

- DRAFT -

1. Introduction

For centuries, Germany has experienced large-scale in-migration of labour force. Between the 1950s and the early 1970s, a period of economic expansion and increasing labor shortages, particularly in the low-skilled labor market segment, a “guest-worker program” brought hundreds of thousands of workers from Southern Europe, and, later on, Turkey and Eastern Europe into the country. Until the early 1980s, the foreign workforce, complemented production capital helped boost up Germany’s economic growth. As growth rates subsided during the mid-1980s, the workers were increasingly perceived as a burden on the country’s social system. The government tried to prevent the inflow of additional labour force and convince those who had become unemployed to return home, but the number of foreigners looking for jobs in Germany continued to grow.

The tables finally turned in the 1990s, when Germany slipped into an economic crisis under the pressures of national reunification and an increasingly globalized economy. Unemployment has become a mass phenomenon and affects almost all skill and educational levels. Permanent unemployment rates are around 10% and real wages are decreasing. One of the first consequences of this crisis was the decline in foreign labour force inflow, which was supported by the government’s efforts to protect the domestic labor market. This was followed by an increase in emigration, as a growing number of Germans have started leaving the country in search of better opportunities. The reactions to this new phenomenon are mixed, but its consequences have hardly been researched and are not clear to a broader public (Bundesamt für Migration und Flüchtlinge, 2006). Additionally, an increasing number of foreign-born residents return to their home countries or choose to migrate to a third country.

The phenomenon of German out-migration has been neglected by the scientific community (Bundesamt für Migration und Flüchtlinge, 2006: 114) but received growing

attention from the media. The departure of highly qualified labor force, in particular, fuels popular fears of “brain drain.” The research presented in this paper contributes to filling this gap. Starting from the hypotheses that the international out-migration of labour force entails net costs to the domestic economy, and could hamper economic growth in the long term, it explores the economic consequences of labor outflow for Germany using a cost benefit analysis. It separately studies the out-migration of highly qualified labor force, skilled manual workers and low-skilled workers, including German nationals as well as the (second-step) out-migration of foreigners, and analyzes the opportunity costs of lost labor, remittances, and the possible backflow of human capital acquired abroad. A weak statistical basis constituted a challenge for quantitative analyses in this context.

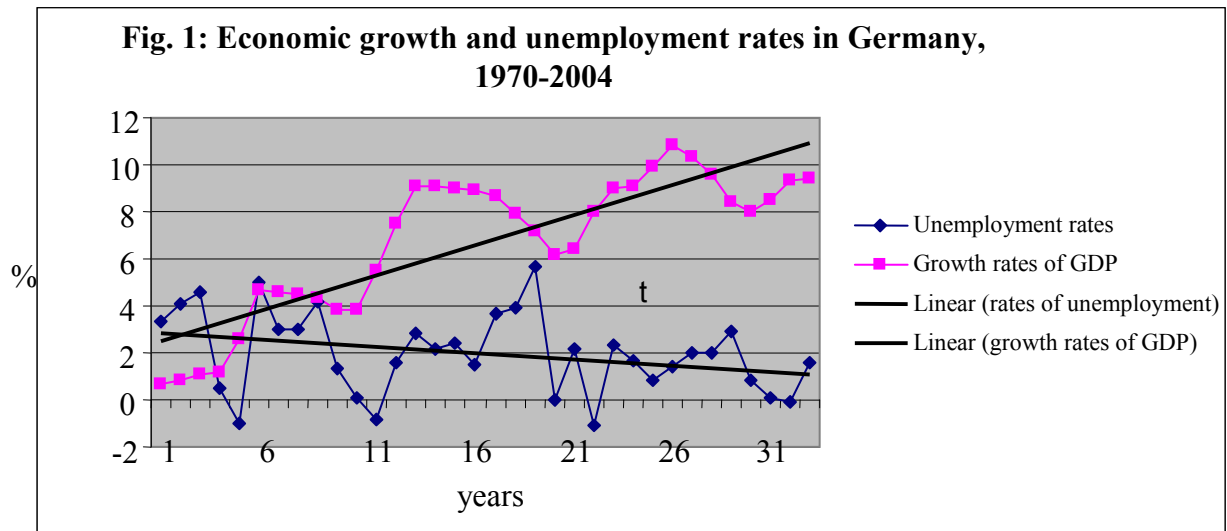
The paper is organized as follows: Section 2 explains the development of out-migration in the context of Germany’s economic growth, Section 3 presents cost and benefit calculations, and Section 4 draws conclusions.

2. Out-migration from Germany

2.1 Economic development and the labor market

For centuries, Germany was one of Europe’s economic “growth engines.” Despite the positive growth rate of the national labor force, the country attracted large numbers of workers (first from Southern Europe and, later on, from Turkey) through active recruitment programs during the 1960s and 1970s (Castles, 1986; Straubhaar, 1988; Körner, 1990; Knerr, 1997). Since the early 1990s, however, national economic growth has decreased and unemployment rates have reached unprecedented heights, reacting to changing growth rates with a time lag of up to two years (Fig. 1). At the same time, Germany is the only country in the European Union (EU) where real wages have declined (Claus, 2006). During the 1995-2004 period, German real wages dropped 0.9 percent while, in the rest of the EU, they

reached an average increase of 7.7 percent. Sweden and Great Britain were on top with an over 25 percent increase; in the United States the increase was almost 20 percent.



Source: based on data from Statistisches Bundesamt Deutschland and WSI (2005, data from EU Commission).

Even though German wages are still relatively high when compared to those of other EU member states and, even more so, to current international standards, the formerly positive differences are shrinking. The labour force is increasingly subject to employment insecurity, reduced unemployment benefits, worsening working conditions such as longer working hours, fewer fringe benefits, and, generally increased pressure. In less than a decade, for example, the share of time-restricted work contracts has more than doubled for people less than 25 years of age and increased by more than one third for those between 25 and 35 (Table 1).

Table 1: Percentage of time-restricted work contracts, 1995 and 2003

<i>Age group</i>	<i>1995</i>	<i>2003</i>
<i>15-20</i>	31.5	80.9
<i>21-25</i>	20.9	43.2
<i>26-30</i>	10.2	16.6

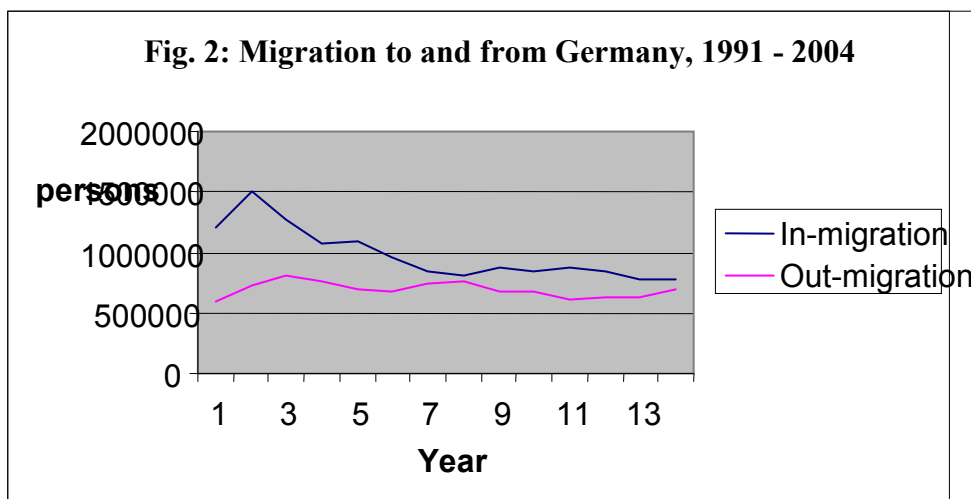
31-31	5.6	8.3
-------	-----	-----

Source: based on data from Statistisches Bundesamt, Fachserie 1; cit. from Köhne.

The declining demand for labor has been followed by a subsiding supply of expatriate labor, increased return migration or second-step migration on the part of foreigners, and large-scale emigration of German workforce, a new phenomenon in post-war Germany.

2.2 Changing cross-border migration patterns

Since the early 1990s, the gap between in-migration and out-migration has narrowed significantly (Fig. 2¹). In-migration declined considerably during the 1991-2005 period and, in 2004, Germany registered the lowest number of immigrants in more than a decade. Additionally, more and more Germans, along with first and second generation immigrants, are leaving the country to take employment abroad. Some immigrants return to their or their parents' home country, others move to third countries. Between 2003 and 2004 alone, the number of foreigners residing in Germany dropped 8.4 percent (Migrationsbericht, 2006:117). As a result, out-migration surpassed in-migration in 2005.

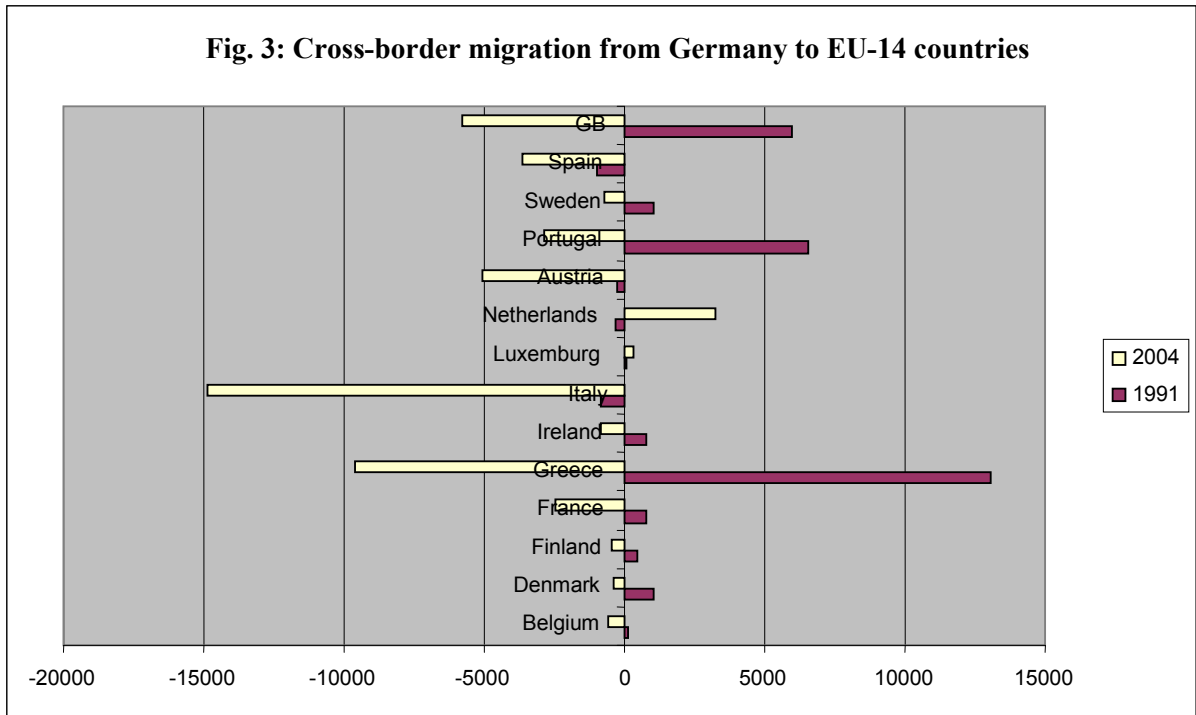


¹ Official figures do not include the large number of ethnic Germans (the so-called “Spätaussiedler”) who have left Eastern Europe (mainly the former Soviet Union) and receive German citizenship as soon as they get into the country. Their number amounted to 397,073 people in 1990, and had steadily declined to 59,093 in 2004 (Migrationsbericht, 2006:46).

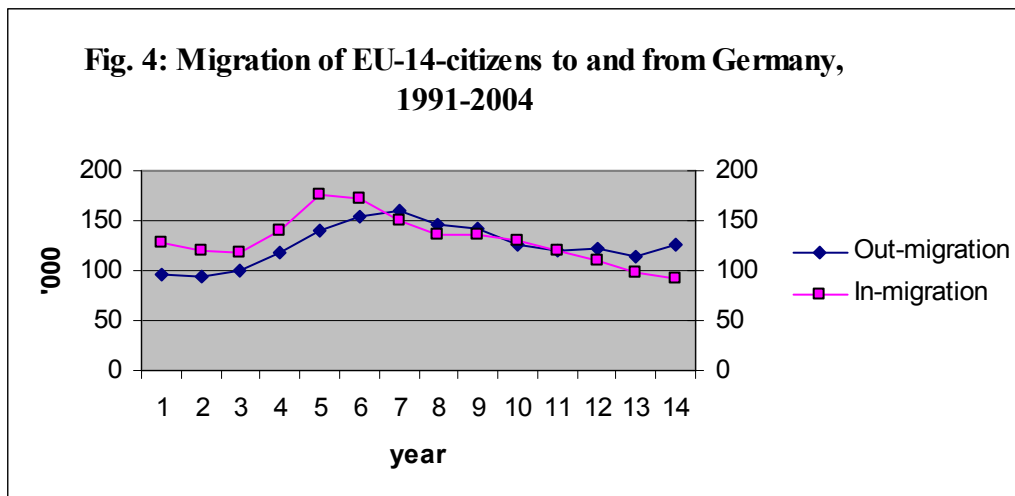
Source: based on data from Bundesamt für Migration und Flüchtlinge, 2006.

The relationship between in- and out-migration and Germany's economic development is clarified by the migratory movements between Germany and its EU-14 partners. Their stages of economic development are similar and, therefore, cross-border migration can be seen to react sensitively to changes between the countries' economic parameters. In the 1990s, migration between Germany and all of its EU-14² partners (excepting the Netherlands and the special case of Luxemburg) switched from positive to negative (Fig. 3), following declining real wages in Germany and increasing real wages in the other EU-14 countries (Table 2). Since 1996, the migration balance between Germany and the EU-14 (i.e. the richer EU member states) has been negative. From an overall total of +27,487 in 1991, it dropped to -43,705 in 2004 (Fig. 4). In contrast, it has been positive with all the new (and poorer) EU-10 members (i.e. the middle and Eastern European countries that joined the EU in 2004), reaching 34,634 people in 2004 (Statistisches Bundesamt, 2006). Poland alone displayed a balance of +27,326 people, which is about twice the amount from the previous year.

² These are essentially the industrialized high-income western and southern European countries: Belgium, Denmark, Finland, France, Greece, Ireland, Italy, Luxemburg, the Netherlands, Austria, Portugal, Sweden, Spain, Great Britain.



Source: based on data from the Statistisches Bundesamt.



Source: based on data from the Statistisches Bundesamt.

Table 2: Development of real wages and out-migration in Germany

<i>Country of destination</i>	<i>Net migration, 1995</i>	<i>Net migration, 2004</i>	<i>Increase in real wages, 1995-2004, %</i>	<i>Difference to the increase of German real wages</i>	<i>% increase in net-migration</i>
Austria	13	-5062	2.8	3.7	-39,038
Netherlands	1273	3245	11.9	12.8	155
Belgium	-246	-587	6.4	7.3	-136
France	1315	-2,477	8.4	9.3	-288
Sweden	698	-684	25.4	26.3	-198
Great Britain	1289	-5810	25.2	26.1	-550
Ireland	529	-834	19.4	20.3	-258
Italy	15,349	-14,851	2.0	2.9	-196
Spain	-1269	-3,604	5.4	6.3	-184
Denmark	-314	-384	16.6	17.5	-22
Greece	1126	-934	n.a.	-	-183
Portugal	10,838	-2,873	n.a.	-	-126

Source: based on data from WSI 2005, and the Statistisches Bundesamt, 2006

Most current immigrants in Germany come from countries with a comparatively low-skilled workforce. While most stay in spite of the deteriorating labor market conditions, some leave for a third country. At the same time, a significant number of second-generation immigrants have become an economic challenge; counter to earlier expectations, their integration into the German labor market and also into German society—two processes which would largely proceed hand in hand—have proved difficult. With a low educational level and a deficient knowledge of the German language, many of them have not been able to access the labor market. Instead, they comprise a disproportionate share of mass youth unemployment and, as a result, contribute to widespread social tensions.³

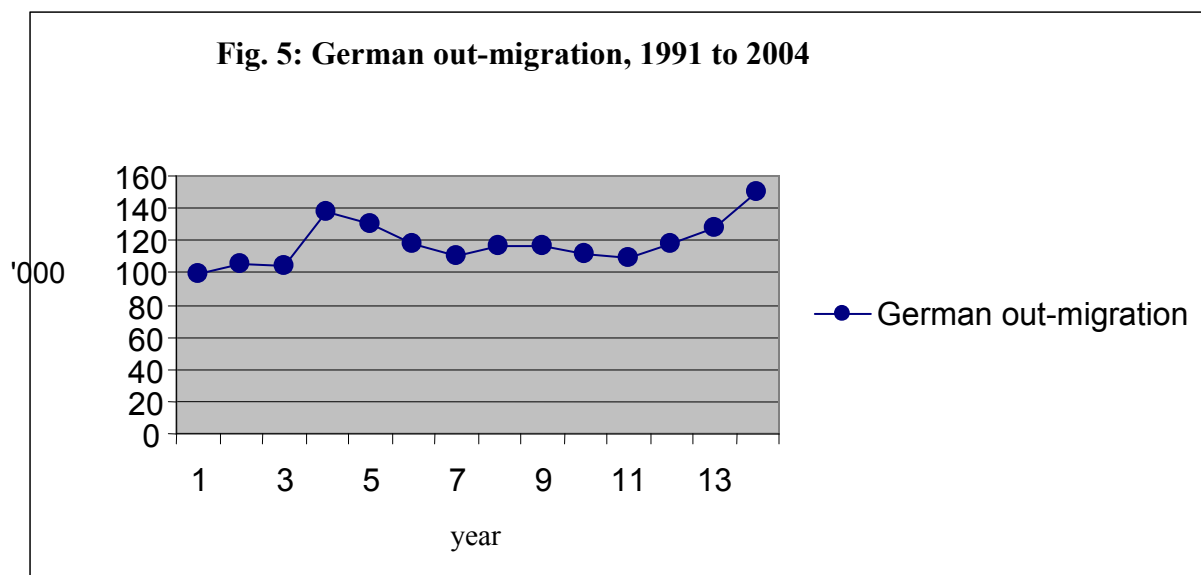
If we consider in-migration both a consequence and an indicator of economic development, a comparison between in-migration in Germany and other EU countries with higher GDP growth rates is revealing: while in-migration to Germany has steadily declined

³ Many second generation immigrants (i.e. the German-born children of the immigrants) speak even worse German than their parents, which handicaps them at school.

since the early 1990s, Spain and Italy have become major hubs. In 1999, only 127,000 people migrated to Spain; in 2004, the number had grown to 685,000, showing a five-fold increase in the space of five years. In Italy, the number of immigrants doubled between 2002 and 2003 with a total of 445,000 people. Similar developments have been observed in Great Britain, Austria, and a new EU-member state, the Czech Republic (Migrationsbericht, 2006).⁴

2.3 Out-migration of German labor force

The unfavorable situation of the German labor market in relation to neighboring countries has caused both low-skilled and highly qualified labour force to emigrate (Seidler, 2006). In 2004, over 150,000 Germans officially left the country—18 percent more than the previous year and the largest percentage since 1950 (Statistisches Bundesamt, 2005).⁵ The number people leaving Germany had oscillated between 50,000 and 65,000 p.a. since the 1970s, but in 1989 it rose to over 100,000 p.a. Since then, it has steadily increased (Bundesamt für Migration und Flüchtlinge, 2006: 114; see Fig. 5) and is much more pronounced than in the other EU-14 states.



⁴ When comparing absolute figures it should be pointed out that the definition of “migrants” varies between countries.

⁵ According to calculations made by the economics magazine “Manager-magazin” based on data available from the German Federal Statistical Service, this figure increased to 160,000 in 2005. This signifies an 8 percent increase against the measured nine-month period of 2004 (Müller, 2006b).

Source: based on data from the Bundesamt für Migration und Flüchtlinge and Statistisches Bundesamt, 2006.

These figures only include those who register their out-migrating status when they leave. How many depart without officially registering or commute is open to speculation (Seith, 2006). According to Müller, the number of German emigrants probably reached 250,000 in 2005 (Müller, 2006b). Additionally, in times of increasing globalization, many jobs for highly qualified academics on the upper management level are filled within large multinational enterprises on a transnational scale. These people do not show up in the current statistical data.

In the past, it was mainly the so-called “high potentials” who left Germany, seeking new experiences and challenges abroad. Since the beginning of the economic crisis, more and more skilled and unskilled manual workers take up jobs abroad because they see no economic opportunities in Germany (Nina Seidel in Seith, 2006). Many are assisted by the government’s Job Agencies, which organize “Foreign Job Exchanges” and offer hundreds of jobs abroad, or by some of the private employment agencies that have mushroomed since the mid-1990s. Both report an unprecedented increase in requests since the early 2000s. The most sought-after host countries are Switzerland, Austria, Great Britain, Spain and the United States (Beunink, 2006).

The German government’s Federal Job Centre (Zentralstelle für Arbeitsvermittlung der Bundesagentur für Arbeit, or ZAV) actively supports the out-migration of labour force and tries to find placements for unemployed workers in countries such as Norway, Ireland or the Netherlands. Between 2000 and 2005, the number of job contracts arranged by the ZAV increased five-fold, showing a 50 percent increase in 2003-2004 period alone. The Centre estimated it would mediate some 10,000 jobs in 2006 and that applicants would include a large number of skilled manual workers, like carpenters and construction workers. The German government’s declared policy is to support the out-migration of the unemployed, but

the Centre also assists employed job-seekers. Most of those mediated by the ZAV go to Austria, Switzerland and the Netherlands, where the tourist industries favor German native speakers.

As explained by the ZAV spokeswoman in December 2005, Germans are increasingly motivated to work abroad and they meet with considerable international interest. As reported by Seidler, German engineers are in high demand in China, while physicians and social education workers go to Great Britain (Seidler, 2006). Skilled German construction workers are in high demand almost everywhere in Europe, from Norway to Switzerland to Spain, as well as in far-away countries like Australia and Canada (Beunink, 2005). In the case of those who already hold a job in Germany, Seidler stresses that the decision to look for employment abroad is not related to higher salaries. Their major motivations seem to be better working conditions (like secure employment), favorable future perspectives, personal development, and fixed working hours, the last one being particularly important in the health sector (Seidler, 2006). Young scientists are particularly attracted to the more comfortable research atmosphere in the United States, which involves superior financial and research infrastructure (Biestmann 2005). Only recently did the German government begin to address this issue and discuss which measures should be taken to prevent German brain drain.

3. Cost benefit analysis

When seen from the perspective of neo-classical economic theory, increasing out-migration would be expected to contribute to a new labor market equilibrium characterized by less unemployment and higher wages in the source region, all of which, in turn, would lead to welfare improvements. In a real world situation, however, benefits for the source country are not so clear because a) the neo-classical assumptions of a homogenous labour force are not fulfilled (out-migration is, in fact, positively selective), and b) migratory movements almost inevitably involve the movement of capital and its significant economic implications. A closer

look at the composition of the migrant population, their mobility patterns, and their behavior involving remittances reveals a complex picture.

3.1 Methodology

The costs and benefits accrued by an economy through the out-migration of its labour force are composed of a) the opportunity costs of that labor force, i.e. the lost value of their production due to their departure, b) the value of remittances for the domestic economy, and c) the additional human capital acquired abroad and brought home by those who return. According to the principles of a full-fledged cost-benefit analysis, in order to assess their domestic value these flows should be evaluated by their opportunity costs and the utility of additional goods provided measured by the willingness to pay for them.⁶

In the following section, these costs and benefits are assessed on a rough data base for different groups of emigrants. Since there are no official statistics regarding essential determinants of the relevant costs and benefits, calculations will be made by using somewhat imprecise but nevertheless plausible information and assumptions. Comprehensive official data about the number of emigrants, their gender and age composition, their nationality and their destination are provided on an annual basis by the German Federal Office for Migration and Refugees (Bundesamt für Migration und Flüchtlinge); yet, no data about migrants' skills, professions or motivations are supplied. Information about emigrant workers' remittances is provided by Germany's Federal State Bank (Deutsche Bundesbank). The estimates used will be explained when they come up in the following calculations. Return migration is not considered separately.⁷ In line with general principles of CBA, we assume that emigrants are no longer part of the German society as long as they are abroad (i.e. we treat them as

⁶ An appropriate methodological basis for evaluation is a three-phase model. This has been applied by Knerr and Zaqqa (2004) and Zaqqa (2006) in the evaluation of labour force exportation from Jordan, as well as in an assessment of the utility of the state's investment in human capital for those who later emigrate.

⁷ Risk and uncertainty associated with activities will not be considered as there is no information available regarding this aspect.

“economic foreigners”). Therefore the income they earn abroad will not be treated as a benefit for Germany. Consequently, we do not subtract the benefits accruing to the foreigners living in Germany.

3.2 Data basis and material

No official statistical information about the professional, educational or skill profile of the emigrants is available. Rough indicators are supplied by Uebelmesser (2006), who processed data from the German Socio-Economic Panel (GSOEP), a household survey carried out in several phases that included questions about intentions to emigrate classified by age, gender and educational level. The results show that the tendency to migrate increases with the educational level (as measured by schooling). What might be surprising is that employed men and women display a significantly higher propensity to out-migrate than those who are unemployed. Fifty-four percent of employed respondents were prepared to move as opposed to only 46 percent of the unemployed. Moreover, the respondents' willingness to take up employment abroad increased with their educational level. While, for example, 46 percent of the men with only elementary school education declared that they would “easily migrate” or “migrate if necessary,” this share reached 61 percent among those holding a university degree. Following Burda et al. and assuming that intentions are a monotonic function of the variables which motivate migration (Burda et al., 1998), it can be concluded that those groups expressing a higher readiness to out-migrate are also over-proportionally represented among the actual migrants.

According to Klaus Bade, board member of the German Council for Migration, Germany is losing out in the international competition for high potentials (Bade, 2005). More and more experts, especially from the IT sector, leave Germany for good. As stated by Bade,

the German university system makes academic careers difficult and lengthy, causing young scientists to look for employment abroad (Bade, 2005)⁸.

3.1 Loss of labor force

Opportunity costs of out-migrated German labour force

In 2004, 150,667 Germans officially left Germany to establish themselves abroad. When we deduct those less than 18 years of age and older than 65 (14 percent of the total), we are left with 129,573 people in the workforce.

If we assume that

- wages reflect the marginal opportunity cost of labor;
- those with a high educational level belong to the high-income group, skilled manual workers to the middle income group, and the low-skilled to the low-income group, and that the GSOEP data can be used to assess the migratory behavior of the different income groups;
- out-migrants display the same skill composition as the rest of the population; and
- 33 percent of low-skilled workers have been unemployed, and, therefore, accrue no opportunity costs for the economy when leaving⁹

we arrive at the results displayed in Table 3, showing the opportunity costs of an out-migrating German workforce. They demonstrate that, under the given assumptions, Germany lost one and a half billion Euros during 2004 alone.

Table 3: Annual opportunity cost of out-migrating German labour force(in €)

⁸ Numerous German top-scientists are established in the United States (e.g., German Nobel price winner Wolfgang Ketterle, who holds a chair in the United States). In 2005, 10,000 Germans studied in the United States (Biestermann, 2005). Many of them stay there after completion of their studies.

⁹ There are significant differences in the labor market situations of West and East Germany (the former “German Democratic Republic”). The rates of unemployment among the low-skilled differ strongly in both parts of the country. The contrary applies to some highly-qualified professions, like medical doctors. As a result, there are different opportunity costs depending on where the migrants come from. In addition, our calculations do not take into account the fact that a large share of the unemployed occasionally work in the shadow economy.

<i>Qualification</i>	<i>Number, '000 (migration units)^x</i>	<i>Assumed gross income p.a., per m.u.^x €</i>	<i>Total opportunity costs, € p.a.</i>
<i>Low-skilled</i>	29,543	(2,507*) 30,084	59,5476,980
<i>Skilled</i>	61,288	(3,384 € **) 40,608	2,488,783,104
<i>Highly qualified</i>	38,742	(5,000 € ***) 60,000	2,324,520,000
<i>Total</i>	129,573	130,692	5,408,780,084

* Average gross monthly income of a worker in the production industry

** Average gross monthly income of an employee in industry, commerce, credit and insurance

*** Assumption based on various information sources

****88,8771,612x0,67

^x Migration Unit = share of labor force (according to income level)x(propensity to migrate of that group), calculated with GSOEP data, as cit. by Uebelmesser (2006).

Source: author's calculations based on data from the Statistisches Bundesamt, GSOEP Survey and Uebelmesser, 2006.

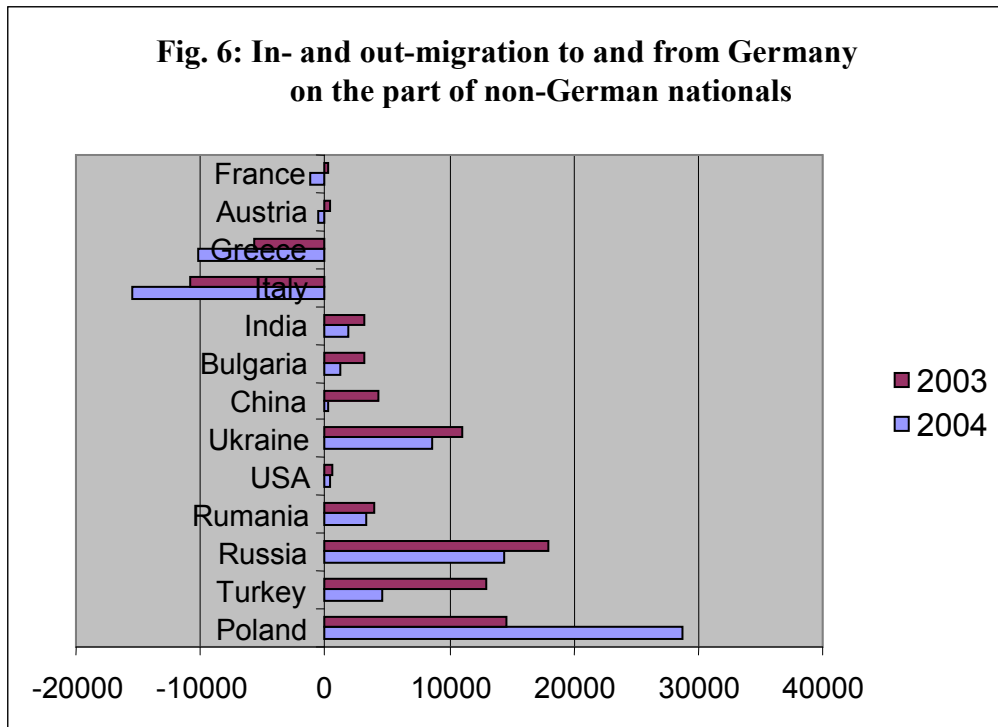
According to the GSOEP survey, the propensity to migrate increases with educational level and decreases with age (Uebelmesser, 2006). Based on the results, this means that Germany loses a disproportionate amount of highly-qualified young workforce. The emigration of young scientists could be quite costly in the long run, since a large part of their working life is still ahead. Each year, some 50,000 young scientists study abroad. An estimated one out of seven Ph.D. students leaves Germany, most of them for the United States. According to the German Scholars Association (GSO), out of the approximately 6,000 young scientists who were working in the United States in 2005, a quarter did not return to Germany (Biestmann, 2005). Many move to Switzerland, where 22 percent of university staff comes from Germany¹⁰ (Hahne, 2005). Only a minority returns.¹¹

Opportunity costs of foreign labour force

¹⁰ One third of university staff in Switzerland comes from abroad, and two thirds of them are Germans.

¹¹ The emigration of pensioners might also constitute a loss of human capital because many of those who retire to Southern Europe have chosen early retirement and might have to be substituted by less experienced personnel.

The out-migration of foreigners (and their reduced rate of immigration) has its own set of costs and benefits for the German economy. There is not enough available information on the qualifications of those leaving, so we cannot assess the value of the human capital Germany loses this way. Immigrants' national composition, however, suggests there is an out-migration bias toward those with a higher educational level. In 2004, the migration balance between Germany and the EU-14 states was a negative -33,817, but a positive +34,634 with the new EU-10 states, which, on average, have a lower educational level (Statistisches Bundesamt, 2006; World Bank). When we compare out- and in-migration, we see that there is increasing net out-migration by those stemming from economically more developed countries, and net in-migration by people from less developed countries (i.e., "developing countries" and middle and Eastern European countries). For example, net migration from the African continent, where the population displays a significantly below-average educational level, increases disproportionately over time (see data from the Statistisches Bundesamt, 2006, and the World Bank). In short, the migration balance tends to be negative in the case of countries with a higher educational level, and positive in the case of countries where the educational level is lower (see Fig. 6).



Source: based on data from the Statistisches Bundesamt.

Foreigners who move out export human capital that might have been useful to the German economy. This applies to what they brought with them when they arrived as skilled and educated people, as well as to what they acquired while working and living in Germany. The last component is country-specific and might be particularly valuable to the German economy. Instead, the new receiving countries benefit from it. Declining immigration also implies costs and benefits. It is not equally distributed across all skill levels, and maybe the number of out-migrating qualified workers is proportionally higher than that of less skilled workers. For example, the number of immigrant IT specialists declined by half between the early and the mid-2000s (Bundesamt für Migration und Flüchtlinge, 2006). At the same time, Germany is facing increasing scarcity of highly skilled workers and an excess supply of unskilled and low-skilled ones. The largest current share of immigrants is comprised by seasonal workers who are employed for several weeks or months in the agricultural sector.

They mainly come from Poland and are a numerically stable group of about 250,000 people, as their employment is subject to quota (Pruin and Knerr, 2006).

In 2005, the numbers of in- and out-migrants were about the same (Statistisches Bundesamt, 2006), which would, at first glance, suggest there is substitution migration. In the context of the country's economic development however, in- and out-migration do not strike a balance because there is a significant disparity between the qualifications of in-migrants and out-migrants. It is plausible that foreigners with better job opportunities (i.e., those who are more highly qualified) leave Germany, while the contrary applies to less qualified and unemployed workers who are entitled to unemployment and other social benefits in Germany. Within this same framework, country-specific human capital leaves while more inexperienced immigrants move in.

3.1.3 Remittances

Remittances received

In the case of out-migration, Germany may benefit from remittances sent or carried by workers employed abroad, whereby the benefits accruing to those who do not receive them depend on the spending behavior of these first receivers as well as of those who spend that money in the second and following rounds. This is reflected in the macroeconomic spending multiplier which, in the mid-2000s, was an estimated 0.63 in Germany (Deutsche Bank, 2005). There is no available information on the extent of remittances sent by Germans from abroad, but we know they are not negligible as a significant share of the high potentials are not working abroad on a permanent basis but keep Germany as their home base. This is the case, for example, of many physicians working in Great Britain, for whom no remittance statistical

data are available.¹² Estimates regarding the transferred amounts would therefore be guesswork.¹³

Some conclusions may, however, be drawn from the development of German out-migration. As the number of emigrants increases, so should their remittances. There are frequent cases of physicians working in Great Britain during their holidays and/or on weekends. They should be expected to transfer the largest share of their earnings back to Germany, either by bank transfer or by hand. The same applies to those working abroad seasonally, which is often the case in the tourism sector. On the other hand, there are groups of emigrants, like young scientists, that cannot be expected to remit any significant amount. On the contrary, since a considerable share of them studies abroad with a German Government scholarship, their studies constitute an outflow of German capital. The broad category involving “private transfers, payments from abroad, pensions, support payments” includes remittances sent to Germany from abroad, but these do not play a significant role. In addition, transfers of less than €12,500 are not reported, which probably applies to most of the remittance parcels.

The strong economic impact of remittances has been demonstrated by many researchers (Knerr, 1994; Gallina, 2006). However, their results cannot be applied to Germany because these studies largely involve low-income countries. The typical spending pattern of remittances is different in an industrialized country. Although there is no information about the use given to remittances, we can reasonably assume that they are spent according to the migrants and their families’ previous spending patterns since, as a rule, they

¹² Workers remittances are not separately recorded in Germany’s balance of payment (Deutsche Bundesbank, 2006b). “There is no counter-category for the home remittances of guest workers, which would reflect transfers to Germany. Incoming payments that could belong within such a category are included in the ‘private transfers, payments from abroad, pensions, support payments’ group. However, it must be observed that the larger share of such payments would most probably be below the limit of obligatory report, and therefore cannot be included in the balance of payments. Moreover, due to missing statistical sources, it is not possible to conduct estimation procedures for such category” (Deutsche Bundesbank, 2006b; author’s translation).

¹³ Nevertheless, the World Bank offers information about the amount of remittances flowing into Germany under the heading “German workers’ remittances and compensation of employees, received.” It shows an amount of nearly US\$7 billion for 2004. This does not seem plausible given the background information available from the Deutsche Bundesbank and the extent and structure of German emigration. For details see annex I.

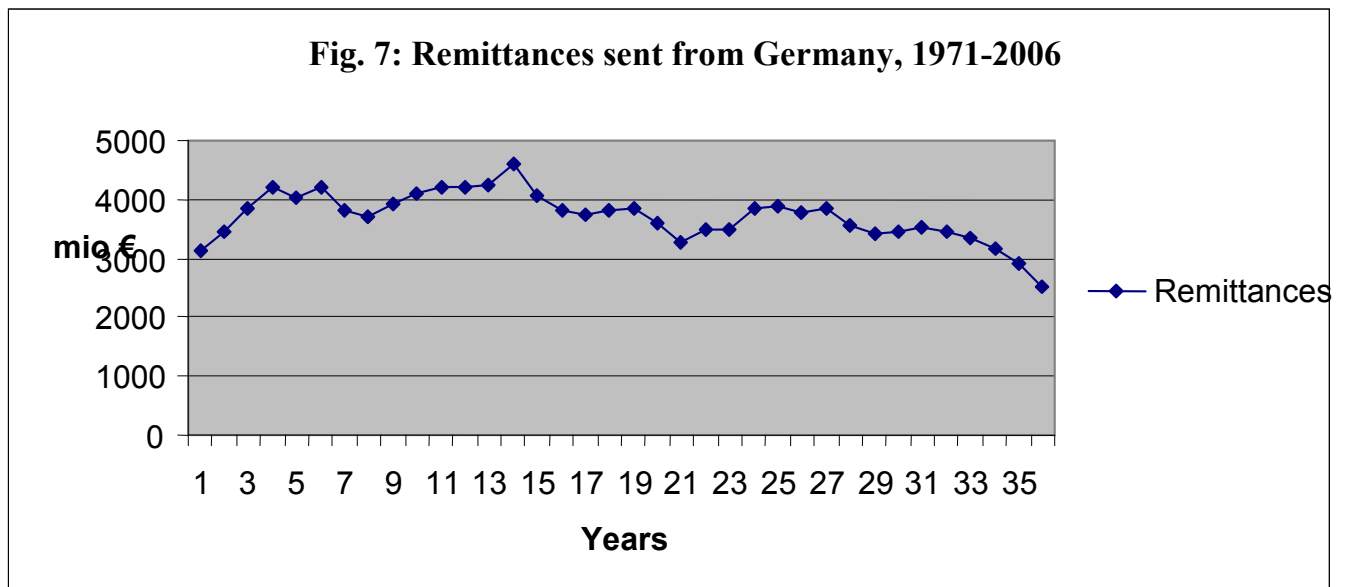
do not make such a difference in the income of these households. Assuming that remittances are spent like other money, the multiplier would be 0.62 (Deutsche Bank, 2005).

The remittances flowing in slightly outweigh out-going ones, but due to differences between data provided by Germany's Statistical Service and the World Bank (see footnote 13) a direct comparison between remittance flows is not justified.

Remittances sent abroad

Since the early 1990s, there has been a significant and continuous drop in the amount remittances sent from Germany (see Fig. 7). As the number of immigrants decreases, so do the out-going remittances. Another reason for the decline may be the increasingly insecure economic situation of the migrants, which could result in lower incomes and a reduced propensity to send money to family members living abroad. Also, with reduced immigration, some established immigrant families might think of Germany as home, the source and center of their life activities and future prospects.

Decreasing labour force in-migration, foreigner out-migration, and unemployment have lead to a decline in the outflow of remittances from Germany. It peaked in 1983 and has been declining since then.



Source: based on data from the Deutsche Bundesbank, 2006.

A certain percentage of out-migrants is comprised of pensioners who like to spend their time in the warm and sunny regions of Southern Europe, mainly Spain. Although their migratory decisions do not seem to be directly influenced by Germany's economic development, their departure has economic consequences since their capital and purchasing power will cease to stimulate the German economy and instead benefit the host country. The countries that profit the most from German pensioners are Spain and, to a much lesser extent, Turkey.

3.5 Perspectives

Processes that are relevant to population structure and size unfold slowly. "As a rule, changes in the essential components of the population's development—birth rates, mortality and migration—show their full impact only after many decades." (Statistisches Bundesamt, 2003: 9).

Possible back-flow of human capital

Out-migration of high potentials might result in Germany's long-term enrichment assuming they improve their knowledge and experience while abroad and return home after a certain time. Current data on this issue are, however, insufficient. Only three-quarters of young scientists who pursue additional education in, for example, the United States, return to Germany. It can safely be assumed that, during their time abroad, they have increased their human capital. Awareness of this issue is increasing, both among Germany policy makers and the general public.

Changing age and skill composition of the German labor force

Stephanie Wahl, managing director of the Research Institute of Economy Society (Institut für Wirtschaft und Gesellschaft, or IWG), states that the problem facing Germany at the turn of the 21st century is not the amount of out-migration but the increasing propensity among young, highly qualified Germans to emigrate, which could be taken as synonymous of the country's unattractiveness. "Those who leave are highly motivated and well trained and educated. Those who come are, in most cases, poor, unskilled badly educated" (Wahl, cited by Hahne, 2005; author's translation). Klaus Bade describes the situation as follows: "Germany is in a suicidal migratory situation because we are less and less capable of providing prospects for competent young people; at the same time, we receive mostly low-skilled immigrants ... Therefore, we end up losing blood" (Bade, in Müller, 2006; author's translation).

The disproportionate out-migration of high potentials from Germany might reinforce existent trends and lead to altered population structures: in a country with a shrinking population and a birth rate of 1.3 children per woman, immigrants display higher birth rates than native Germans; also, low-skilled residents tend to have higher birth rates than more highly qualified ones. Hence, the share of inhabitants with a migratory background is

expected to continue to increase along with the share of children born to lower-educated families (see Kaufmann, 2005).

Implications for the pension system

The consequences of an out-migrating young labour force will be felt by the country's pension system, as out-migrants cease to participate in it when they leave. Germany is caught in the population paradox: increased economic development and a rise in the standard of living go along with declining birth rates (Birg, 2004). This trend does not reverse in times of economic crisis but instead seems to become entrenched: according to a survey by Germany's Federal Institute of Population Research (Bundesinstitut für Bevölkerungsforschung), young Germans refrain from having children because of economic insecurity.

The out-migration of young people reinforces the consequences of an unfavorable age composition and, as the number of contributors drops, further affects the pension and health systems. This could result in a vicious circle: fit young people leave the country, one of the reasons being that, when they compare net incomes, they realize have to pay large amounts of money to support the German social system (pension system, health insurance, unemployment insurance). As the dependence coefficient increases, so does the burden for those left behind. This might, in turn, lead to the out-migration of others.

Declining birth rates lead to lower dependency ratios, which, on the other end of the age scale, are counterbalanced by increasing life expectancy $d = (P_{0-20} + P_{65}) / (P_{20-64})^{-1}$ (Dinkel, 1989: 251). Yet, this formula is misleading when addressing the burden imposed on the working population. There is—with the same $(d - a)$ —a difference between a dependency ratio caused by a larger share of young people and one caused by a larger share of older people. The out-migration of younger individuals leaves the country with a comparatively larger share of older people, while the children (if the migrants have any) are taken abroad by their parents or are born outside the country.

Gender imbalance

Migration to and from Germany is a predominantly male phenomenon, which results in imbalances in the population structure. Although out-migration in Germany is not a mass phenomenon, there could still be marginal effects. In 2004, the share of emigrant men was 62.5 percent, compared to only 58.4 percent among immigrants. Both figures have been increasing over the past decade or so; in 1991 they were 57.1 percent and 55.7 percent respectively (Bundesamt für Migration und Flüchtlinge, 2006: 139). As a result, female workers might comprise an increasingly larger share in sectors that demand a more qualified workforce.

Networking

As in many other countries, the trickle of out-migration could become a stream promoted by networking among friends and relatives, eventually leading to a self-sustaining process that would be partially independent of Germany's economic development. According to Bade, "The maelstrom has started and it will not cease anytime soon" (in Müller, 2006; author's translation). Given the specific character of private networks, the flow of out-migration might even become professionally focused, targeting certain professional fields (Knerr, 1994).

4 Conclusions

Having been a country of immigrants, Germany is now developing into a country of emigrants. While some EU countries that, for decades, had been characterized by net out-migration have become countries of in-migration, Germany is taking the opposite path. When measured by the share of the total labour force out-migration still appears insignificant, but its composition and perspectives could pose an increasing threat to the German economy. While pressures on the public treasury are relieved by the departure unemployed workers (most of whom have low qualifications), high potentials, who are increasingly scarce in the German economy, display a higher propensity to migrate. International experience suggests that, due to networking, the trickle of out-migration could rapidly develop into a stream. At the same time, the composition of the immigrating labor force does not correspond to the requirements of the German economy and key sectors will face a lack of qualified labour force in the near future. All of this evidences the need for a migratory policy that focuses on the economic development of Germany. The elaboration of appropriate policies, however, requires knowledge of the situation and a broader data base. The promotion of specific research should be the next step in the solution of these issues.

Given the country's low birth rates and the disproportionate out-migration of highly qualified workforce, immigration of high potentials could benefit Germany's economic development. Therefore, an improved composition of the immigrant base would be desirable. The establishment of a point system designed for selecting immigrants (e.g., the one applied in the United States) might help in this regard. It would also make sense to try to keep highly-qualified migrants in Germany, even if, when they initially entered the country, their status did not allow them to stay and work. At the same time, there should be an increase in efforts to provide unemployed workers with jobs outside the country.

Young scientists should be persuaded to return to Germany after spending some valuable years abroad. This is not just a matter of salaries; German universities and research institutions should be able to provide the kind of environment that is conducive to the development and implementation of innovative ideas. The German government spends large amounts of money on scholarships and sends excellent students to learn abroad, seeking to accumulate precious human capital. It does not, however, care sufficiently for their return and, from a long-term perspective, this will affect the availability of human capital in Germany.¹⁴

In order to keep highly-qualified labour force in the country, Germany needs to boost its economic growth and provide its labour force with more optimistic prospects. Special incentives created to keep high potentials in the country could then become obsolete. However, the shortage of highly-qualified labour force may have already handicapped the economy, making the process more difficult.

References

Bade, Klaus, (2006), Interview in *Frankfurter Rundschau*, 2.1.

¹⁴ See also Eicke Weber, President of the German Scholars Organization in the U.S., cit. by Hahne 2006.

- Beunink, Ralf, (2007), "Alpenländer besonders beliebt," *Manager-magazin*, <http://www.manager-magazin.de/koepfe/karriere/0,2828,388527,00.html>., accessed 30/1/2007.
- Biestmann, Stefan, (2005), "Abwanderung ohne Ende," *Manager-magazin*, 9.11.
- Birg, Herwig, (2004b), "Ergebnisse international vergleichender Forschung," in Bundeszentrale für politische Bildung (Hg.), *Bevölkerungsentwicklung*, Franzis' print & media GmbH, München, 11-13.
- Bundesamt für Migration und Flüchtlinge, (2006), "Migrationsbericht im Auftrag der Bundesregierung (Migrationsbericht 2005)," Berlin.
Bundesgesetzblatt (2006) 30.3.
- Bundesinstitut für Bevölkerungsforschung und Robert-Bosch-Stiftung, (2006), "Generation and Gender Survey 2005," Stuttgart.
- Burda, M.C., W. Härdle, M. Müller and A. Werwatz, (1998), "Semiparametric Analysis of German East-West Migration Intentions: Facts and History," *Journal of Applied Econometrics* 13, 531-533.
- Castles, Steven, (1986), "The Guest-worker in Western Europe: An Obituary," *International Migration Review, Special Issue on Temporary Worker Programs: Mechanisms, Conditions, Consequences*, Vol.20, 761-78.
- Claus, Frieder, (2006), "Löhne und Wirtschaftswachstum in Deutschland," edited by Diakonisches Werk Baden Württemberg.
- Deutsche Bank Research, (2003), "Haushaltskonsolidierung: Wunschdenken und harte Realität," *Aktuelle Themen*, Nr. 256 /17.2, Frankfurt.
- Deutsche Bundesbank, (2006a), *Balance of Payment Statistics*, Frankfurt.
- Deutsche Bundesbank, (2006b), E-Mail dated 30/8/2006, signed by Dirk Mühlhausen
- Dinkel, Reiner, (1989), *Demographie*, Bd.1, Bevölkerungsdynamik, München.

- Gallina, Andrea, (2006), "Migration, Financial Flows and Development in the Euro-Mediterranean Area," *The Journal of North African Studies*, Vol. 11 (1), 17-34.
- Hahne, Peter, (2005), "Deutschland wird Auswanderungsland. Viele unterbezahlte oder arbeitslose Fachkräfte suchen im Ausland ihr Glück," *Migration und Bevölkerung Newsletter*, Edition 7, September.
- International Bank for Reconstruction and Development (World Bank), (2004-2006), *World Development Indicators*, Washington.
- Kaufmann, Franz-Xaver, (2005), "Schrumpfende Gesellschaft. Vom Bevölkerungsrückgang und seinen Folgen," Suhrkamp Verlag, Frankfurt a.M.
- Knerr, Béatrice, (1997), *Labour migration from developing countries. Macro-economic impacts and policy interventions*, Kassel University Press, Kassel.
- Knerr, Béatrice and Zaqqa, Nadim, (2002), "Economic Costs and Benefits of Human Capital Migration from Jordan," paper presented at the first World Congress of Middle East Studies, Mainz.
- Körner, Heiko, (1990), *Internationale Mobilität der Arbeit*, Wissenschaftliche Buchgesellschaft, Darmstadt.
- Müller, Henrik, (2006a), "Auswanderungswelle 'Wir bluten aus': Interview mit Klaus Bade," *Manager-magazin*, No. 7.
- Müller, Hendrik, (2006b), "Auswanderungswelle: 'Wir bluten aus,'" *Manager-magazin-online*, <http://www.manager-magazin.de/unternehmen/artikel/0,2828,422371,00.html>., accessed 15/2/2006.
- Pruin, Anja and Béatrice Knerr, (2006), "Die Bedeutung ausländischer Saisonarbeitskräfte für verschiedene Wirtschaftssektoren Deutschlands," in Béatrice Knerr (ed.), *Vorweggenommene Erweiterungen: Wanderungsbewegungen aus Grenzgebieten in die EU*, Kassel University Press, Kassel.

Seith, Anne, (2006), "Deutsche Auswanderer: Die Tschüss-AG," *Spiegel Online*, 11th August 2006, <http://www.spiegel.de/wirtschaft/0,1518.430943,00.html>, accessed 28/8/2006.

Statistisches Bundesamt, (1996, 2004, 2005, and 2006), *Statistisches Jahrbuch*, Wiesbaden.

Statistisches Bundesamt, (2005), *Fachserie 1*, Wiesbaden.

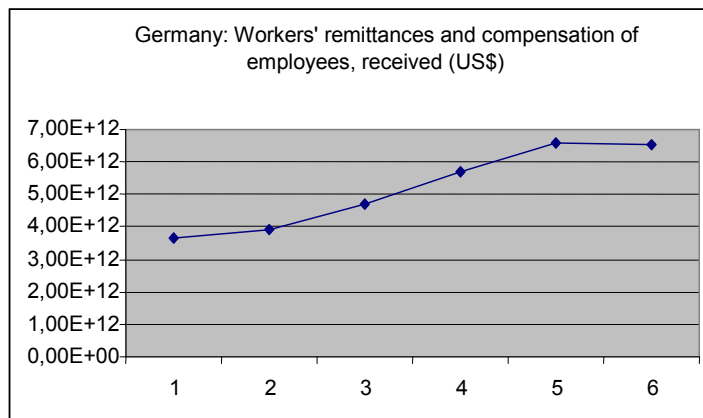
Straubhaar, Thomas, (1988), *On the economics of international labour migration*, ISTAR. Population Investigation Committee, Bern, Stuttgart.

Uebelmesser, Silke, (2006), "To go or not to go: emigration from Germany," *German Economic Review*, Vol. 7 (2), 211-231.

Wirtschafts- und Sozialwissenschaftliches Forschungsinstitut der Hans-Böckler-Stiftung (WSI), (2005), *Europäischer Tarifbericht*, Bonn.

Zaqqqa, Nadim, (2006), *Economic Development and Export of Human Capital: A Contradiction?*, Kassel University Press, Kassel.

Annex I



Source: based on data from World Bank