather different results.<sup>12</sup> The structure of migration flows between the associated CEE countries and the current EU-member countries suggests that potential East-West migration flows will be largely temporary, whereas permanent migration from these countries will be mainly directed towards the traditional immigration countries in North America, Australia and New Zealand (IOM 1998). The discussion has also shown that there are very different views among the current member states concerning the freedom of labor mobility between the new and the old member states after enlargement, with some countries asking to restrict the freedom of movement for a limited period of time, as it was the case when Spain and Portugal joined the EU in 1986, while others promote the immediate implementation of freedom of labor mobility between the new and the old members. At the end, Germany and Austria have succeeded in negotiating transitional periods allowing them to protect their domestic employment markets for a maximum of seven years.

An issue that has received almost no attention in the media and the public discussion concerns problems associated with ethnic migration. Again, this problem exists mainly for Europe. As already noted in section 1, there are continuing large scale migration flows within the CEE countries which were initiated by the fall of the iron curtain. In addition, many descendants of former migrants appear to take the opportunity to return to the country of their ancestors. So far, this type of immigration occurred mainly in Germany. In the 1990s, Germany received more than 2.5 million ethnic Germans from the former USSR, Romania, and Poland. In the last few years, the inflow of ethnic Germans decreased substantially, partly because of a tightening of the entry procedures and partly because there are not many ethnic Germans left in Eastern Europe (see Bauer et. al. 2003 for a more detailed discussion).

Ethnic migration from people originating in Eastern Europe is also experienced by Turkey, receiving ethnic Turks from Bulgaria, and Finland, facing immigration of ethnic Fins from the Balkan and the former USSR. Much less is known about newly emerging flows of ethnic migrants into Ireland, Italy, Spain, and the UK. Because of a deterioration of the economic and/or political situation, persons of British origin living in Zimbabwe or South Africa are increasingly returning to the UK. The economic crisis in Argentina has initiated increasing immigration from Latin America into Italy and Spain. Finally, the economic boom in Ireland led to an increasing inflow of Americans of Irish origin into Ireland. Our knowledge about the size and persistence of these

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<sup>12</sup> See the controversial views in Bauer/Zimmermann (1999), Fertig (2001), Sinn (1999, 2002) and Fertig/Schmidt (2001).

flows is rather rudimentary. Consistent data exists only in a few cases (for example in Germany) and the governments of the destination regions are in many cases not willing to start a broad discussion on this type of migrants.

Another concern regarding future migration originates from the increasing importance of the New Economy and the globalization of labor and goods markets. Specifically, the observed increasing flows of highly skilled migrants have been associated with the emergence of skill-biased technical change in the developed labor markets, which in turn is frequently viewed as a consequence of the rising diffusion of ICT and, more generally, of the radical re-structuring of the organization of work. Prominent examples for migrants of the New Economy era are programmers from countries like India moving in response to employment opportunities to developed countries and venture capitalists all over the world who are attracted by profit prospects in destinations such as the US. Migration is also caused by the internationalization of multinational firms' internal and external labor markets. If, as often argued, there is indeed a trend towards a relentlessly increasing international demand for skilled labor, caused by the further diffusion of ICT, advanced economies could even intensify their efforts to attract such workers away from their origin countries. An intensified competition of developed countries for high-skilled workers, which manifests itself already in the various new immigration initiatives described above, and a serious brain drain might be the immediate consequence.

The developments that are directly or indirectly associated with the production and use of ICT technologies have fundamental consequences for core questions of migration and ought to shape the migration streams of the future. Most importantly, a direct channel of influence is likely to run from increasing wage premia for skills to an acceleration of high-skilled migration. Yet, although in the recent past the importance of high-skilled migration has increased distinctively, it is far from clear whether the development and diffusion of ICT will lead to a dramatic increase in international migration of the highly skilled. The emergence of the New Economy makes factual migration less important as business can be done across space in a completely new way.<sup>13</sup>

*Policy options on migration: control or management?*

Apart from the traditional immigration countries, Canada, Australia and New Zealand, and the US, most countries in the region did not consider themselves as immigration countries, even though many of them experienced large immigration flows. Because of this attitude, European countries followed a "zero-immigration" policy for the last three decades. The immigration policy of these countries mainly focused on entry control and the regulation of permissions to stay and to work in the country. These policies, together with a tendency of

<sup>13</sup> See Rothgang/Schmidt (2003) for a more detailed discussion of these issues.



solving new migration-related problems in a rather ad hoc way led in many countries to a system of very complicated institutions, ranging from a plethora of different types of entry, stay and work permissions, over different forms of access for similar persons to state benefits, to different regulations concerning repatriation and re-immigration.<sup>14</sup>

Often, there is no coordination between different government agencies dealing with different migration-related issues. In many countries, for example, the ministry of interior or justice is responsible for the entry and stay of foreigners, whereas the ministry of labor deals with issues concerning permissions to work. The spreading of responsibilities across different agencies and the lack of cooperation has frequently resulted in inconsistent legislation. It has further been argued that the lack of possibilities to immigrate on a legal basis is one important explanation for the increasing number of illegal migrants and associated issues such as increased exploitation and trafficking of migrants and the misuse of the existing asylum systems. Finally, since most countries in Europe did not consider themselves as being immigration countries, there is a widespread lack of integration policies, which resulted in additional social and economic problems concerning not only first-generation but also second- and third-generation immigrants.<sup>15</sup>

Overall, it has to be concluded that the present system of migration control has proved to be inefficient in dealing with the new migration problems that have been developing through increasing globalization, i.e. increasingly integrated international economies and labor markets, and through the demographic challenges that many countries in the region will face in the coming decades. Many governments in the region seem to realize now that they have to change their migration policy and that these changes require a more comprehensive approach to manage migration in order to reap the potential gains of migration without incurring too many of its potential costs. It has further been argued that such a comprehensive policy could contribute in reducing xenophobia. For example, it has been observed that xenophobia tends to be lower in countries that follow a comprehensive migration policy, such as for example Canada (Bauer et al. 2000).

Following the lines of the United Nations (1994) and the IOM (2003), such a comprehensive approach towards an efficient management should include, among others, the following basic elements: (i) opportunities for both temporary and permanent immigration including labor migration programmes; (ii) effective border management to increase security, to combat illegal migra-

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<sup>14</sup> See, for example, Bauer et al. (2004) for a detailed description of the current German institutions concerning the entry, stay and work permissions for foreigners, which could be considered to be representative for many European countries.

<sup>15</sup> See, for example, Fertig/Schmidt (2003) and the literature cited in there.

tion together with smuggling and trafficking, and to sustain the integrity of the asylum system; (iii) integration of immigrants in the society and economy of the host country; (iv) recognition and respect of the rights of all type of migrants, and (v) measures that address the main causes of emigration, including investments and development aid to foster the development of the sending regions and a foreign policy that aims to avoid new massive flows of refugees. In addition, a comprehensive migration approach should be flexible enough not only to react to gradual changes but also to often unexpected short-term changes in migration trends and the economic and social environment.

To establish such a comprehensive policy it would be necessary to increase the cooperation of national agencies that deal with migration issues, increased international cooperation in order to share information on migration-related issues and harmonize migration policies, and the improvement of the availability of information on migration legislation and of data on migration. The German discussion on a new immigration policy in the last two years could serve as a good example of this changing attitude towards immigration policy. The report of the immigration commission, which has been described in more detail above, accomplished most of the elements of a comprehensive approach of migration management.

In addition, many countries realize that more international cooperation is necessary for an effective management of migration, even though these attempts are just in their infancy. A by-product of the events of September 11 is an increased co-operation in and debate on potential strategies to improve the existing identification systems and to increase the effectiveness of information-sharing and data-exchange between the immigration authorities and the police within the potential destination regions as well as between the regions and the sending countries.

Until a few years ago, there was no attempt in co-ordinating migration issues across countries, even though the characteristics of integrated goods and labor markets evoke a strong need for a coordinated migration policy. A good example is the EU, because the abolition of interior borders results in a dependency of each member state on the immigration policy of the other states. Once a foreigner enters EU-territory, the further migration of this person can no longer be controlled. As a result of free labor and product markets within the EU, individual member countries are unable to follow independent migration policies without potentially harming other members. The asylum policy in many European countries since the early 1990s, which has shown that the implementation of tighter asylum and immigration laws in one country automatically lead to an increase of asylum seekers and immigrants in neighboring countries, could act as a good example for this interdependence. Therefore, the EU

should consider a unified migration policy.<sup>17</sup> A unified immigration policy is, however, just in its infancy.

Since 1988, the migration policy of the EU is marked by two different developments. First, since the original Treaty of Rome in 1957, internal migration within the EU has been steadily liberalized, concluding in Article 8a of the Single European Act. This Act requires the achievement of the free movement of people, capital, goods, and services by 1 January, 1993, implying the abolishment of controls on the interior borders of the EU. Second, with respect to immigration from outside the EU, there have been increasing efforts to establish a unified, though in many cases more restrictive policy. The development towards a joint EU migration policy started with the Schengen Accords of June 1985 (Schengen I), 19 June, 1990 (Schengen II), and the accord of Dublin on 15 June, 1990, continuing with the Maastricht Treaty of 1992 and the Amsterdam Treaty of 1997, which came into force in 1999.

The last milestone of this process could be seen in the special meeting of the European Council in Tampere (Finland) in October 1999, where the Heads of State and Government agreed upon a program of action including the development of a common EU policy on asylum and migration. So far, the main objectives of these initiatives are as follows: to eliminate internal border checks, to establish consistent and tighter external border controls, a unified visa policy, and the co-ordination of different national asylum policies and measures to fight illegal migration. Furthermore, the objectives comprise the elaboration of joint norms regarding the acceptance of asylum seekers, generating the prerequisites for immigration and residence of immigrants from countries outside the EU, and formulating the rights and conditions under which immigrants of one EU member country can reside in another member country.

Apart from the development of an increasingly integrated goods and financial markets within NAFTA, a similar development could not be observed in North-America. The objective there is rather to limit migration, especially between Mexico and the US. It is further unclear whether the NAFTA agreements have reduced or increased migration between the associated countries.

International co-operation in the field of migration has also occurred with regard to regulations concerning temporary migration.<sup>18</sup> Germany, for example, has signed bilateral agreements with several CEE countries concerning the admission of temporary workers (Bauer, Zimmermann 1999). The following

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<sup>17</sup> A general analysis of migration policy issues is given by Straubhaar/Zimmermann (1993) and Zimmermann (1995). See also IOM (2003, chapter 14) for a detailed description of the common migration policy within the EU.

<sup>18</sup> A detailed discussion of the characteristics of and the legislation on temporary migration in Australia, Canada, France, Germany, the Netherlands, Switzerland, the United Kingdom, and the US is given by OECD (1998).

goals were at the core of these bilateral agreements: (i) to bring the CEEC-countries up to Western European standards; (ii) solidarity with CEEC-countries; (iii) to impart skills to firms and workers with modern technology in order to foster economic development in the countries of origin; (iv) to decrease the immigration pressure from these countries; and (v) to promote economic co-operation with these countries.

Finally, there has been a strong co-operation between the EU and those CEE countries that are in the process of joining the EU. However, this co-operation could not be seen as a step towards a more comprehensive management of migration flows. The aim of this co-operation, which concerns mainly the installation of Western standards with regard to border controls and asylum laws, could rather be seen as the attempt to create a “buffer zone” at the Union’s eastern border. This buffer would shift part of the problem of fighting irregular migration and of the asylum problem towards the East by promoting the creation of asylum laws according to Western standards and the “safe third country concept”. Accordingly, the vast majority of cooperative measures between EU member states and the associated CEE countries concentrate on restrictive measures for fighting illegal immigration rather than on the promotion of humanitarian standards in dealing with immigrants (Subhan 1998).

Overall, even though many important receiving countries realize the need for a more internationally cooperative migration policy, the development of international cooperation seems to kick off rather slowly. Together with apparent problems in developing similar institutions from the existing institution in the countries, one reason for this slow development may be seen in the increased world-wide competition for high-skilled labor. Other reasons are historical migration links and ethnic migration flows, on which many countries are unwilling to discuss in an international setting.

#### *Future of migration in the region*

Assessing migration potentials and predicting future migration streams are among the most relevant, yet least well understood topics of migration research. Multiple push and pull factors are responsible for observed migration flows, including for example, economic and social differences between countries, migration networks, different population and aging trends, environmental problems, reduced transportation and information costs as well as various political factors, including armed conflicts, and the violation of human rights. Theoretical models and empirical studies of the determinants of migration are only able to capture a subset of the various factors determining human migration either because models that aim to describe as many determinants of migration as possible would become by far too complicated or because the paucity of the available data material and the interrelationship between the different factors of migration makes the precise estimation and identification of his-

torical relationships between demographic, economic, social and political determinants difficult.<sup>19</sup> The usual approach taken in economic analyses is to fit *ad hoc* specifications to historical, aggregate-level data, and for purposes of prediction to extrapolate from these estimates on the basis of auxiliary conditioning information. However, as already mentioned in section 2, no stable patterns emerge from studies on the determinants of migration whatsoever, limiting the reliability of this type of forecasts.

Even if these problems could be solved, the usefulness of precise estimates of historical relationships between demographic and economic determinants and the resulting migration streams would be rather limited. A second and conceptually more severe problem is the identification problem that has to be solved satisfactorily for any valid extrapolation, irrespective of the available data points. Intellectually, the forecasting problem arises because the future will be going to be different from the past, while the key to its solution lies in finding sufficient aspects of stability to be able to learn from the past (Fertig, Schmidt 2001). Changes in the various determinants of human migration are not only gradual both across time and across space; even the temporal development of many determinants of migration face abrupt changes and are very hard to predict. The overall migration experience in the last decade has further shown that migration flows do not occur necessarily between the traditional origin and destination region. Migration increasingly takes place between two regions that do not share a common migration history.<sup>20</sup>

Before this background, the following description of potential future migration flows should be seen as speculative, because the institutional, economic and demographic factors that form the basis of these trends could change rather rapidly. For the same reason, we refrain from quantifying potential future migration flows and, in most cases, from characterizing the composition of the migration flows into labor migrants, family migrants and asylum seekers and refugees, and permanent and temporary migrants.

The current economic and demographic development suggests that the region will face an increasing migration pressure. The observed globalization process results in fast economic growth in many potential sending regions, especially in Asia (for example China, India, Taiwan, Vietnam) and some countries in Africa (for example, South Africa). Because of this economic growth and the associated increase in living-standards, these countries may not only become destination regions for international migrants. More importantly, the increasing income associated with this process will enable many individuals residing

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<sup>19</sup> See, for example, Bauer/Zimmermann (1997), Greenwood (1985), Massey et. al. (1993), and Molho (1996) for surveys of different migration theories and the existing empirical evidence.

<sup>20</sup> Fertig/Schmidt (2001) provide a more detailed discussion about extrapolation of future migration flows using aggregate-level studies of the determinants of migration.

in these countries to finance their move to countries in the region. Even though economic theories predict that the globalization process tends to reduce income differentials between countries in the long-run, it is unclear whether income differentials between the region and third countries will increase or decrease in the short- and medium-run. Hence, it may be possible that globalization leads to increased migration pressure in the region. This process may further be accelerated by falling information and transportation costs.

At the same time, the demographic development in many countries of the region and the associated aging process of the population will result in an increasing demand for immigrants. Given the accelerating process of technological progress and the necessity to concentrate on the production of high-tech products and knowledge in order to be able to compete with low-wage countries in Asia, Africa, Latin America and parts of Eastern Europe, much of this increasing demand will concentrate on high-skilled labor. As already described in section 2, an increasing competition among the countries in the region for high-skilled migrants could already be observed and it could be expected that this competition will further increase in the future. At the same time, this development suggests that a coordinated development of migration policies among the countries in the region will be hard to realize, at least as far as skilled labor is concerned. Nevertheless, the increasing aging process in most countries of the region will also increase the demand for personal services (especially in the health sector), and hence the demand for low- and medium-skilled labor. Given the low status of most of the employment opportunities in the service sector for elderly, the relative paucity of young persons in the native population willing to enter this sector, there will be a future demand for especially young and middle age health service workers from outside the region.

Finally, the globalization process and the associated increase in the availability of information will most likely increase the portfolio of potential source countries of migrants for most countries in the region – a process that has already been observed during the last few years. So far, migration flows occur mostly along established migration networks (such as, those between Turkey and Germany or between Mexico and the US). As information on the economic and social situation in the potential destination regions spreads out, the relative importance of these traditional migration networks will decrease and new migration networks will be established.

There are other special developments in some countries within the region that will potentially increase the inflow of persons into these countries. Most importantly, even though the magnitude of the migration flows is very hard to predict, the enlargement of the EU towards CEE countries will most likely re-

sult in increased East-West migration, but also in increasing migration flows into and between the new members of the EU.<sup>21</sup> Based on existing migration networks it is rather likely that the most important destination countries for the migrants will be Germany and Austria. Similarly, it is rather difficult to forecast to what extent the increasing economic integration of Canada, Mexico, and the US within the NAFTA agreement will lead to a further increase of migration between these countries.

The development of future migration flows due to other than economic and demographic reasons are even harder to predict, because of the uncertain development of the existing and the future occurrence of armed conflicts and human rights violations. This holds also for environmental deterioration as main migration factor, even though this factor seems to most likely contribute to South-North migration flows.

## Bibliography

- Auerbach, A., J. Gokhale and L. Kotlikoff (1991), Generational Accounting: A Meaningful Alternative to Deficit Accounting. *Tax Policy and the Economy* 5, 55–110.
- Auerbach, A., J. Gokhale and L. Kotlikoff (1992), Generational Accounting: A New Approach to Understanding the Effects of Fiscal Policy on Saving. *Scandinavian Journal of Economics* 94: 303–318.
- Auerbach, A. and J. P. Oreopoulos (1999), Analyzing the Fiscal Impact of US Immigration. *American Economic Review, Papers and Proceedings* 89: 176–180.
- Barro, R.J. and X. Sala-i-Martin (1992), Convergence. *Journal of Political Economy* 100: 223–251.
- Barro, R.J. and X. Sala-i-Martin (1995), *Economic Growth*. New York et al.: MacGraw-Hill.
- Bauer, T., B. Dietz, K.F. Zimmermann and E. Zwintz (2003), German Migration: Development, Assimilation and Labor Market Effects. In K.F. Zimmermann (ed.), *European Migration: What Do We Know?* Forthcoming 2004, Oxford University Press.
- Bauer, T. and A. Kunze (2003), *The Demand for High-Skilled Workers and Immigration Policy*. RWI : Discussion Paper 11. RWI, Essen.
- Bauer, T., C. Larsen and P.C. Matthiessen (2004), *Immigration Policy and Danish and German Immigration*. Forthcoming, IZA, Bonn.
- Bauer, T., M. Lofström and K.F. Zimmermann (2000), Immigration Policy, Assimilation of Immigrants and Natives' Sentiments towards Immigrants: Evidence from 12 OECD-countries. *Swedish Economic Policy Review* 7 (2): 11–53.
- Bauer, T. and K.F. Zimmermann (1998), Causes of International Migration: A Survey. In C. Gorter, P. Nijkamp and J. Poot (eds.), *Crossing Borders: Regional and Urban Perspectives on International Migration*. Aldershot et.al.: Ashgate, 95–127.

<sup>21</sup> See Fertig/Schmidt (2001) for a critical review of existing estimates of potential East-West migration after the EU-enlargement.

- Bauer, T. and K.F. Zimmermann (1999), Assessment of Possible Migration Pressure and its Labor Market Impact Following EU Enlargement to Central and Eastern Europe. IZA Research Report 3. IZA: Bonn.
- Bauer, T. and K.F. Zimmermann (2002). The Economics of Migration. International Library of Critical Writings in Economics 151. Cheltenham: Edward Elgar.
- Beine, M., F. Docquier and H. Rapoport (2001), Brain Drain and Economic Growth: Theory and Evidence. *Journal of Development Economics* 64: 275–289.
- Berry, R.A. and R. Soligo (1969), Some Welfare Aspects of International Migration. *Journal of Political Economy* 77: 778–794.
- Bhagwati, J. and K. Hamada (1974), The Brain Drain, International Integration of Markets for Professionals and Unemployment. A Theoretical Analysis. *Journal of Development Economics* 1: 19–42.
- Blanchard, O. and L. Katz (1992), Regional Evolutions. *Brookings Papers on Economic Activity* 1992 (1): 1–61.
- Borjas, G.J. (1987), Self-Selection and the Earnings of Immigrants. *American Economic Review* 77: 531–553.
- Borjas, G.J. (1991), Immigration and Self-Selection. In J.M. Abowd and R. B. Freeman (eds.), *Immigration, Trade, and the Labor Market*. Chicago and London: University of Chicago Press, 29–76.
- Borjas, G.J. (1999), The Economic Analysis of Immigration. In O. Ashenfelter and D. Card (eds.), *Handbook of Labor Economics*. Amsterdam: Elsevier, Vol. 3, 1679–1769.
- Bonin, H. (2001), Fiskalische Effekte der Zuwanderung nach Deutschland: Eine Generationenbilanz. *Applied Economics Quarterly* 52 (Supplement): 127–156.
- Bonin, H., B. Raffelhüschen and J. Walliser (2000), Can Immigration Alleviate the Demographic Burden? *Finanzarchiv* 57: 1–21.
- Card, D. (1990), The Impact of the Mariel Boatlift on the Miami Labor Market. *Industrial and Labor Relations Review* 43: 245–257.
- Card, D. and Ch.M. Schmidt (2003), Editorial: Symposium on “Second-Generation Immigrants and the Transition to Ethnic Minorities”. *Journal of Population Economics* 16: 707–710.
- Carrington, W.J. and P. de Lima (1996), The Impact of 1970s Repatriates from Africa on the Portuguese Labor Market. *Industrial and Labor Relations Review* 49: 330–347.
- Carrington, W.J. and E. Detragiache (1998), How Big is the Brain Drain? IMF Working Paper WP/98/102. IMF, Washington, DC.
- Chiswick, B.R. (1978), The Effect of Americanization on the Earnings of Foreign-born Men. *Journal of Political Economy* 86: 897–921.
- Dolado, J.J., A. Goría and A. Ichino (1993), Immigration, Human Capital and Growth in the Host Country: Evidence from Pooled Country Data. CEPR Discussion Paper 875. CEPR, London.
- Dustmann, C. (1993), Earnings Adjustments of Temporary Migrants. *Journal of Population Economics* 6: 153–168.



- Dustmann, C. (1996), Return Migration, The European Experience. *Economic Policy: A European Forum* 1996: 213–250.
- Edin, P.-A., R. LaLonde and O. Aslund (2000), *Emigration of Immigrants and Measures of Immigrant Assimilation: Evidence from Sweden*. Paper presented at the Swedish Economic Council's conference on: The Assimilation of Immigrants in the Labor Market, Stockholm, March 13, 2000.
- Ekberg, J. (1994), Economic Progress of Immigrants in Sweden from 1970 to 1990: A Longitudinal Study. *Scandinavian Journal of Social Welfare* 3: 148–157.
- Faini, R. (2002), *Migration, Remittances and Growth*. Preliminary Version, September 2002. Mimeo.
- Fertig, M. (2001), The Economic Impact of EU-Enlargement: Assessing the Migration Potential. *Empirical Economics* 26: 707–720.
- Fertig, M. and Ch.M. Schmidt (2001), Aggregate-level Migration Studies as a Tool for Forecasting Future Migration Streams. In S. Djajić (ed.), *International Migration – Trends, Policies and Economic Impact*. London and New York: Routledge.
- Fertig, M., and Ch.M. Schmidt (2002), First- and Second Generation Migrants in Germany: What Do We Know and What Do People Think. In R. Rotte and P. Stein (eds.), *Migration Policy and the Economy: International Experiences*. Neuried: ars et unitas, 179–218.
- Friedberg, R.M. and J. Hunt (1995), The Impact of Immigrants on Host Country Wages, Employment and Growth. *Journal of Economic Perspectives* 9 (2): 23–44.
- Galiana, C. (2000), Trafficking in Women. Directorate General for Research of the European Parliament Working Paper LIBE 109 EN – 3–2000. European Parliament, Brussels.
- Greenwood, M.J. (1985), Human Migration: Theory, Models, and Empirical Studies. *Journal of Regional Science* 25 (4): 521–544.
- Grubel, H.G. and A.D. Scott (1966), The Immigration of Scientists and Engineers to the United States, 1949–61. *Journal of Political Economy* 74 (4): 368–378.
- Hatton, T.J. and S. Wheatley Price (1999), Migration, Migrants and Policy in the United Kingdom. IZA Discussion Paper 81. IZA, Bonn.
- Hunt, J. (1992), The Impact of the 1962 Repatriates from Algeria on the French Labor Market. *Industrial and Labor Relations Review* 45: 556–572.
- Immigration Canada (2003), *Self-Assessment Worksheet for Independent Applicants*. Ottawa, Canada.
- IOM – International Organization for Migration (ed.) (1998), *Migration Potential in Central and Eastern Europe*. Geneva.
- IOM – International Organization for Migration (ed.) (2002a), *Migration Trends in Eastern Europe and Central Asia*. Geneva.
- IOM – International Organization for Migration (ed.) (2002b), *Trafficking for Sexual Exploitation: The Case of the Russian Federation*. Geneva.
- IOM – International Organization for Migration (ed.) (2003), *World Migration 2003 – Managing Migration: Challenges and Responses for People on the Move*. Geneva.

- LaLonde, R.J. and R.H. Topel (1991), Labor Market Adjustments to Increased Immigration. In J.M. Abowd and R.B. Freeman (eds.), *Immigration, Trade, and the Labor Market*. Chicago and London: University of Chicago Press, 167–199.
- Massey, D.S., J. Arango, G. Hugo, A. Kouaouci, A. Pellegrino and J.E. Taylor (1993), Theories of International Migration: A Review and Appraisal. *Population and Development Review* 19 (3): 431–466.
- McCulloch, R. and J.L. Yellen (1975), Consequences of a Tax on the Brain Drain for Unemployment and Income Inequality in Less Developed Countries. *Journal of Development Economics* 2: 249–264.
- Mincer, J. (1978), Family Migration Decision. *Journal of Political Economy* 86: 749–773.
- Molho, I. (1986), Theories of Migration: A Review. *Scottish Journal of Political Economy* 33 (4): 396–419.
- OECD (ed.) (1998), *SOPEMI – Trends in International Migration: Annual Report 1998*. Paris.
- OECD (ed.) (1999), *Trends in International Migration: Annual Report 1999*. Paris.
- OECD (ed.) (2002), *International Mobility of the Highly Skilled*. Paris.
- OECD (ed.) (2003), *Trends in International Migration: Annual Report 2002*. Paris.
- Ravenstein, E.G. (1889), The Laws of Migration. *Journal of the Royal Statistical Society* 52: 241–305.
- Rothgang, M. and Ch.M. Schmidt (2003), The New Economy, the Impact of Immigration, and the Brain Drain. In D.C. Jones (ed.), *New Economy Handbook*. Amsterdam et al.: Elsevier.
- Rotte, R. and M. Vogler (1998), Determinants of International Migration: Empirical Evidence for the Migration from the LDCs to Germany. CEPR Discussion Paper 1920. CEPR, London.
- Salt, J. (2002), *Current Trends in International Migration in Europe*. Council of Europe, Strasbourg.
- Schmidt, Ch.M., A. Stilz and K. F. Zimmermann (1994), Mass Migration Unions, and Government Intervention. *Journal of Public Economics* 55: 185–201.
- Schmidt, Ch.M. (1997), Immigrant Performance in Germany: Labor Earnings of Ethnic German Migrants and Foreign Guest-Workers. *Quarterly Review of Economics and Finance* 37: 379–397.
- Sinn, H.-W. (1999), EU Enlargement, Migration, and Lessons from German Unification. *German Economic Review* 1: 299–314.
- Sinn, H.-W. (2002), EU Enlargement, and the Future of the Welfare State. *Scottish Journal of Political Economy* 49 (1): 104–115.
- Sjaastad, L.A. (1962), The Costs and Returns of Human Migration. *Journal of Political Economy* 70: S80–S93.
- Stark, O. (1991), *The Migration of Labor*. Cambridge, MA: Blackwell.
- Stark, O., C. Helmenstein and A. Prskawetz (1997), A Brain Gain with a Brain Drain. *Economic Letters* 55: 227–234.

- Stark, O., C. Helmenstein and A. Prskawetz (1998), Human Capital Depletion, Human Capital Formation, and Migration: A Blessing or a “Curse”? *Economic Letters* 60: 363–367.
- Straubhaar, T. and K.F. Zimmermann (1993): Towards a European Migration Policy. *Population Research and Policy Review* 12: 225–241.
- Subhan, A. (1998): “Migration and Asylum in Central and Eastern Europe,” Directorate General for Research of the European Parliament Working Paper LIBE 104 EN – 2–99. Brussels: European Parliament.
- United Nations (ed.) (1994), *European Population Conference Recommendations*. New York and Geneva.
- Vidal, J.-P. (1998), The Effect of Emigration on Human Capital Formation. *Journal of Population Economics* 11 (4): 589–600.
- Wanner, P. (2002), Migration Trends in Europe. European Population Papers Series 7. Council of Europe, Strasbourg.
- Winter-Ebmer, R. (1994), Motivation for Migration and Economic Success. *Journal of Economic Psychology* 15: 269–284.
- Zaionchkovskaya, Z.A. (1996), Migration Patterns in the former Soviet Union. In J.R. Azrael, E.A. Payin, K.F. McCarthy and G. Vernez (eds.), *Cooperation and Conflict in the Former Soviet Union: Implications for Migration*. Santa Monica (CA): RAND, 15–48.
- Zaionchkovskaya, Z.A. (2000), Recent Migration Trends in the Commonwealth of Independent States. *International Social Science Journal* 52 (165): 343–355.
- Zimmermann, K.F. (1995), Tackling the European Migration Problem. *Journal of Economic Perspectives* 9: 45–62.