Un-restricted agents? International migration of the highly skilled revisited

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Abstract

International migration of highly skilled people is often conceived as the international mobility of educated personnel within transnational companies. It epitomises the successful international migration of labour. This article critically reviews this conception and analyses the major viewpoints on the phenomenon. Starting with a description of brain drain in the 1960s, researchers’ attention shifted to analyses of brain exchange in the late 1980s. Studies came to the fore that focused on international migration processes from a company-related perspective and emphasised the influence of transnational companies. The importance of individual migrants, however, was neglected, since they appeared to have minor influence on the migration process. Due to recent changes in technology, reorganisation of processes of production and a policy shift, the article reinvestigates their position. Firstly, it draws on a case study on the German “Green Card” scheme which opened up the labour market for highly skilled ICT specialists. In this new process individual migrants have gained importance. Secondly, it revises the major labour flows of highly skilled persons to Germany during 2000–2003. The majority of highly skilled immigrants entered the country not via intra-company transfers or as highly skilled specialists, but as refugees or repatriates. Their labour market success, however, is low, which might question the existing positive image of highly skilled international migration.

1 Introduction

Amongst the public and in politics, the international migration of highly skilled professionals is rarely discussed compared to the immigration of unskilled workers. The international migration of highly skilled labour, however, appears to be one important element of economic globalisation with positive effects on the nation states. Thus, national governments try to attract highly skilled professionals by implementing new work permits for this group. States emphasise their appeal for highly skilled professionals
in order to succeed in the global competition for talents (Florida, 2002; Unabhängige Kommission “Zuwanderung”, 2001; Ministeries van Economische Zaken en Onderwijs, Cultuur en Wetenschap, 2005). Metropolitan councils increasingly identify the creative class as a major factor for innovation (Regierender Bürgermeister, 2001). Consequently, city and metropolitan governments invest in soft location factors to attract highly skilled migrants. International highly skilled migrants are believed to contribute to the wealth of their destinations. They spend a considerable amount of their earnings on consumption and housing. Their labour market and social integration appears to be easy due to their high level of education (Freund, 1998: 57; White, 1988: 411; 1998). The following article revises this positive conception of the international migration of highly skilled people. It attempts to map out different periods of research on the phenomena and relates each period to distinctive research approaches. Of course, at the same time other forms of migration and other research concepts coexisted, but this article aims to identify typical research perspectives and portray the major international movement of highly skilled migrants. Firstly, it compares the main research perspectives in the 1970s and 1990s, and describes the brain drain approach and brain exchange approach. Secondly, meso-level explanations, which are mainly employed in the brain exchange approach, are analysed in detail and related to empirical data. It draws on results of an analysis of international migration movements of highly skilled professionals to Germany, when computer scientists from non-EU-countries were admitted to this labour market between 2000 and 2004 (Pethe, 2006). It will be argued that apart from managerial professionals, other occupational groups are also involved in international labour exchange in Germany and other countries. Due to the focus on intra-company migrants however, the agency of individual migrants and its influence on the international migration process has often been overlooked. This will form the subject of a third section. Mapping out additional data on international highly skilled migrants who entered Western countries as humanitarian or family migrants, the final part of the paper critically reviews the positive conception of highly skilled migration. It concludes that apparent research gaps call for conceptual changes in international
migration research, and for a wider, more actor-centred research approach.

2 From brain drain to brain exchange

Since the 1960s international migration of highly skilled labour has often been discussed under the aspect of “brain drain”. The negative effects of international, permanent emigration of highly educated persons were critically investigated for the less developed countries, which lost highly skilled people to industrialised countries because of income gaps at the macro level between countries of origin and receiving countries (Adams, 1968; Fortney, 1970; Schipulle 1973). Attention shifted away from this perspective in the 1980s, when it became clear that the direction, the composition and the character of the international migration stream of highly skilled professionals had changed. The majority of highly skilled professionals no longer emigrated permanently from less developed countries of the “South” to developed countries in the “North”. A new migration pattern was observed: a circular migration between industrialised countries in the North and even a change of direction. Highly skilled professionals were temporarily sent from industrialised countries in the North to the South (Findlay, 1988; Salt, 1988; Findlay and Gould, 1989; Beaverstock, 1990; Findlay and Garrick, 1990; 183; Salt, 1992: 488f; Findlay, 1995a: 515; Wolter, 1997). International transfers within the internal labour market of transnational companies neither had negative effects on the countries of origin nor led to a permanent brain drain of human capital. Instead it reinforced the economic position of the centres of capitalism in the so-called global cities (Beaverstock 1994, 1996; Beaverstock and Smith 1996; Beaverstock and Boardwell, 2000). The research perspective was no longer elaborated in development studies nor in migration studies, but in disciplines with a strong economic interest (e.g. economic geography). The former attention to the effects of international migration flows of highly skilled people on their countries of origin was replaced by the study of international migration processes in relation to their relevance to economic globalisation.
2.1 Intra-company transfers

Transnational companies expand their international business (Boyle et al., 1994; Findlay, 1995a, 1995b; Wolter, 1997) and restructure their organisation transnationally (Perlmutter, 1969; Salt, 1988). They depend on highly skilled professionals to manage and supervise their international production of goods and services. This is part of a new international division of labour (Fröbel et al., 1978; Findlay, 1988; Boyle et al., 1994; Wolter, 1997) and created by the internationalisation of services (Beaverstock, 1994; Beaverstock and Smith, 1996; Boyle et al., 1996; Findlay et al., 1996). Highly skilled personnel are transferred within the internal labour markets of transnational companies. Thus, the movement of highly skilled personnel is interlinked with the international flow of capital or goods and services. Highly skilled foreign professionals can be related to indicators like direct foreign investment or a high volume of trade (List, 1996: 86; Wolter, 1997; IZA, 2001: 56). Because of the economic importance of highly skilled labour transfers, their mobility had long been privileged by nation states. Whereas national labour markets were closed to almost all labour immigrants, highly skilled professionals faced hardly any obstacles compared to semi-skilled or skilled personnel.

In spite of this fact, their numbers were very low. For instance, in Germany, which is known as an export country, only about 2510 highly skilled labour migrants entered the country in 1999. Of these, 1578 were transferred within transnational companies, whereas only 932 professional gained a work permit due to external recruitment (Bundesanstalt für Arbeit, 1999).

Most authors concluded at the time that transnational companies control international migration of the highly skilled within their internal labour markets (Beaverstock, 1994, 1996; Findlay, 1995b; Tzeng, 1995; Hillmann and Rudolph, 1996; Wolter, 1997; Glebe and White, 2001). Given this perspective on international migration, it is hardly surprising that a positive image of international highly skilled migrations and their labour market success dominates the academic literature and the public perception (White,
This group of highly skilled professionals works in the higher echelons of transnational companies, and they receive above-average incomes. Their international transfer is managed by the companies, which also organise the professional and social integration of their employees and even of their families. Their position is truly privileged.

2.2 External recruitments

Although research has focused on internal exchange of highly skilled professionals within transnational companies, other important international migration channels exist. Findlay et al. developed a model to describe the most common migration channels (Findlay, 1990; Findlay and Garrick, 1990; Findlay, 1995a; Findlay and Li, 1998): Apart from the internal labour market of transnational firms, recruitment agencies and international bilateral contacts are seen as additional pathways for highly skilled migrants who are recruited externally. These meso-level organisations control the size, composition and direction of the external migration channels, too. They mediate between individual migrants and the countries of origin and destination. Their operation has been less often been subject of investigations (apart Boyle et al., 1996). At the moment, detailed knowledge about the external recruitment process is quite limited. Although there are some evidence that more meso-level institutions such as international political organisations play a part (Hillmann und Rudoph, 1996, 22), some obvious research gaps still exists. For example, authors like Ong et al. (1992) who portray the brain drain process in detail, describe the influence of higher education institution as mediators on the meso-level. These results, however, were not related to the migration channel approach. Additionally, an investigation of external channels is empirically much more demanding than an analysis of intra company transfers due to the diversity of actors in

\[^{1}\text{The influence of higher education organisations on the international migration of highly skilled is strong, but there is a danger to overrate their importance. The share of students who were sent abroad due to international exchange programmes is less than 20% in Germany, for example (Isserstedt and Schnitzer, 2002:28f). Joens describes the complex interplay of}

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this process (cf. Koser and Salt, 1997).

Since most authors have investigated international intra-company movements and concluded that those transnational organisations control and command the international migration of the highly skilled, the influence of individual migrants was not equally thoroughly investigated (Koser and Salt, 1997). Thus, it often appeared that individual migrants occur to be restricted in their agency. They were portrayed as dependent on international employers that rely on existing migration channels in order to gain international experience.

In conclusion, the international migration process of highly skilled people is structured by a strong power asymmetry. Whereas companies command and control international migration, individuals depend on mediating channels for international exchange. The number of international highly skilled migrants is low, but their professional and social integration is organised by relocation programmes of their employers. In the following section of the article, however, I will critically review the common conception of international migration. Firstly, I will analyse the perspective which underlies those results. What research approach was used in order to analyse the migration process? Do other ways of entry exist for highly skilled migrants? Secondly, how is the migration process shaped today? Which impact do developments in communication and technology as well as changes in the legal regulation of the migration process have?

3 Reviewing work on the migration process

Since most researchers have investigated from a British perspective, and they direct their attention to the economic effects of globalisation, they have hardly focused on other groups of highly skilled migrants in other European countries. When international academic organisations and individual decisions for scientific exchange to Germany (2003). Overall, the control of higher education organisations over international migration of highly skilled occurs to be limited.
transfers of highly skilled personnel increased dramatically in the United Kingdom in the late 1980s, even then, other professional groups influenced international migration flows of highly skilled people.

Figure 1 shows that apart from the managerial professions, other occupational groups such as artists, doctors or scientists have shaped the migration pattern. In addition, flows varied in certain periods in terms of their size and their professional composition. Whereas the number of professionals in management rose enormously in the late 1980s and the early 1990s, the number of foreign health professionals influenced the migration flow from the mid 1990s onwards. In other words, during the period of an increasing interest in the field of international migration of highly skilled professionals in the late 1980s, the international migration of professionals in management heavily influenced the international exchange of labour. This might explain the strong interest of researchers in international intra-company mobility.

Since attention was drawn to managerial occupations, what relationship exists between migration channels and occupations? Mahroum (2000) pointed out that the migration channels are related to occupational qualifications. Whereas international migrants who work as managers are usually transferred within transnational companies, highly skilled migrants in other occupations such as engineers, technicians or scientists tend to look for international positions more independently. This argument is also supported by empirical evidence. Findlay and Li (1998, 691) found that doctors and nurses from Hong Kong use their own private and professionals networks, which they had often developed during their education abroad, for their international job searches (Beaverstock, 2002: 533f; Jöns, 2003: 253ff; Pethe, 2006: 122). In addition to professional organisations such as international recruitment agencies, private networks are also used to find a job abroad (Willis and Yeoh, 2002: 557; Thang et al., 2002: 549; Jöns, 2003: 253ff; Pethe, 2006: 256ff). In addition to that, highly skilled people are not confined to the migration channels described above; they contact their prospective employers directly, too (Stifterverband 2002: 45; Pethe, 2006: 293ff). Whereas for a long time advertisements in international newspapers represented the largest resource
for international job searches, internet job sites have now established themselves as a major market for international recruitment (Findlay and Li, 1998: 691; Harms, 2002: 125f).

The number of occupational groups and their migration channels appear to be more diverse than often assumed. As the international migration process for artists, teachers and other highly mobile professional groups is rarely investigated, it might be problematic to assume that individual migrants are not in a position to influence international migration flow in general. On the contrary, empirical evidence seems to support the view that professionals in many occupations organise their mobility individually rather than subscribing to major organisations for an international transfer.

3.1 Scale of agency

In social science literature antagonistic positions are found concerning the ability and influence of highly skilled people on the international migration progress. Some scholars identify a transnational capitalist class or cosmopolitan managerial elites “that exercise the directional functions around which … space is articulated” (Castells, 1997: 415; Sklair, 2001). Transnational elites act as powerful element of Castell’s “space of flow” (Castell 1997) that organises global capitalism, and they are able to employ control their environment. This view was criticised for its sketchy description, since it is not clear whether a shared transnational class consciousness has developed and whether managers and owners are unified by a common consciousness (Hartmann, 1999; Embong, 2000). Furthermore, the majority of internationally mobile professionals cannot be considered as a transnational elite, because they originate from a middle class background with less control over their environment (Xiang, 2002). On the other hand, several arguments support the view that highly skilled individuals are increasingly independent and free to determine their next international destination. Several reasons should be taken into account. Firstly, private networks are extended internationally with more ease. Research on transnational migration has demonstrated that legal barriers are often overcome by using social networks (Goss and Lindquist, 1995;
The constitution and maintenance of international social linkages has been growingly facilitated due to the increase in international student exchange (Isserstedt und Schnitzer, 2002: 15), greater international exposure in day-to-day working environments, and an increase in international communication and traffic. Secondly, occupational structures change in favour of more generic and universally structured qualifications which can be used everywhere due to international technical and education standards. New occupations such as computer specialist have occurred (Khadria, 2001). International standards reduce differences in national education curricula (Gould, 2000: 106; Council of Europe, 1997; European Ministers of Education, 1999; UNESCO 2002; Commonwealth of Learning and UNESCO, 2006). English is used as a *lingua franca*. Highly skilled professionals are enabled to transfer their qualifications to a larger extent than before, because international differences in education and occupations are gradually levelled out.

Thirdly, the shift from Fordism to Post-Fordism has influenced the international organisational structure of companies and the international division of labour. The outsourcing of tasks have become more common. Highly skilled professionals who manage the co-ordination of production chains travel not only between branches of transnational companies, but also between an increasing number of offices and production sites of their external suppliers and partners. This might lead to more inter-company moves than before (Cormode, 1994; Koser and Salt, 1997: 290). International experience is prized more highly since information about international partners and competitors has become more valuable. Professionals no longer pursue their careers only within large transnational corporations in one place, but inter-company career paths have become more common. This process is mirrored by the increasing inter-company mobility of highly skilled professionals.

Fourthly, because of the increasing importance of knowledge and creativity for economic success, highly skilled individuals receive greater attention from employers as well as public actors. An increasing share of work is organised as non-standardised project work, in which the application of implicit and explicit knowledge is more common and the management of social relations is of greater relevance. An increasing body of
literature describes how highly skilled people perform professional tasks and social tasks at the same time, which cannot be separated from their personality (Drucker, 1958; Beaverstock, 2002: 526; Matthiesen, 2004; Williams, 2006). As a result, highly skilled professionals gain an improved position in the negotiation of international contracts, especially when they are highly specialised, and personally linked to prospective clients or partners. The attraction of human capital is crucial for companies as well as regions. Recently Richard Florida argued that the creation of a tolerant atmosphere and of a high quality of life is pivotal for creativity and innovation in the economic realm, because companies tend to follow the path of creative and innovative talent (Florida, 2002).

Finally, motivations for international mobility are more rewarding for highly skilled individuals than for international companies. Because of the high relocation costs and improvements in international communication, transnational companies tend to reduce the international mobility of their employees (Pethe 2006: 258–262). Instead, transnational companies reorganise their international division of labour within their different national branches and prefer to send working packages abroad rather than to relocate individual employees (Pethe, 2006: 48 and 261). Whereas international experience is a benefit for individual professionals and their careers, it is a costly, hazardous and avoidable irritation for larger international organisations. As a result of this, the transnational companies that created the international labour flow of highly skilled labour in the 1980s and 1990s no longer exclusively control and command the international mobility of highly skilled people. Individual migrants shape the international migration pattern to a larger extent than ever before, because international contacts and job searches are easier to organise and the costs of international communication and travel have declined. On a general level, an array of reasons exists to indicate that individual migrants influence the international migration process, too. Recently, two decisive developments have restructured the international migration flow of highly skilled people, which will be described in the next section.
3.2 Recent changes and the creation of a new immigration flow

The latest change of conditions for highly skilled migrants, however, occurred due to the expansion of the new economy at the turn of the millennium, when an array of changes created a new environment for international migrants. Firstly, the labour market of many OECD countries had been gradually opened up for highly skilled migrants. Because of labour shortages in the ICT sector for instance, about 15 national governments of several OECD countries implemented special policies to target international computer specialists (Greifenstein, 2001: 41ff; Khadria, 2001: 50; OECD, 2002: 344ff). Then, international migration of highly skilled professionals has been increasingly important for the economy. EU and OECD countries have recently discussed opening their labour markets to foreign specialists, and simplifying temporary international labour exchange (OECD, 2004).

Secondly, new communication devices have allowed individuals to gain access to information about foreign labour markets. They can contact prospective employers abroad due to the revolution in electronic communication and improved international transport connections. Migrants are no longer reliant on international companies or other consulting institutions in order to get information, to obtain working permits or to find employment.

The impact of this shift can be shown in a case study of Germany. In 2000 the German parliament passed the so called “Green Card” scheme for software and hardware engineers from non-EU countries (Bundesanstalt für Arbeit, 2000). In contrast to the American Green Card, only a single occupational group was awarded temporary working and residence permits for five years. Similar programmes were installed in the Netherlands, Great Britain, France and other countries of the European Union. It was the first time that international recruiting agencies were allowed to process international recruitments in Germany, but they did not play any crucial role for the dynamic of the migration process, nor did companies in Germany actively try to recruit foreign IT specialists outside the country. Surprisingly, the majority of computer specialists are
employed by small and medium enterprises (Bundesanstalt für Arbeit, 2004), which had hardly had any experience with foreign employees before (Pethe, 2006: 267). Third-country nationals, however, immediately used the internet for international job searches and posted their CVs to companies in Germany. They made contact with their prospective employers and organised the international transfers themselves.

Highly skilled migrants who were transferred to Germany within transnational companies before 2000 used to originate in a few industrialised countries such as the US, Japan, Korea and Poland. The new migrants, however, originated in countries with which Germany had never had an intensive exchange of labour (e.g. Romania, India). Their motivation, however, was not so much to reach maximum gain during their stay abroad; most of the specialists were motivated by better working conditions and the possibility of gaining international experience. A small group from other industrialised countries, however, even accepted a loss of salary and dropped out of their promotion cycle, because they judged the experience in Europe, with its rich cultural attractions, to be a better option than living permanently in their accustomed environment and receiving constant salary rises. To sum up, the migration process to Germany and the countries of origin were restructured during this new migration flow (Pethe, 2006). Individual migrants heavily influenced migration movement with their applications, whereas most companies passively selected their prospective employees from abundant incoming applications. The foreign specialists, however, were no longer integrated via company relocation programmes, but had to organise their resettlement themselves. Their motivation was not so much driven by monetary expectations as by the possibility of living, travelling and working in a new cultural environment.

In other words, due to legal and technological changes the international migration flow of highly skilled labour migrants has changed. A change of perspective from company-oriented investigations to actor-centred research is central for the new understanding of migration process of the highly skilled.
4 Migration flow of highly skilled non-labour migrants

Investigations into international migration of highly educated immigrants must not focus on labour migrants only. The aim of immigration is often identified along the mode of entry. Then, labour migrants are recognised on the basis of their work visa, educational migrants can be traced to their student visa, and so on. The mode of entry does neither cogently refer to migrants’ qualifications nor to the purpose of the migration in any case. Kanjanapan (1995) analyses modes of entry to the U.S. He was able to demonstrate that the mode of entry depended heavily on certain occupational backgrounds. Whereas Asian health professionals entered the U.S. because of family relationships, engineers and computer scientists used occupational preferences to obtain a visa. Furthermore, many immigrants adjust their visas after some years, and for example changed their status from that of temporary student immigrants to that of permanent emigrants on occupational grounds (Kanjanapan, 1995). Research on transnational migration shows that migrants strategically employ existing modes of entry. All kinds of transnational networks and personal relationships are employed as long as they are able to overcome national boundaries and to fulfil visa requirements. Since most researchers who focus on highly skilled migration pay major attention to occupational modes of entry, other groups of migrants such as refugees or family migrants attributed less attention to. For an overall picture of international migration of highly skilled people, serious consideration should be given to other pathways, because they have an impact on the migration process, the composition of the highly skilled foreign labour force, and their labour market integration. How important are other immigration categories? Do they influence the overall structure of the international migration of talent?

Again, the situation in Germany provides the basis for the analyses. Although labour-driven immigration has been banned in Germany since 1973 apart from minor exceptions, German legislation allows other forms of immigration such as family reunification or political asylum or humanitarian programmes. Special regulations apply for two ad-
ditional groups in Germany, which are a response to German history. Firstly, persons of Jewish descent from the former territories of the Soviet Union are considered as refugees and are entitled to apply for access to Germany. Since 1992, they have been able to gain unrestricted residence and work permits. Secondly, regulations for ethnic German repatriates have existed for five decades. Due to the political restructuring of post-war Europe, Germany approved entry of persons of German descent who mainly lived in Eastern European countries.

Table 1 shows emigration inflow from non-EU countries by different modes of entry in the period 2000–2003. Groups which are listed in the overview include considerable proportions of highly skilled people. The inflow of highly skilled labour migrants amounts to an annual average of 3500 highly skilled professionals who are admitted on the basis of a German Greencard and intra-company exchanges from non-EU countries. The inflow of highly educated persons in other categories of entry is much higher in total, although it varies considerably between these groups. More than 60 % of Jewish refugee migrants hold university degrees. This amounts at least to 8,500 people each year. Since ethnic German repatriates represent the largest group in absolute numbers, about 4500 people with an academic background entered Germany each year. In addition to the listed non-labour immigrants in Table 1, other major groups must be considered as well, but the lack of data obscures the educational background of asylum seekers and refugees in Germany. It is known that certain national groups of refugees such as Iraqis, Afghans and Iranians include a high proportion of academically educated persons (Schmidt-Fink, 2003; Isoplan, 2004). Literature on labour market integration of refugees suggests, however, that the proportion of educated persons within those groups has been underestimated for a long time (Foda and Kadur, 2004; Hadeed, 2004). Although statistical data fail to represent completely the educational qualifications of non-EU professionals who arrived in Germany via other modes

\[ \text{The largest numbers of immigrants are represented by seasonal workers and contract workers. Since this group is not employed in qualified positions, it is excluded from this overview.}\]
of entry, even then it can be demonstrated that the majority of highly skilled professionals enter the country as refugees, asylum seekers, repatriates or family members rather than as officially recorded labour migrants.

The migration process for non-labour migrants is shaped differently. Non-labour migrants are driven by another set of motivations. Individual choices of migration route and destination are of greater importance. Destinations and the migration process are determined less by economic factors than by political and personal aspects. Detailed and systematic research on the importance of this group for overall understanding of the international migration of highly skilled people is lacking. Apart from the different structure of the migration process, labour market integration of non-labour migrants is less successful than for other highly skilled international migrants (Gruber and Rüßler, 2002). Although public administrations provide some integration services for some groups in some countries, their professional and social integration is not managed as well as for labour migrants.

The result is that they are extremely challenged in overcoming existing labour market barriers. In spite of their high human capital and long work experience, which is much greater than that of young labour migrants or students, their integration process is often hindered by various obstacles such as the non-recognition of foreign credentials and work experience, and working bans for foreign nationals for certain occupations (Bauder, 2003, 2005; Girard and Bauder, 2007; Hillmann and Pethe 2006). In addition to that, more general constraints exist. Some occupations include a higher proportion of locally-bound expertise which cannot be transferred internationally. The interplay between labour market qualifications and labour demand is influenced by national traditions and the organisation of the educational system (Gertler, 1996). Career paths and career promotion are organised differently, which makes it necessary to actively acquire a good knowledge of the organisation of labour markets in destination countries. In contrast to transnational companies, small and medium employers, which still represent the majority of businesses in national states, are often reluctant to employ foreign employees and to install English as a communication language, since they serve
national corporate clients more often than transnational ones (Pethe, 2006: 275).

The majority of highly skilled people travel under their own steam. They enter the
destination country not as labour migrants, but as family or humanitarian migrants. The
migration process appears to be different from the international mobility of highly skilled
labour migrants. The labour market success is in conflict with the positive image that
is dominant in the literature.

5 Conclusions

International migration of highly skilled people is often related to economic globalisa-
tion, because transnational companies seem to account for the major share of the
international mobility of highly skilled professionals. Thus, highly skilled migrants ap-
pear as a successful and easily integrated group of temporary immigrants. The article
has critically reviewed this conception of international migration by using empirical data
from Germany.

Meso-level organisation such as transnational companies and international recruit-
ment agencies that mediate between prospective employees and destination countries
are often used to explain international mobility. Whereas migration processes within
the internal labour market of transnational companies have been thoroughly analysed,
systematic research on international migration processes in the external labour market
is rare. For Germany, it was demonstrated by using quantitative data that the majority
of international migrants are neither working in managerial professions nor do they rely
on mediators to find jobs abroad. Due to rapid technological development and changes
in legal frameworks, for example, highly skilled migrants are no longer confined to medi-
ators if they plan to work abroad, but can contact prospective employers directly. In ad-
dition, non-economic motivations are often given by highly skilled migrants, which also
underlines the fact that a wider research perspective on internationally mobile, highly
educated persons might deliver new results. Another group that has been largely ne-
eglected in the research, despite the large numbers involved, are non-labour immigrants
who received educational qualifications from universities in their home countries and entered Western countries as family migrants, refugees or repatriates. Their labour market success is often small. On the contrary, they epitomise the risk of international mobility for highly skilled persons.

International migration of highly skilled professionals is related to certain periods of time and is characterised by distinct geographies. International movements of highly skilled professionals which are described as brain drain, brain exchange, brain circulation, show specific spatio-temporal patterns and are controlled by distinct processes in time and space. Simultaneously, different scales of agency determine the dynamic of those movements. For example, the brain drain process can be typically portrayed as permanent emigration from “southern” to “northern” countries. It was influenced by the modernisation process and macro level differences between countries. This characteristic pattern changed in the late 1980s, when highly skilled migrants circulated temporarily between ‘northern’ industrialised countries, or they moved to newly developing countries in the ‘south’ due to the enhancing globalisation of economy. The new labour movement of highly skilled professionals that had been initiated by the Greencard, for instance, has been nourished from “southern” and to a lesser extent from ‘northern’ destinations. At the same time, it has shown a highly transient character. New technological developments and the changing insights of governments in industrialised countries that an opening of their labour markets to foreign highly skilled professionals would bring additional wealth to their territories are underlying reasons for the new character of the international movement of the highly skilled. At the moment, however, it might be too early to describe this movement in a new, independent category or even designate a new “brain-” terminology for it. A classification of each international migration flow of highly skilled helps to gain deeper insight in the spatio-temporal structure, their agency and their underlying causes. An analysis of all different groups of migrants, however, brings to the fore that those categorisations are by far not complete. Researchers might give in the risk of overemphasising a single group of highly skilled migrants. The diversity of different groups of migrants and the variety of
processes, which influence the migration are only partly mapped out and not systematically compared. A new research agenda should take this into account. For example, little is known about highly skilled professionals who searched for new positions abroad independently. It seems that they perform well in the labour market. To compare the international migration process of this group with the international mobility of non-labour migrants would be one of many new research perspectives a wider research agenda could achieve.

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Table 1. Immigration to Germany – Path of Entry.

<table>
<thead>
<tr>
<th>Year</th>
<th>Highly skilled Labour Migration</th>
<th>Jewish Refugees</th>
<th>Ethnic Germans</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>3133</td>
<td>16 538</td>
<td>95 615</td>
</tr>
<tr>
<td>2001</td>
<td>3525</td>
<td>16 711</td>
<td>98 484</td>
</tr>
<tr>
<td>2002</td>
<td>3321</td>
<td>19 262</td>
<td>91 416</td>
</tr>
<tr>
<td>2003</td>
<td>3693</td>
<td>15 442</td>
<td>72 885</td>
</tr>
<tr>
<td>Average 2000–2003</td>
<td>3418</td>
<td>16 988</td>
<td>89 600</td>
</tr>
</tbody>
</table>

| Estimated Number of Highly Skilled | 3418 | 8500–12 000 | 4500 |

Data Source: Bundesanstalt für Arbeit (2000–2003); Bundesverwaltungsamt (2005)
Fig. 1. Long term work permits and first permissions in UK (1985–1997).