

Why Go to France or Germany, if You Could as Well Go to the UK or the US? Selective Features of Immigration to the EU ‘Big Three’ and the United States*

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Abstract

Building on a new data set which is constructed from a combination of national micro-data bases, we highlight differences in the structure of migrants to four countries – namely, France, Germany, the UK and the US – which receive a substantial share of all immigrants to the OECD world. Looking at immigrants by source country, we illustrate the important role of distance, both geographical and cultural, immigration policies and migrant networks. Differentiating immigrants by their educational attainments, we observe interesting patterns in the skill composition, employment opportunities and wages of migrants to the different destination countries. Focusing on migration between the four countries in our data set, we find that migration within western Europe is small and rather balanced in terms of skill structures, while there appears to be a brain drain from Europe to the US.

Introduction

The EU (European Union) and the US are among the regions attracting most immigrants from all over the world. However, there are large differences among these countries, not only between Europe and the US but also among EU Member States that share a set of common institutions. As to the legal framework for immigration, e.g., France and Germany have very restrictive

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immigration policies which, to the extent that they are applicable,¹ allow immigration almost exclusively for humanitarian reasons, including family reunification. Immigration policies in the Anglo-Saxon countries are more liberal in general, but rather selective regarding the skills of potential migrants.² Moreover, France and Germany are characterized by smaller wage dispersion, higher unemployment and a more generous welfare state.

Taking these aspects together, the Anglo-Saxon countries are often expected to attract highly qualified migrants with strong economic potential, whereas France and Germany are considered to be the preferred destination of migrants with lower skills and weaker economic potential – provided they are granted access there. In other words, the Anglo-Saxon countries may benefit from a ‘brain drain’ (Johnson, 1967; Bhagwati and Hamada, 1974), while France and Germany could act as ‘welfare magnets’ (Borjas, 1994, 1999).

Evidently, these conjectures deserve a more detailed analysis based on data which allow exploration of the different economic, institutional and other factors that may explain how migrants choose their destination country.³ In this article, we use large representative micro-data sets⁴ to study whether the distribution of migrants across France, Germany, the UK and the US⁵ is consistent with a number of factors that are generally perceived to have an influence on the choice of destination countries. Specifically, we focus on the following questions: does the structure of immigrants differ across destination countries, and does it differ from the structure of the native populations? Is migration to a specific country exclusively driven by factors such as historical links, geographical and/or cultural proximity and migrant networks,

¹ In France, Germany and the UK, citizens of EU countries who are seeking employment or taking up a job as well as those who are self-employed are subject to free mobility of labour, a basic legal entitlement which also applies to their families (Treaty Establishing the European Community, 2002, Articles 39–55). This rule has been partially suspended during a transition period *vis-à-vis* the accession countries in central and eastern Europe that joined the EU in 2004. Until 2005, only the UK opened the labour market for citizens of these countries, while France and Germany did not.

² See OECD (2007) for a discussion of immigration programmes that are targeted at attracting high-skilled migrants.

³ Similar studies have been conducted by Saint-Paul (2004) for Europeans in the US and by Diehl and Dixon (2005) for Germans in the US.

⁴ These data sets are the *Enquête Emploi*, a 0.5 per cent random survey of the French population; the *Mikrozensus*, a 1 per cent random survey of the German population (Scientific use file: 0.7 per cent); the American Community Survey (Ruggles *et al.*, 2007), a 1 per cent random survey of the US population (all for the year 2005); and the British Labour Force Survey (Office for National Statistics, 2005), a 0.2 per cent random survey of the British population for the first quarter of 2005. The surveys from European countries we are using are all collected by national statistical offices and used for official statistics – in particular, they are channelled into the European Labour Force Survey collected by Eurostat. However, the much larger EU-level data set is not available for in-depth research distinguishing immigrants by their home countries. Together with the native populations, the data cover the current stocks of immigrants living in the four countries and provide very detailed information regarding their socio-economic characteristics.

⁵ Together with Canada and Australia, these four countries receive 77 per cent of all the immigrants to OECD countries (Defoort, 2006).

or may other (e.g. institutional) determinants play a role as well? Are there any indications of group-specific incentives to migrate to a specific country, in particular, for groups of different skills?

Since we are analysing immigration to three big EU Member States – namely, France, Germany and the UK – and comparing this with immigration to the US, we are able to shed some light on two further issues. First, the analysis can contribute to a better understanding of migration decisions in a framework with unrestricted mobility, such as the one emerging inside the enlarged EU. *Vis-à-vis* migrants from the accession countries in central and eastern Europe, there are no specific policy instruments left for the old Member States, such as visa restrictions, etc. Migration between these countries is thus mainly driven by self-selection in the light of social and economic conditions in potential destination countries. Second, the study allows us to identify the main subgroups of migrants who move between our four countries. This enables us to shed light on recent discussions of whether there is nowadays a 'brain drain' between Europe and the US, with the US winning highly qualified citizens at the expense of the European countries. In both cases, we are interested in the composition of immigrants and how it differs both across destination countries and when compared to the native populations.

The migration literature states that, first of all, the distance between source and destination countries influences immigrants' choice. Here, distance not only relates to geographical proximity, but also to cultural links, such as language, customs or religious beliefs (Docquier *et al.*, 2007; Mayda, 2007; Pedersen *et al.*, 2004). Another important factor which may in fact help to bridge both geographical and cultural distances is the existence of migrant networks (Munshi, 2003). Many people appear to prefer destination countries to which members of their family, their home town or their ethnic group have previously migrated. To some extent, these networks allow migrants to adhere to the culture of their home countries. They also facilitate migration as they transmit information about the destination countries and may even give people preferential access in spite of legal restrictions, particularly via family reunification.

The article is organized as follows. In section I, we discuss how immigrants can be identified in our data and give a broad overview of the immigrant population in our four destination countries. In section II, we highlight the role of distance, immigration policies and network effects in explaining the distribution of migrants by their countries of origin across the destination countries. In section III, we take a closer look at the composition of migrants and highlight differences between the European countries and the US in some detail. Section IV concentrates on the issue of a 'brain drain', in particular between Europe and the US. Conclusions are then presented.

I. Immigrant Populations in France, Germany, the UK and the US

For an analysis of the immigrant population, a precise definition of migrants is needed. In this regard, there are two common approaches. One is to classify all people holding the nationality of the destination country as natives, and those with a foreign nationality as immigrants. The other is to consider all people who were born in the destination country as natives, and those who were foreign-born as immigrants. By the first definition, after naturalization an immigrant can no longer be distinguished from a native person. Who is a migrant and who is not thus depends on national naturalization laws which differ strongly across countries. For instance, it is much easier to acquire US than German nationality. Therefore, when comparing data for immigrants based on nationality, we cannot really distinguish between the effects of migration and naturalization policies. Moreover, by this definition ethnic Germans whose ancestors had settled in eastern Europe centuries ago – the so-called (*Spät-*)*Aussiedler* – are automatically classified as natives when they move to Germany, since they are entitled to receive German nationality immediately upon their arrival.

However, relying on the country of birth is also far from optimal. This definition does not at all reflect the different stages of integration into the society of the destination country. Migrants can never become natives under this classification, even if they arrived in the country in their early childhood, have lived there for decades and are perfectly integrated. At the same time, people whose mothers were more or less coincidentally in the destination country when they were born are automatically classified as natives, even though they may not be integrated at all. Another related problem is that children of natives who were born abroad are immigrants by this definition. This is mainly relevant for children of members of the armed forces who were stationed abroad at the time of birth. As a rule, these children have lived abroad only for a few years and should reasonably be considered as natives in their parents' home country. Migration from Germany to the UK is a prominent example of how important this group can be: among the 265,000 German-born people living in the UK, only 96,000 do not claim to be ethnic British. Fortunately, our data set allows us to identify these individuals.

A related question is how to deal with people who actually did not decide themselves whether to migrate or not, as they were small children at the time when this decision was taken. To circumvent this problem, we focus on individuals who were aged 16 years and older when moving to their current country of residence.

To illustrate the impact of the different definitions we have discussed here, Table 1 gives an overview of the numbers of 'migrants' aged 18–65 who are

Table 1: Immigrants by Varying Definitions (Aged 18–65)

	(i) <i>Nationality</i>	(ii) <i>Country of birth</i>	(iii) <i>As in (ii), corrected for children of natives</i>	(iv) <i>As in (iii), restricted to individuals aged >15 when migrating</i>
<i>France:</i>				
Natives	35,706,564	33,392,066	34,516,027	
Participation rate	72.72%	72.92%	72.79%	
Unemployment rate	9.29%	9.05%	9.05%	
Wage in \$ (PPP)	\$22.73	\$22.63	\$22.77	
Immigrants	2,235,731	4,550,229	3,426,268	2,430,072
Participation rate	64.77%	67.39%	66.81%	64.26%
Unemployment rate	19.46%	16.00%	18.36%	19.71%
Wage in \$ (PPP)	\$19.10	\$21.90	\$19.96	\$19.69
Main source countries:				
1. Morocco	316,323	640,116	480,799	347,833
2. Algeria	308,766	921,284	469,593	317,070
3. Portugal	381,540	485,281	474,598	283,625
4. Turkey	143,892	183,472	181,705	134,514
5. Tunisia	108,278	267,470	173,978	138,207
<i>Germany:^a</i>				
Natives	48,433,295	44,766,025		
Participation rate	76.35%	76.91%		
Unemployment rate	10.21%	9.88%		
Wage in \$ (PPP)	\$22.28	\$22.36		
Immigrants	5,533,608	9,200,879		5,648,068
Participation rate	68.40%	68.85%		70.75%
Unemployment rate	20.39%	18.05%		19.62%
Wage in \$ (PPP)	\$20.69	\$20.89		\$21.26
Main source countries: ^b				
1. Turkey	1,333,512	1,339,737		755,108
2. Russia	258,114	829,751		631,454
3. Poland	239,271	682,191		463,433
4. Italy	500,315	389,075		239,800
5. Serbia and Montenegro	254,335	252,812		171,040
<i>UK:</i>				
Natives	34,608,154	32,803,978	33,528,731	
Participation rate	77.05%	77.43%	77.46%	
Unemployment rate	4.00%	3.92%	3.93%	
Wage in \$ (PPP)	\$19.91	\$19.84	\$19.91	
Immigrants	2,371,600	4,163,636	3,440,004	2,753,244
Participation rate	69.26%	69.73%	67.86%	67.82%
Unemployment rate	8.40%	7.17%	7.88%	7.55%
Wage in \$ (PPP)	\$20.68	\$21.06	\$20.52	\$20.16
Main source countries:				
1. India	153,081	386,663	362,519	276,253
2. Pakistan	75,851	234,742	233,055	159,898
3. Ireland	248,925	282,213	201,530	148,174
4. South Africa	83,180	163,896	106,399	92,243
5. Poland	92,636	103,656	94,867	93,535
<i>USA:</i>				
Natives	165,305,607	152,192,720	153,664,002	
Participation rate	77.06%	77.08%	77.12%	
Unemployment rate	6.51%	6.61%	6.60%	
Wage in \$ (PPP)	\$24.92	\$24.71	\$24.72	

Table 1: (Continued)

	(i) Nationality	(ii) Country of birth	(iii) As in (ii), corrected for children of natives	(iv) As in (iii), restricted to individuals aged >15 when migrating
Immigrants	17,357,046	29,815,975	28,420,240	22,065,088
Participation rate	73.12%	74.67%	74.35%	73.78%
Unemployment rate	7.37%	6.56%	6.59%	6.31%
Wage in \$ (PPP)	\$18.33	\$22.14	\$21.92	\$21.73
Main source countries:				
1. Mexico	7,240,984	9,446,343	9,330,045	7,112,336
2. India	709,847	1,238,560	1,228,302	1,108,573
3. Philippines	474,521	1,353,701	1,281,424	1,009,079
4. China	458,059	902,680	896,267	796,682
5. El Salvador	646,398	899,033	894,225	707,120

Source: National micro-data sets; authors' calculations.

Notes: (a) Correction for children of natives does not make sense because of the (*Spät*-)Aussiedler. (b) Country-of-birth information is not available for all observations. While participation and unemployment are directly observable in our micro-data (see footnote 6), hourly wages are determined as described in the Appendix.

living in our four countries based on (i) nationality, (ii) country of birth, (iii) country of birth corrected for children of natives and (iv) additionally restricted to those who were aged at least 16 at the time of migration. In addition, Table 1 displays fundamental labour-market characteristics of natives and immigrants such as the respective participation rates, unemployment rates and hourly wages.

Table 1 shows that the definition of migrants is important. It not only impacts on the total number of immigrants but also on their composition. A good example is given by the Algerian and Portuguese populations living in France, two of the most important immigrant groups in this country. When defining immigrants by nationality (version *i*), the number of people from Portugal is about 382,000 and thus much higher than the number of people from Algeria, which is about 308,000. However, when defining immigrants by their country of birth (version *ii*), the number of people from Algeria becomes about 921,000 – almost twice as high as the number of people from Portugal, which is about 485,000. Moreover, in the case of France the definition also affects the labour-market characteristics. If immigrants are defined by country of birth and not by nationality, the participation rate of immigrants is more than two percentage points higher, the unemployment rate more than three percentage points lower, and the wage \$2 higher.⁶ We have already

⁶ Participation rates as well as unemployment rates are calculated from information regarding labour-force status in the micro-data sets (based on the self-assessments of respondents). The relevant questions in all surveys are harmonized to correspond to ILO standards. The information provided can thus be expected to be comparable across countries. The calculation of wages is explained in the Appendix to this article.

discussed that correcting country-of-birth data for the children of natives is also important; in the case of France the unemployment rate of immigrants is more than two percentage points higher after this correction than before. In addition, concentrating on individuals who migrated when they were aged 16 and above does not make a major difference to the structure of immigrants by source countries; however, it has a further effect on labour-force participation, unemployment rates and wages.

Comparing the unemployment rates of immigrants in the four countries leads to surprising insights. In France, Germany and the UK, the unemployment rates of immigrants, regardless of their definition, are about twice as high as the unemployment rates of natives. However, in the US the unemployment rates of the two groups are about the same. The participation rates also show an interesting pattern. In Germany, the UK and the US, the participation rates of natives are all about 77 per cent, while those of immigrants differ between 74 per cent in the US and only 69 per cent in Germany and the UK. In France, the participation rates of both natives and immigrants are lower. As to the average wage of immigrants, it is lower than that of natives in France, Germany and the US, the difference being largest in the US. In the UK, however, the average wage of immigrants is higher than that of natives.⁷

II. Distance, Network Effects and Immigration Policies

How do migrants choose their destination countries? If migrants were a homogeneous group choosing their destination country only according to economic conditions in potential destination countries, all migrants should either choose the same destination country, or they should evenly disperse across a number of (identical) destination countries. However, we do not observe any of this (cf. Table 1). The five most important countries of origin strongly differ for our four destination countries. Most notably, the numbers of immigrants from India and China, by far the two largest countries in the world in terms of population size as well as important source countries of migrants, are negligible in France and Germany, while Indians rank first among immigrants to the UK, and Indians as well as Chinese are important groups of immigrants to the US. There, however, they are outnumbered by Mexican immigrants by factors of seven to nine. This points to two qualifications of the simple conjecture above. First, economic conditions in the

⁷ In order to check whether cohort effects or a different age structure of the immigrant populations are responsible for these observations, we have additionally looked at the participation and unemployment rates for the 25–35 age group. As the respective rates are very similar for this more homogeneous group to those of the 18–65 age group, we conclude that cohort effects and the composition of migrants cannot explain their different labour-market performance.

destination countries, whether identical or not, are not the only determinants of migration. Second, migrants do not constitute a homogeneous group. In this section, we therefore discuss non-economic factors that help to explain why migrants from certain source regions choose certain destination countries. In the next section, we will analyse in particular whether migrants with different levels of education differ in their choice of destination countries.

Geographical and Cultural Distance

One factor that is taken into account in most econometric studies on migration is the geographical distance between source and destination countries (see, e.g., Docquier *et al.*, 2007; Pedersen *et al.*, 2004). The idea behind this is simply that migration costs increase with distance.⁸ This was certainly true in the past, but with the emergence of new transportation and communication networks in the last decades the importance of sheer geographical distance may have declined. Our data give no clear picture regarding the importance of distance. For France, Germany and the US, it seems to play an important role. Concentrating, from here onward, on immigrants in terms of foreign-born people corrected for children of natives (version *iii* in Table 1), about 49 per cent of all immigrants to the US come from Canada, Central and Caribbean America, with 32 per cent from Mexico alone; 79 per cent of immigrants to Germany (for whom country-of-birth information is available) come from Europe, including Russia and Turkey; over 74 per cent of the immigrants to France come from Europe and Northern Africa. In the UK, however, the picture is entirely different. Only 27 per cent of the immigrants there come from European countries.

Geographical distance can be more or less coincidentally correlated with other factors that also have an influence on migration decisions, so that one cannot tell their effects apart. For instance, 33 per cent of French immigrants are from the Maghreb, that is, from countries which are not only close to France but also were former colonies. With 60 per cent of its immigrants from former colonies, this factor is also important for immigration to the UK; there, however, it is not correlated with geographical distance. In Germany, 76 per cent of immigrants come from countries where either (*Spät-*)*Aussiedler* or guest workers (who were actively recruited between the 1950s and the early 1970s) are from, that is, from eastern Europe in the former case and from southern Europe in the latter.⁹ For immigrants to the US, such additional linkages appear to be less important, but at least the large number of

⁸ See Sjaastad (1962) and Carrington *et al.* (1996) for discussions of migration costs.

⁹ Persons for whom no country-of-birth information is available are counted as ethnic Germans.

immigrants from the Philippines is most certainly due to the fact that the Philippines are a former colony.

Related to this aspect, the migration literature has developed the concept of cultural distance (see, e.g., Docquier *et al.*, 2007). The idea behind this is that integration into a new cultural environment is difficult and associated with substantial, though to an important degree intangible, costs for migrants. These costs should be higher the more the new environment differs from the one they are used to.

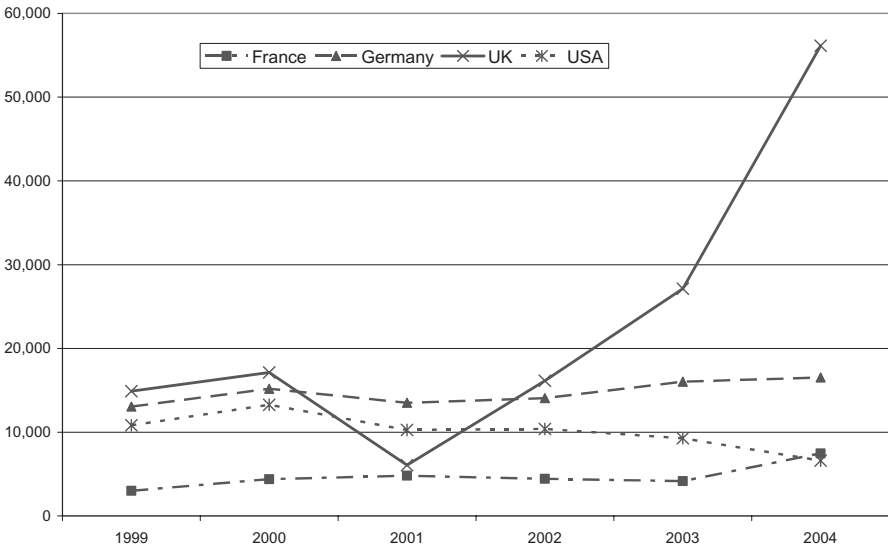
An important concept that is used to make the idea of cultural distance operational in the context of research on migration is the 'linguistic distance', measured for example by the average time people need to learn the foreign language (see, e.g., Chiswick and Miller, 2005). An obvious approach to testing the importance of this kind of distance would be to look at migration flows between countries with the same language. However, virtually all countries with the same language also have historical links, in many cases from colonialism, so that the effect of language cannot be isolated. Furthermore, there is thus far no reliable concept by which the linguistic distance between all pairs of countries could be ranked. Approaching other dimensions of cultural distance, such as proximity of religious beliefs, lifestyles, etc., also leads to measurement problems. Again, countries that are separated by only a small distance often have historical ties and a similar cultural environment. In fact, all concepts discussed here are potentially important but closely intertwined.

Nevertheless, there are two examples in our data where small cultural distance is the most convincing explanation for migration flows. One is the high number of immigrants from India, Pakistan and South Africa, all former colonies, living in the UK. The other is the distribution of immigrants from Portugal to France and Germany. In the second half of the 20th century, there were large migration flows from Portugal to France; parallel flows to Germany were much smaller, even though the Germans were recruiting Portuguese guest workers at that time. The geographical distance between Portugal and France is smaller than that to Germany, but neither Germany nor France share a common border with Portugal. It can thus be assumed that the difference in travelling costs should not be very large. However, the Portuguese language is particularly close to French, and social interactions are rather similar in these two countries.

Immigration Policy

Another factor that ought to play an important role for migrants' choice of a destination country is immigration policy. It determines whether and under

Figure 1: Immigrants from Poland by Year of Immigration



Source: National micro-data sets; authors' calculations.

what conditions a migrant has legal access to a particular country. Immigration policy can also have an effect on the expectations that migrants have regarding their life in possible destination countries. A common example of the effect of regulations on migration flows is the recent migration from Poland to the UK (see Blanchflower and Shadforth, 2009; or Drinkwater *et al.*, 2006, for discussions). At the time of EU eastern enlargement in 2004, the UK and Ireland were the only countries of the old EU-15 that gave citizens of the new Member States free access to their labour markets, whereas Germany and France implemented restrictive transitional policies. As one would expect, our data indicate that many Polish migrated to the UK shortly before and after EU enlargement (see Figure 1). However, the data do not show a significant decrease in migration from Poland to Germany and France in 2003 and 2004. Thus, it seems that the change in British immigration laws has increased total emigration from Poland and not just induced a predetermined number of emigrants to go elsewhere.

Apart from single instances of policy change that may constitute (quasi-)experimental settings, measuring and comparing the strictness of immigration laws across countries is a complicated task. To assess the impact of immigration policy properly, one would also have to consider illegal

immigrants, i.e. people who are not observed in official statistics.¹⁰ Note also that immigration laws are usually not targeted at people from specific source countries¹¹ but at individuals with specific characteristics, as is the case with family reunification, the US 'Green Card' or, more recently, points systems based on age, education and job experience such as that introduced in the UK. It is thus rather difficult to obtain a comprehensive picture of the immigration laws of a given country and their effects on migrant flows.

Migrant Networks

Migrant networks are probably one of the most important determinants of migration. These networks consist of members of the same family, the same home town or the same ethnic group (Massey *et al.*, 1993; Munshi, 2003). They facilitate migration in various ways. First, they can provide detailed information about the destination country to people who are considering migrating. This reduces uncertainty and helps potential migrants to reduce costs. Second, getting legal access to a destination country can be easier for those with family ties to other people who migrated there in the past. Most countries have special rules for family reunification that can give access to people who would face immigration restrictions elsewhere. Third, networks may offer active support in dealing with the practical matters of life in the destination country at an early stage of migration, such as finding a place to stay or finding a job. Fourth, large-scale networks allow migrants to use their native language and keep their customs in the destination country, effectively reducing cultural distance in its many dimensions.

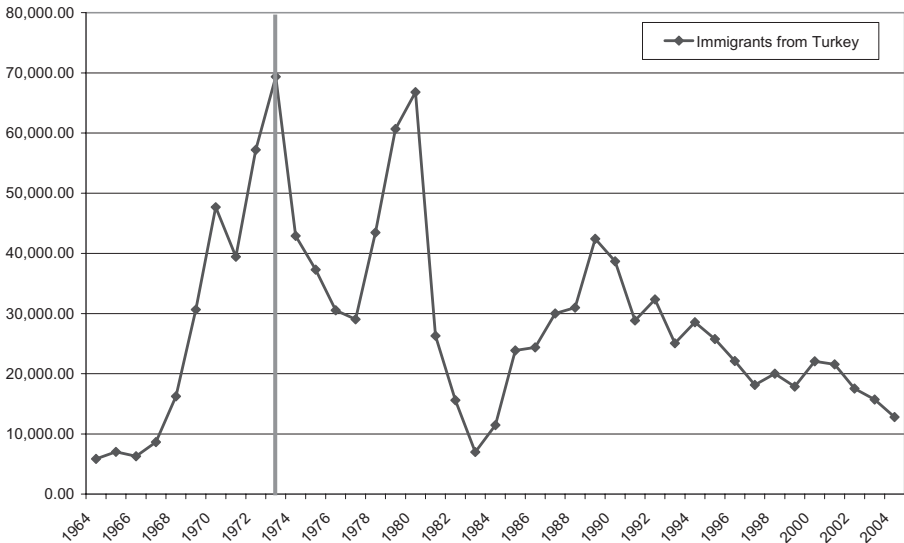
An interesting example of the importance of networks is provided by the migration flows from Turkey to Germany. Between 1961 and 1973, Germany actively recruited guest workers in Turkey. Although this programme was actually meant to be temporary, many of the guest workers became permanent immigrants. Since 1973, Germany has had a very restrictive immigration policy *vis-à-vis* Turkish people, only allowing family reunification and migration for humanitarian reasons.¹² Thus, legal conditions for potential migrants from Turkey to Germany changed substantially, and one would expect that immigration had dramatically decreased. But in fact, a large share of Turkish

¹⁰ However, in all countries the economic situation of illegal immigrants is far worse than that of legal ones. Hence, as long as economic conditions in possible destination countries are not too different from each other, immigrants should always prefer countries to which they can legally migrate.

¹¹ An obvious exception is the differentiation between EU citizens and citizens from 'third countries' in the immigration policies of all EU Member States.

¹² After the military coup in Turkey in 1980 and during the military conflict in Kurdistan in the second half of the 1980s, a large number of Turkish asylum seekers came to Germany.

Figure 2: Immigrants Aged 18–65 from Turkey to Germany by Year of Arrival



Source: German *Mikrozensus*.

immigrants to Germany migrated after 1973 (see Figure 2), and network effects are the most convincing explanation for this.

Migrant networks require a critical mass of immigrants from a particular source country, or source region. Therefore, in order fully to explain this determinant of migration one also has to consider the conditions under which the first migrants came to the destination country. Short distances, cultural proximity and favourable immigration policies of the destination country can lead to a first wave of migration flows. Later on, these first migrants may form migrant networks which, in turn, can attract additional migrants from the same source countries as they (further) reduce the cultural distance and may even create options to use preferential immigration rules. This can be the case even if the initial conditions have changed completely since then. As a consequence, network effects can become stronger and stronger over time. Once they have been initiated, migration flows in a particular direction may thus be self-enforcing.

A large part of migration into our four countries can indeed be attributed to networks that originate in historical and cultural links, and in specific policy measures. With the exception of Poland (which ranks fifth), the ten most important source countries of immigrants to the UK are former colonies. Immigrants to France from the Maghreb countries as well as immigrants to

Germany from guest-worker countries (Turkey, the former Yugoslavia and Italy) or countries with many (*Spät-*)*Aussiedler* (Russia, Poland and Romania) are nowadays forming strong networks. For the US, similar effects may apply to immigrants from the Philippines, as already mentioned. Also, the very large immigration flows from Mexico and El Salvador are most likely not only caused by the short distance to the US, but also by the emergence of strong migrant networks.

Note that networks may play a dual role in directing migration flows. On the one hand, they can act as strong 'pull factors' which effectively render any individual-level choices immaterial. On the other hand, they can also contribute to more informed, better choices through a significant reduction of costs and uncertainties involved in migration decisions. In reality, it may be very difficult to discriminate between these two aspects, one working through social ties and one through economic rationality. In any case, together with the immigration policy of a destination country, networks are certainly one of the most important determinants of migration, creating strong idiosyncrasies in the composition of immigrants to each country. Still, our data suggest that there may be other factors as well, with a more apparent economic content, that have a strong influence on migration decisions.

A brief remark on reasonable assumptions regarding the informational setting may be in order here. Discussing migrants' location decisions and relevant incentives often seems to suggest that migrants had to be perfectly informed about potential destination countries to really make 'choices' about where to go. In reality, information is, of course, far from perfect (as is acknowledged in much of the economics literature on migration; see, e.g., Katz and Stark, 1989; Stark, 1991). This may be precisely why geographical, historical and cultural links as well as networks play an important role in this context, which is difficult to disentangle from the effect of economic and institutional factors. Not only do the former influence – or even predetermine to a certain extent – decisions on where to migrate; they also decrease significantly the costs incurred in obtaining some amount of reliable information.

III. Employment Opportunities and Skill-Specific Incentives to Migrate

In addition to controlling for one of the dimensions of distance and potential network effects, the migration literature usually emphasizes the role of wages, or wage differentials between source countries and destination countries, as well as employment opportunities in the destination country, measured for

instance through aggregate unemployment rates, as important factors for the decision to migrate in a particular direction (see, e.g., Todaro, 1969; Harris and Todaro, 1970). It is important to note, however, that the impact of these factors is in all likelihood much more group-specific than the effects of distance, cultural links and network effects.¹³ The same may apply to institutional factors, such as labour market regulation, taxes and transfers, which we will not address in this article.¹⁴ In terms of a descriptive analysis, an important and highly interesting dimension of the structure of migrants living in the four destination countries is their skill composition. We will therefore look at this aspect more closely, taking into account in particular how migrants' skills relate to their employment opportunities and wages in different countries.

Skill Composition of Migrants

The idea that high-skilled and low-skilled individuals face different economic incentives to migrate is at the core of the well-known application of the Roy model to immigration (Roy, 1951; Borjas, 1987). This model states that, in a two-country setting in which both countries are equal except for their wage dispersion, high-skilled people will migrate from the country with the lower wage dispersion to the one with the higher wage dispersion, while low-skilled people move in the opposite direction. In a multi-country setting, high-skilled and low-skilled migrants will *ceteris paribus* choose those destination countries that offer them the highest wages. In addition to wages, skill-specific employment opportunities as well as institutional factors may further contribute to differentiate incentives to migrate to a particular country by the level of skills of the potential migrants.

To what extent do migrants with different skill levels really choose different destination countries? To address this question, we need a consistent measure of skills. Assuming that the skill level of an individual is determined by, or at least highly correlated with, educational attainment, it can be measured by the highest educational degree obtained. To rank educational degrees of various kinds, we use the ISCED (international standard classification of education), a classification that was developed by UNESCO (1997) to allow for international comparisons of educational degrees. For the German data we use an algorithm proposed by Schroedter *et al.* (2006); for the US data we apply the mapping between years of schooling and ISCED levels provided

¹³ Immigration policies, however, can be targeted both at citizens of specific source countries and at migrants with specific characteristics, such as education, professional qualifications or age (see below).

¹⁴ See Geis *et al.* (2008) for an empirical analysis which builds on the same data set as the present article and adds data on national-level institutions to explain migrants' choices among different destination countries.

by the Institute for Education Sciences (2007); for the British data our reclassification follows the British Labour Force Survey User Guide (Office for National Statistics, 2007) with two deviations;¹⁵ the French data already contain education levels in the ISCED classification.

Here, we do not use all ISCED levels, but condense them into four educational groups: no secondary educational attainment (ISCED 0–1), lower secondary educational attainment (ISCED 2), upper secondary and post-secondary, non-tertiary educational attainment (ISCED 3–4) and tertiary educational attainment (ISCED 5–6). A major reason is that differentiations between ISCED 3 and 4 and between ISCED 5 and 6 are hardly comparable across countries. Table 2 gives an overview of the skill structure of immigrants to our four destination countries based on these groups, also comparing it to the skill structure of the native populations. We now focus on individuals aged between 25 and 54, as these people are generally part of the labour force.

According to Table 2, our data support the idea that the Anglo-Saxon countries attract highly qualified migrants, whereas Germany and France attract low-skilled ones. Among all immigrants aged 25–54, 34 per cent have a tertiary degree (ISCED 5–6) in the US and 28 per cent in the UK. In France and Germany, this share is substantially lower – 22 per cent and 21 per cent, respectively. However, the share of natives with a tertiary degree is also much higher in the US (39 per cent) and still higher in the UK (31 per cent) than in France (28 per cent) and Germany (29 per cent). Up to a point, this general observation still holds if we apply a broader skill measure. Considering the shares of all migrants with at least an upper secondary degree (ISCED 3–6), we find that 69 per cent of immigrants in the US, 62 per cent in Germany and the UK, but only 50 per cent in France belong to this group. It should be noted, by the way, that in the UK only 69 per cent of the native population aged 25–54 have at least an upper secondary degree, while 73 per cent of the French, 89 per cent of the German and even 91 per cent of the US native population do. Relative to natives, the educational level of immigrants is thus by far the highest in the UK.

In some cases, the skill structure of migrants also differs remarkably by source countries. Probably the most prominent example is given by the US. Table 3 (upper panel) shows that there are enormous differences in the

¹⁵ First, we classify people who state that they have been in school but have not acquired any formal degree as ISCED 1, not as ISCED 2. Second, we do not classify all people who state that they have 'other qualifications' as ISCED 3, but assign them the median ISCED level of people with the same age and the same (last) occupation. For this we use the SOC (standard occupational classification) 2000 unit-level classification which distinguishes between 353 different occupations. An assignment of education levels is necessary, as most foreign degrees are recorded as 'other qualification' in the British Labour Force Survey.

Table 2: Immigrants by Skill Groups (Aged 25–54)

	<i>France</i>		<i>Germany</i>	
	<i>Natives</i>	<i>Immigrants</i>	<i>Natives</i>	<i>Immigrants</i>
<i>ISCED 0–1</i>				
Number	1,613,090	699,323	368,143	718,828
Share	7.13%	28.56%	1.24%	11.70%
Share of immigrants		30.24%		66.13%
Participation rate	74.75%	67.98%	68.14%	60.36%
Unemployment rate	13.18%	19.15%	29.47%	26.86%
Wage	\$17.47	\$17.63	\$12.77	\$17.95
<i>ISCED 2</i>				
Number	4,478,207	512,363	3,003,786	1,596,041
Share	19.78%	20.92%	10.14%	25.97%
Share of immigrants		10.27%		34.70%
Participation rate	84.92%	76.05%	79.40%	75.08%
Unemployment rate	12.10%	21.55%	18.42%	20.65%
Wage	\$19.73	\$18.06	\$17.68	\$17.83
<i>ISCED 3–4</i>				
Number	10,167,941	701,190	17,763,323	2,547,618
Share	44.92%	28.63%	59.95%	41.45%
Share of immigrants		6.45%		12.54%
Participation rate	90.00%	81.39%	88.62%	84.46%
Unemployment rate	6.90%	17.19%	9.87%	15.56%
Wage	\$20.93	\$19.44	\$20.32	\$19.55
<i>ISCED 5–6</i>				
Number	6,375,285	535,926	8,490,608	1,282,602
Share	28.17%	21.89%	28.66%	20.87%
Share of immigrants		7.75%		13.12%
Participation rate	91.67%	80.90%	90.61%	81.55%
Unemployment rate	5.45%	15.81%	3.92%	12.69%
Wage	\$28.50	\$26.71	\$27.73	\$26.60
<i>Total</i>				
Number	22,634,522	2,448,802	29,628,916	6,145,765
Share of immigrants		9.76%		17.18%
Participation rate	88.38%	76.34%	88.00%	78.60%
Unemployment rate	7.84%	18.28%	9.09%	17.22%
Wage	\$22.75	\$20.28	\$22.40	\$20.62

Table 2: (Continued)

	UK		US	
	Natives	Immigrants	Natives	Immigrants
<i>ISCED 0–1</i>				
Number	2,590,481	509,257	1,667,184	3,884,751
Share	11.92%	19.89%	1.63%	18.27%
Share of immigrants		16.43%		69.97%
Participation rate	61.94%	49.95%	51.41%	73.25%
Unemployment rate	6.98%	9.25%	13.33%	7.99%
Wage	\$13.85	\$12.19	\$15.12	\$12.09
<i>ISCED 2</i>				
Number	3,905,006	305,096	7,655,447	2,659,406
Share	17.96%	11.92%	7.47%	12.51%
Share of immigrants		7.25%		25.78%
Participation rate	82.30%	78.99%	67.58%	74.26%
Unemployment rate	4.27%	7.65%	14.63%	7.80%
Wage	\$15.63	\$15.62	\$15.00	\$13.64
<i>ISCED 3–4</i>				
Number	8,428,241	880,387	53,448,746	7,583,786
Share	38.77%	34.38%	52.18%	35.67%
Share of immigrants		9.46%		12.43%
Participation rate	88.44%	84.08%	81.64%	78.40%
Unemployment rate	2.78%	5.65%	6.39%	6.26%
Wage	\$18.17	\$19.32	\$19.91	\$17.39
<i>ISCED 5–6</i>				
Number	6,736,941	715,139	39,661,288	7,132,580
Share	30.99%	27.93%	38.72%	33.55%
Share of immigrants		9.60%		15.24%
Participation rate	93.08%	87.75%	87.84%	81.23%
Unemployment rate	1.81%	5.43%	3.01%	4.24%
Wage	\$25.28	\$25.56	\$32.58	\$31.94
<i>Total</i>				
Number	21,739,180	2,560,563	102,432,665	21,260,523
Share of immigrants		10.54%		17.19%
Participation rate	85.34%	73.34%	82.50%	77.89%
Unemployment rate	3.11%	7.02%	5.57%	6.04%
Wage	\$19.93	\$20.16	\$24.89	\$21.28

Source: National micro-data sets; authors' calculations.

Notes: Immigrants are defined as in version (iii) in Table 1. Participation and unemployment are directly observable in our micro-data (see footnote 6). Hourly wages are derived as described in the Appendix.

Table 3: Immigrants to the USA and Germany Aged 25–54, by Skill Groups

Immigrants from ...	USA				Total	Share
	ISCED 0–1	ISCED 2	ISCED 3–4	ISCED 5–6		
Mexico	2,689,265 37.8%	1,495,480 21.0%	2,384,069 33.5%	554,930 7.8%	7,123,744 100.0%	33.5%
Canada and other Latin America	766,029 15.2%	667,339 13.3%	2,223,289 44.3%	1,367,519 27.2%	5,024,176 100.0%	23.6%
Other countries	429,457 4.7%	496,587 5.4%	2,976,428 32.7%	5,210,131 57.2%	9,112,603 100.0%	42.9%
Natives	1,667,184 1.6%	7,655,447 7.5%	53,448,746 52.2%	39,661,288 38.7%	102,432,665 100.0%	
Germany						
Turkey	301,201 30.3%	404,875 40.7%	238,452 24.0%	49,387 5.0%	993,915 100.0%	16.3%
Other countries	417,280 8.2%	1,186,661 23.2%	2,291,732 44.8%	1,224,032 23.9%	5,119,705 100.0%	83.7%
Natives	368,143 1.2%	3,003,786 10.1%	17,763,323 60.0%	8,490,608 28.7%	29,625,860 100.0%	

Source: American Community Survey; German *Mikrozensus*; authors' calculations.

educational levels of immigrants from Mexico, from Canada and other Latin American countries, and from all other countries. Thirty-eight per cent of immigrants from Mexico do not have a secondary educational degree (ISCED 0–1), while the same holds for less than 5 per cent of migrants from 'other countries'. On the other hand, only 8 per cent of immigrants from Mexico have a tertiary degree (ISCED 5–6), in contrast to 57 per cent of immigrants from other countries. Keeping in mind that 34 per cent of all immigrants to the US come from Mexico and 43 per cent from 'other countries', this shows that the immigrant population is very heterogeneous. In Europe, these differences are far smaller, and the immigrant population is more homogeneous. Nevertheless, there is some variation in the skill structure of various sub-groups of immigrants there too, with immigrants from Turkey and other countries to Germany offering a good example. Only 5 per cent of Turkish immigrants to Germany have a tertiary degree, while more than 23 per cent of those from other countries do (see Table 3, lower panel).

Employment Opportunities and Wages by Skill Groups

Employment opportunities for natives and immigrants are usually far from equal. In addition, this difference also varies by educational level, yet with substantial variation across our four destination countries (again, see Table 2). In the US, the unemployment rate of immigrants aged 25–54 with lower skills (ISCED 0–2) is six percentage points lower than that of natives in the same skill groups. In Germany and the UK, the rate is three percentage points higher, and in France it is eight percentage points higher. At the same time, the participation rate of immigrants with lower skills is higher in the US than in Europe, whereas the participation rates of natives in the same skill groups are clearly higher in (continental) Europe than they are in the US. This indicates that low-skilled immigrants are much better integrated in the US labour market than in European ones.

The unemployment rate of immigrants with high skills (ISCED 5–6) relative to that of natives in the same skill group is again lowest in the US. There, it is higher by a factor of about 1.4; the corresponding figure for France is about 2.9, for the UK about 3.0 and for Germany about 3.2. Taking into account that participation rates in this group are about 81 per cent in Germany, France and the US and 88 per cent in the UK, these numbers indicate that for highly qualified immigrants it appears to be much easier to enter the US labour market than the German and French ones.

Calculating unemployment rates and participation rates and comparing them across the four countries does not raise any major problems, as all micro-data sets refer to the ILO classification and are based on parallel survey

Table 4: Share of Self-Employment in Total Employment, Individuals Aged 25–54

	<i>France</i>	<i>Germany</i>	<i>UK</i>	<i>US</i>
Natives	9.4%	11.5%	12.5%	10.0%
Immigrants	10.3%	10.7%	14.7%	10.8%
Immigrants/natives	1.09	0.93	1.18	1.08

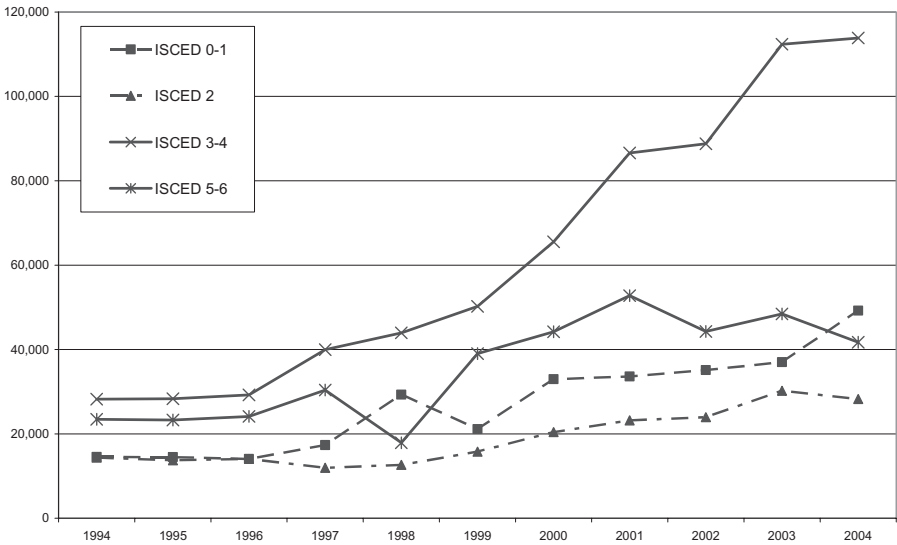
Source: National micro-data sets; authors' calculations.

questions. Comparing wages at an international level is much more difficult in general, and it is certainly not facilitated by the fact that the wage data provided in the four micro-data sets are not entirely consistent. In the Appendix to this article, we describe the procedures we applied to extract a rough, but meaningful, measure of gross wages per hour. Our data indicate that, except for high-skilled immigrants (ISCED 5–6), the wages of immigrants are much lower than those of natives in the US, whereas in the European countries the wages of immigrants and natives are similar. This could be the reason why the unemployment rate in the US is lower for immigrants than for natives and higher in the European countries. Given the nature of our wage data, it is unfortunately not possible to compare the precise degree of wage dispersion across our four destination countries. Using simple measures, the dispersion of hourly wages appears to be a lot wider in the US than in the European countries, and still somewhat wider in the UK than in France and Germany.¹⁶ However, the result for the US may be exaggerated by the way we constructed our wage data.

Educational attainment is not the only measure of migrants' skill levels, as skills are not only reflected in formal qualifications, but also relate to motivation and, in particular, entrepreneurship (see Saint-Paul, 2004). An alternative approach to measuring the skills of migrants, based on their willingness to take on economic risks, could thus be to look at the shares of self-employed individuals among them. Legal rules for self-employment are different in our four destination countries, so that direct cross-country comparisons of these shares may not be appropriate. Table 4 therefore also displays the immigrants-to-natives ratios of self-employment for individuals aged 25–54 in each country. Self-employment is more widespread among immigrants than it is among natives in France, the UK and the US, while in Germany the share of immigrants who are self-employed is lower than that of natives.

¹⁶ For instance, the Gini coefficient of our measure of wages per hour is 0.423 for the US, 0.441 for the UK, 0.457 for France and 0.458 for Germany.

Figure 3: Immigrants to the UK Aged 18–65, by Year of Arrival and Skill Levels



Source: British Labour Force Survey; authors' calculations.

Skill-Specific Immigration Programmes

Besides skill-specific employment opportunities and wages in the destination country, there are also preferential immigration rules for high-skilled people that we have neglected so far, such as the HMSP (highly skilled migrant programme) in the UK, the 'H1B visa' in the US and the German 'Green Card' for IT specialists (Zaletel, 2006). The British HSMP is a very interesting case in showing the effects of group-specific immigration policies. This programme was launched in January 2002, without any preceding scheme of a similar type. It gives people access to the UK regardless of a specific job offer if they reach a certain score based on their qualifications and experience. To see whether this programme has been effective in any way, we plot the numbers of all immigrants aged 18–65 to the UK by year of arrival and educational level in Figure 3. The figure indicates that the immigration of individuals holding tertiary degrees (ISCED 5–6) has not increased since 2001, while immigration of those with an upper and post-secondary degree (ISCED 3–4) has continued to rise substantially. This means that the HSMP did not have much effect on its most important target group. However, it is not unlikely that discussions about this programme and its implementation had a signalling effect for persons with intermediate skills, thus stimulating their immigration.

In the US, selective immigration policies have been rather successful, except for the effects on immigration from its neighbouring countries. As we have already seen in Table 3 (upper panel), the share of individuals aged 25–54 with a tertiary degree (ISCED 5–6) who came from countries other than Canada and Latin America is extremely high, at 57 per cent. Conversely, the share of immigrants from these countries without an upper secondary education (ISCED 0–2) is very low, at 10 per cent. Failure to reach similarly favourable results *vis-à-vis* Mexico and other source countries in North, Central and Caribbean America is mainly due to family reunification rules which offer an alternative route for a significant number of people in each year for getting access to the US without any skill-specific selection. Overall, our data nevertheless indicate that, so far, there is a difference between the US and Europe, not so much between the Anglo-Saxon countries and the continental European ones, regarding the effectiveness of selective migration policies.

Summary

Now, what do these results tell us about the group-specific determinants of migration? First of all, France and Germany appear to be relatively unattractive for highly educated migrants, as the unemployment rate of immigrants with a tertiary educational degree (16 per cent and 13 per cent, respectively) is enormous in these countries and wages are significantly lower than in the UK and the US. Thus, it is not surprising that the shares of high-skilled immigrants are much higher in the UK and the US than in continental Europe. Second, across all skill groups our data show an interesting pattern: on the one hand, immigrants earn lower wages than natives in the US, whereas in the European countries the earnings are similar for both groups. On the other hand, in the European countries immigrants are much more likely to become unemployed than natives, whereas this is not the case in the US. In a sense, both high-skilled *and* low-skilled immigrants appear to be better integrated in the US labour market than they are in Europe. Last but not least, regardless of whether or not our destination countries are actively attempting to select immigrants by skill on a larger scale, none of them appears to be very successful in attracting *mainly* high-skilled migrants.

IV. Migration between the Four Destination Countries

An interesting feature of our data set is that it also allows for a description of migration between our four destination countries. In this respect, we are able

to contribute some insights to recent discussions of whether, in the context of globalization and increasing mobility of all factors of production, there is nowadays a brain drain and, on the receiving side, a brain gain between advanced economies (Saint-Paul, 2004).

Table 5 gives an overview of gross migration between the four countries, differentiated by skill levels. Since all of the countries we are looking at are highly developed, these mutual flows are basically modest. In particular, the numbers of low-skilled migrants are very small, so that we aggregate low educational degrees to ISCED 0–2. As there are still only 10,000 individuals or less in most of the cells that result, one should be rather cautious when interpreting these numbers. For comparison, the table also confronts the skill structure of migrants from one country to another with the skill structure of the residents in the source country as well as in the destination country to see whether there are any disproportions on either side.¹⁷

Table 5 shows that far more people have migrated from the European countries to the US than the other way round. Within Europe the differences are much smaller. Nevertheless, there are clearly more people from France and the UK who live in Germany than people from Germany living in France and the UK.¹⁸ As the same holds for high-skilled persons (ISCED 5–6), Germany appears to benefit from the skill structure of migration within Europe, although only on a small scale. France appears to lose in this game, in terms of total migration and high-skilled migrants, *vis-à-vis* the other two European countries. All in all, however, there is no indication that intra-European migration has a notable impact on the skill structure of both source and destination countries.

Things are different with regard to migration between Europe and the US. First of all, we observe that migration from the UK and Germany to the US is substantial, amounting to 1.5 per cent and 0.7 per cent of the population in the source countries, respectively.¹⁹ At the same time, migration from the European countries to the US is clearly biased towards high-skilled individuals. Focusing on this subgroup of the population, emigration to the US amounts to 2.9 per cent for the UK, 1.3 per cent for Germany and 0.9 per cent

¹⁷ Note that, in our rough classification of skill levels, migration could be beneficial (detrimental) for both sides if net migration mainly takes place in the intermediate skill group and the sending country has a large share of high-skilled individuals, while the receiving country has a large share of low-skilled individuals (or vice versa).

¹⁸ Note that this crucially depends on the definition of immigrants. For instance, if one does not exclude the children of armed forces, then more people from Germany live in the UK than people from the UK in Germany.

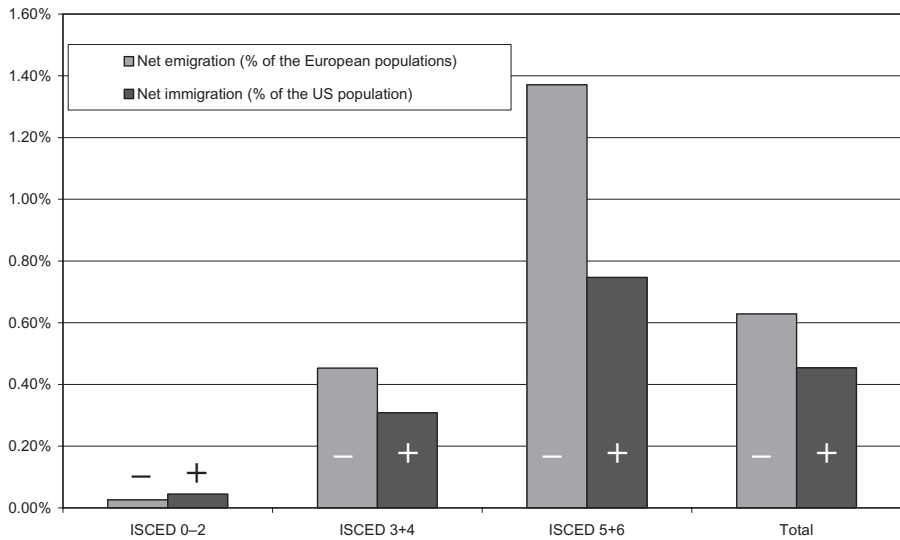
¹⁹ The corresponding figure for France is only 0.3 per cent. Note that these figures are not included in Table 5. See Uebelmesser (2006) for an in-depth analysis of the characteristics of Germans thinking about emigration.

Table 5: Migrants between the Four Countries (Aged 25–54)

	... to France	... to Germany	... to the UK	... to the US
<i>From France . . .</i>				
ISCED 0–2 (in parentheses: share of total)		7,367 (11.2%)	6,006 (10.6%)	2,053 (2.7%)
% of ISCED group				
... in the source country		0.12%	0.03%	0.03%
... in the destination country		0.22%	0.09%	0.02%
ISCED 3–4 (in parentheses: share of total)		22,761 (34.6%)	28,165 (49.6%)	19,630 (25.5%)
% of ISCED group				
... in the source country		0.22%	0.28%	0.19%
... in the destination country		0.13%	0.33%	0.04%
ISCED 5–6 (in parentheses: share of total)		35,689 (54.2%)	22,629 (39.8%)	55,408 (71.9%)
% of ISCED group				
... in the source country		0.56%	0.35%	0.87%
... in the destination country		0.42%	0.34%	0.14%
Total		65,817 (100%)	56,800 (100%)	77,091 (100%)
<i>From Germany . . .</i>				
ISCED 0–2 (in parentheses: share of total)	7,375 (15.1%)		2,363 (7.0%)	10,886 (5.0%)
% of ISCED group				
... in the source country	0.22%		0.07%	0.32%
... in the destination country	0.12%		0.04%	0.12%
ISCED 3–4 (in parentheses: share of total)	21,135 (43.3%)		16,089 (47.9%)	92,151 (42.5%)
% of ISCED group				
... in the source country	0.12%		0.09%	0.52%
... in the destination country	0.21%		0.19%	0.17%
ISCED 5–6 (in parentheses: share of total)	20,351 (41.7%)		15,157 (45.1%)	113,912 (52.5%)
% of ISCED group				
... in the source country	0.24%		0.18%	1.34%
... in the destination country	0.32%		0.22%	0.29%
Total	48,861 (100%)		33,609 (100%)	216,949 (100%)
<i>From the UK . . .</i>				
ISCED 0–2 (in parentheses: share of total)	3,755 (10.1%)	6,569 (11.7%)		9,282 (2.8%)
% of ISCED group				
... in the source country	0.06%	0.10%		0.15%
... in the destination country	0.06%	0.19%		0.10%
ISCED 3–4 (in parentheses: share of total)	12,833 (34.4%)	20,098 (35.8%)		121,502 (37.2%)
% of ISCED group				
... in the source country	0.15%	0.24%		1.44%
... in the destination country	0.13%	0.11%		0.23%
ISCED 5–6 (in parentheses: share of total)	20,733 (55.6%)	29,481 (52.5%)		195,607 (59.9%)
% of ISCED group				
... in the source country	0.31%	0.44%		2.90%
... in the destination country	0.33%	0.35%		0.49%
Total	37,321 (100%)	56,147 (100%)		326,391 (100%)
<i>From the US . . .</i>				
ISCED 0–2 (in parentheses: share of total)	1,933 (17.8%)	9,752 (13.2%)	6,385 (11.0%)	
% of ISCED group				
... in the source country	0.02%	0.10%	0.07%	
... in the destination country	0.03%	0.29%	0.10%	
ISCED 3–4 (in parentheses: share of total)	151 (1.4%)	25,817 (35.0%)	29,941 (51.5%)	
% of ISCED group				
... in the source country	0.00%	0.05%	0.06%	
... in the destination country	0.00%	0.15%	0.36%	
ISCED 5–6 (in parentheses: share of total)	8,788 (80.8%)	38,177 (51.8%)	21,771 (37.5%)	
% of ISCED group				
... in the source country	0.02%	0.10%	0.05%	
... in the destination country	0.14%	0.45%	0.32%	
Total	10,872 (100%)	73,747 (100%)	58,097 (100%)	

Source: National micro-data sets; authors' calculations.

Figure 4: Net Migration from the European Countries to the US, by Skill Levels



Source: National micro-data sets; authors' calculations.

for France. There is clearly less of a skill bias in migration from the US to Europe, and total numbers of migrants are much smaller.

To assess whether there is really a brain drain or brain gain, respectively, involved in migration from one country or region to another, one should of course look at net migration. High-skilled individuals could be more mobile than low-skilled ones in general, which would explain a skill bias in gross migration, while there is simply some 'brain exchange' going on after consolidating these numbers. To investigate this point more carefully, we now combine the figures for the three large European countries in our data set and look at the structure of the resulting net migration to the US (cf. Figure 4). On both sides, the skill structure of the population would be unaffected if net migration were balanced for each skill group or if net migration increased, or reduced, each skill group by the same percentage. In other words, the profile of the columns included in Figure 4 would have to be flat for a given country or region, either at the horizontal axis, above or below it.²⁰ According to our definition, the European countries taken together indeed suffer from a brain

²⁰ One may discuss whether a net in-flow (out-flow) of high-skilled individuals is not beneficial (detrimental) anyway, as they are usually more scarce than the low-skilled throughout the world.

drain *vis-à-vis* the US. While net migration is almost balanced for the low-skilled, there has been considerable net migration of high-skilled people out of Europe. This brain drain is clearly the strongest for the UK, but it is also relevant for Germany and France. For the US, there is thus a brain gain *vis-à-vis* the European countries, but it appears to be less pronounced due to the different skill structure of the US population (and due to the larger working-age population in general).

These numbers quite probably overstate the current brain drain from Europe to the US, as a large share of our observations migrated to the US years ago. Nevertheless, they indicate that the US is particularly attractive for high-skilled Europeans, much more so than Europe is for high-skilled Americans. Beyond the fact that high-skilled individuals are generally more mobile than low-skilled, selective immigration policy in the US may also play a role in strengthening the skill pattern of net migration.

Conclusions

Our data provide interesting insights into the structure and, most notably, the skill composition of migrants. Regarding the latter aspect, we find clear differences between the three big EU Member States, France, Germany and the UK, and also *vis-à-vis* the US. The share of high-skilled immigrants (ISCED 5–6) in the US is far higher than that in any of the three European countries, while the share of high-skilled immigrants in the UK is still more than six percentage points higher than those in Germany and France. The share of qualified immigrants in total (ISCED 3–6) is also highest in the US, followed by the UK and Germany, with equal rates, and then by France. Migration between the European countries is low and basically balanced, whereas we observe a brain drain from the European countries, especially from the UK, to the US.

It is also interesting to note that, in general, immigrants to the US perform better than natives in terms of employment, while immigrants to the European countries do worse. Comparing wages of immigrants and natives, we find that wages of immigrants, except for high-skilled ones, are much lower than those of natives in the US, whereas the difference is much smaller in the European countries. When discussing economic incentives to migrate, one should thus probably not only distinguish between Anglo-Saxon countries and continental Europe, but also carefully study differences between Europe and the US. At the same time, our analysis indicates that the economic situation in potential destination countries is certainly not the only factor that influences the decisions of migrants. This is not surprising, as migrants generally do not

have perfect information regarding the economic situation in all potential destination countries.

In themselves, our data cannot give a comprehensive picture of the reasons why people migrate. However, we do find some interesting features. The short distance is certainly one explanation for the large immigration flows from Central and Caribbean America to the US. However, in the UK immigrants from European countries make up only a small portion of the immigrant population. The main reasons, it appears, are the cultural links between the UK and its former colonies and the resulting migration networks. These networks are an important driving force for migration to a particular destination country. They substantially reduce the cost of migration and thus, in spite of long distances and legal barriers, strongly influence the attractiveness of a destination country. Networks could actually have a stronger effect than the economic situation in the destination countries.

Taken together, these are important insights contributing to a better understanding of migration decisions in general and for the main sub-groups of migrants in particular. Bearing these observations in mind, it is nevertheless important to address the role of factors other than labour market prospects on the one hand, and distance, culture and networks on the other, for migrants' choices of destination countries. The reason is that, in addition to immigration policies that are becoming more and more selective regarding the skill composition of migrants, there may be further determinants which have an impact on these choices and can be influenced by political decisions in countries that seek to attract migrants. For this study, our rich data set, which is constructed from a combination of different national micro-data sets, has been utilized mainly for descriptive purposes. The next step is to exploit it for econometric analyses, controlling for aspects such as employment opportunities, wages and network effects, with an eye on individuals with different skills and placing special emphasis on further – in particular, institutional – determinants which have not been much investigated to date.²¹ The compilation of a more comprehensive picture of migration incentives that are operative at the micro-level becomes more and more important, the more the principle of free mobility of labour becomes fully effective within the enlarged EU and, more generally, the more the developed countries may engage in international competition for qualified workers. Our present analysis is intended to pave the way towards this direction for future research.

²¹ We follow this route in Geis *et al.* (2008).

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Appendix: Calculation of Hourly Wages

The information on wages provided in our four data sets is actually not comparable. Nevertheless, to derive a rough measure for hourly gross wages, we proceed as follows. As a first step, we calculate wages per hour using information on wage earnings and working hours contained in all data sets. As our German data set actually contains income rather than wage data, we consider only persons stating that they have no other income than wages. As a next step, we calculate wages for all the subgroups we consider in more detail (cf. Tables 1 and 2), relative to average wages in the country. In the last step, we multiply these relative wages with data on GDP (gross domestic product) per hours worked from OECD (2008) and the share of labour compensation on GDP from OECD (2009). We cannot directly compare our intermediate results regarding wages per hour, as for the European countries we observe net wages, while for the US we observe gross wages. Note that this means that the dispersion of our wage measure for the US is probably exaggerated compared to that in the European countries. Nevertheless, we think our measure of wages is superior to the (uniform) GDP per capita which is used in many other studies on the determinants of migration (see, e.g., Pedersen *et al.*, 2004; Mayda, 2007; Docquier *et al.*, 2007).

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