Skilled Labour Migration and the Need for Qualified Labour

Jana Vavrečková et al.
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Jana Vavrečková Et Al.

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SKILLED LABOUR MIGRATION AND THE NEED FOR QUALIFIED LABOUR

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Abstract

Access to the European labour market has been facilitated for specialists from the Czech Republic, despite the transitory limitation on the free movement of labour in the European Community. That is because the growth in the advanced technologies industry and skill-intensive services are driving a global need for highly qualified labour. The registered trends are of a movement of specialists from mainland Europe to Great Britain, from old member countries to the USA and Canada, and from new member countries to EU-15 countries.

The publication analyses the issue of international skilled migration as a specific problem and identifies the factors motivating and influencing migration in this population group. It also documents the formation of incentive programmes for maintaining native elite workers and what is being done to attract skilled foreign workers in a number of developed European countries. The segment of highly skilled labour is becoming an arena of competition and the study looks at the steps the Czech Republic is taking in this regard.

The core of the publication is identifying the deficits of qualified specialists on the Czech and European labour markets. The authors tackle the problem whether the demand for skilled labour in the Czech Republic corresponds to the professional and field structure of the lacking specialists on the labour market in developed Europe. In terms of methodology, the authors drawn on both quantitative and qualitative sources. The quantitative source of information is monitoring of advertisements for vacancies for skilled work in the press and on the internet in the Czech Republic and abroad. The qualitative source is a field survey of agencies brokering employment for Czech citizens both at home and abroad. The paper is complemented by reflections on the income factors motivating specialists to work abroad and a comparison of the educational structures of the population capable of work in the Czech Republic and in selected EU countries.

The publication is an output from the first stage of a research project titled “The Risk of a Possible Brain Drain from the Czech Republic”; it offers a concise summary of the findings of several survey reports drawn up by the Research Institute for Labour and Social Affairs in Prague in 2004 and 2005.

Keywords

labour market, highly skilled labour, international skilled migration, the need for skilled labour, national immigration programmes, income motivation, educational structure of labour
INTRODUCTION

Modern Europe has for a long time experienced insufficient numbers of qualified skilled labour. There appears to be paradoxical phenomena on the labour market: whilst there is a relatively high unemployment rate the number of jobs available is growing. The supply of available jobs is not being covered and European labour markets are increasingly lacking qualified specialists in a number of sectors, fields and professions. This problem of an insufficient qualified labour force is not only prevalent in Europe, as there is also interest in qualified experts in the United States, Canada, Australia and other overseas countries.

The situation is not optimistic in terms of future trends either, as unfavourable demographic trends in most economically advanced countries will actually increase this problem. Low birth rates are causing a continued reduction in the percentage of the economically active population and a disproportionate outflow of specialists would make the situation even more acute.\(^1\)

The problem is becoming more relevant in the context of the “European Employment Strategy”, which places emphasis on supporting European labour markets and labour mobility. The level of geographic mobility between individual member states is generally very low. The increase of this level should be supported by a gradual removal of administrative barriers, development of linguistic and cultural skills and the recognition of diplomas and qualifications without regard to which member state they were obtained in.

As yet the issue of the outflow of skilled labour abroad has not been systematically monitored in the CR. The only study in this field is the research project by Jarmila Marešová, Dušan Drbohlav and Věra Lhotská which was compiled under the aegis of the Charles University, Faculty of Science, Department of Social Geography and Regional Development in Prague in 1996. [21]

This publication, an annex to this report, is one of the outputs of the “The Risk of a Possible Brain Drain from the Czech Republic” research project from the wider work “Modern Society and Its Changes”. It does not claim to be an analysis of the theoretical concept of international mobility and the foreign migration of skilled labour but has a more pragmatic nature. In accordance with the project’s aims the authors considered the problem: would CR accession to the EU, the migration incentive programmes for obtaining foreign skilled labour, the “European Employment Strategy” and the future free movement of labour cause a more en masse outflow of Czech specialists abroad, and which sectors or fields could expect the greatest threat from this outflow? In this regarding they posed the simple question – does the demand for skilled labour on the Czech labour market correspond to the insufficient number of specialists in the more developed EU countries? As well as ascertaining the personnel needs of the expert deficit on the Czech and European labour markets this publication also includes observations on European and Czech initiatives in obtaining foreign skilled labour from outside the EU. The study also includes

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1 This is a comparative study of ten selected Central and Eastern European countries. It was carried out in the CR between 1994 and 1995. The study involved the outflow of specialists from state scientific and research centres and universities.
considerations on the income motivation for Czech specialists to emigrate abroad and a comparison of the education structures of Czech and European labour forces.

This publication briefly summarises the findings of eight background studies compiled at the RILSA from mid 2004 to the end of 2005, as set out in Section A of the literature used.
CHAPTER ONE
Basic Patterns of Foreign Labour Migration with Emphasis on Highly Qualified Labour

Migration between countries is a historically long-term phenomenon which is affected by economic, social, demographic and other influences and which can have different social consequences – it may lead to development, but also stagnation and recession. Its existence is influenced by a number of factors. The impulse to migrate can be due to personal, natural climatic, social, political or economic reasons.

The basic factor for economic migration is a higher economic standard at the recipient (target) country compared to the standard in the mother country (country of origin) of the emigrant. The most frequently used indicator for an international comparison of the economic levels of countries is Gross Domestic Product – GDP per capita which is expressed at comparable price levels (Purchasing Power Parity). The larger the gap between the economic level of the mother country and the target country, the higher the intensity of economically motivated migration. [8]

It is practically impossible to define the quantitative scope of economically motivated migration and it can be misleading to do so, even though a number of macro-economic models have attempted this. The results of such models can differ by hundreds of thousands to millions of migrants. This is due to the fact that in addition to the macroeconomic factors such as GDP per capita and unemployment levels etc., there are a large number of non-economic factors which affect migration, the intensity of which can be difficult to estimate.

The basic migration types overlap each other and create a number of modifications. In terms of the aims of this publication the most interesting is selective migration, as this is the most characteristic for the vast majority of skilled labour. Selective migration can be defined as the departure of people from the source country due to job offers from employers in the target country. This type of migration mobility depends as a rule on insufficient labour in certain sectors, fields or professions. Selective migration is usual mostly for highly skilled labour (people with a minimum of tertiary level education). It can be said that this type of migration covers the longer term needs of social and economic development in target countries using labour from abroad.

Characteristics of Highly Skilled Labour Migration

The international mobility of specialists and the employment migration of highly skilled labour abroad are an integral feature of the globalisation of society. The global economy creates specific conditions for the international mobility of skilled labour, mainly by transferring employees within multi-national companies or various international corporations. These activities are leading to a single (global) labour market in which there is eminent interest in highly qualified specialists.

The issue of mobility and migration of skilled labour can theoretically be viewed from a number of different angles and foreign literature displays a number of different approaches. [20] The issue can be analysed at a macro level. Here, authors focus on the international economic
conditions, the significance of governmental (national) immigration policies, or on mobility studies of skilled labour within multinational companies, businesses and their networks, as there is no doubt that the international mobility of skilled labour is considerably influenced by these institutional structures.

Another level of approaching the subject is the micro level, which is based directly on the needs, attitudes and motives of individual migrants. The international mobility of highly skilled labour includes men and women with broad educational and professional potential, with some of these individuals migrating temporarily and some intending to settle in the host countries permanently. The issue of skilled labour migration also includes a deep human dimension and aspects of individual decision making (the level of adapting to a foreign environment, relationships to the home country, ties to family and friends, attitudes to careers, the possibilities of applying skills in the domestic environment, the facilities at science and research work places...). The most effective method is understandably a comprehensive approach of examination including both viewpoints and the mutual connections.

Migration flows of skilled labour in an international sense includes various types and forms, from the classic “brain drain”, which involves a loss of talented and highly qualified people from the origin country, “brain circulation” which involves the movement of migrants between sender and host countries (e.g. during the return migration of skilled labour), up to the “brain exchange” between developed countries. Together with the flow of goods, information and capital, the mobility of highly qualified people is a typical aspect of developed economies. [28]

Data on the flows of highly skilled labour shows that the migration of specialists is particularly significant from Asia to the USA, Canada, Australia and the United Kingdom. It is increased particularly in terms of students and temporary migrants who are qualified professionals, such as IT workers. From 1990–2000 under a visa programme for specialists around 900 thousand highly qualified individuals entered the US labour market and the OECD estimates that temporary workers represents 1/6 of the total labour force working in IT technology in the USA.

This issue grows in significance when the situation of the growth in demand for qualified labour in the healthcare sector is considered.

The motivational factors for skilled labour migration are, on the one hand, the same as the impulse to migrate for most of the population (the migration of this group is similarly a response to the economic opportunities abroad and a reaction to the immigration policy of these countries). On the other hand it does have a number of its own specifics (see below). The general factors influencing decisions to migrate and the selection of a target destination include the desire to increase qualifications, obtain experience and to perfect language skills. For research and academia an important motive can be to participate in international research and development projects in host countries. For technical specialists a motive for migration can be an innovative environment.

In selective skilled labour migration the offer of employment is mainly negotiated while the migrant is still in the country of origin and the terms of employment are agreed in advance. This type of agreement in advance can be via specialised agencies, via personal or intermediated contacts with the employer abroad, or directly on-line via advertisements for positions requiring
qualified applicants etc. The actual taking up of the employment is conditional on a number of professional (language) conditions being fulfilled.

**The pay level achieved** (wages, income), or other material means of security in the target country is only one motive to migrate. Equally important motivating factors for skilled labour migration are the desire to develop professional skills, to work in highly qualified teams, the high standard equipment or facilities, participation in important international projects, or the opportunity for career advancement, either directly in the host country or (more often) after returning to the country of origin.

Selective migration in the vast majority of cases has the characteristics of legal residency migration for, as a rule, longer term stays in the target country. Most highly qualified migrants leave for abroad with the intention to return to their country of origin, with only some of them having the firm intention to settle in the host country. The scope of skilled jobs on offer fluctuates according to the situation on the labour markets of the target country, or expressed more precisely, according to the level of coverage of demand and supply for labour with the relevant qualifications, specialisations and the specific professional posts.

**International comparisons of skilled labour mobility** are hindered by insufficient data sources on the movement of temporary and permanent migrants according to their level of qualifications. However there are certain data sources which may be used to evaluate the numbers and flows of highly qualified migrants in recipient countries. These include population censuses, population registries, labour force surveys, administration sources, and specific surveys and case studies. Each data source has its advantages and shortcomings.

**Population censuses** are exhaustive in their coverage. They are performed according to standard international classifications. The disadvantage is that they are performed sporadically and do not always contain the required information.

**Population registries** contain demographic information in particular. In terms of migration they include data on the entry into the country and the anticipated length of stay, amongst others. Generally they do not include information on the education level of the migrant or characteristics of the labour market. These registers can however be a connecting link between various other sources (e.g. social security systems).

**Labour force surveys** can be one of the main sources for comparing the international mobility of skilled labour even though they do have shortcomings (e.g. smaller sample ranges).

In addition to the above there are also **administrative sources** in individual countries (for work permits, residency permits, etc.) which do provide relevant data but which do not provide the capacity to use the concepts, definitions and classifications necessary for creating international statistics. An important source for mapping skilled labour migration is **special surveys** focused on highly qualified specialists from abroad. These surveys are financially demanding but they are being supported increasingly by the OECD.\(^2\) [64]

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A special modality of international skilled labour migration is the mobility of top, usually science orientated “talent”, including younger talents with proven abilities for highly creative activities. These specialists as a rule migrate to economically developed countries with state of the art research, development and construction facilities and which have access to the most modern technologies available. A significant characteristic of this type of migration is the fact that the supply of vacancies for this type of “talent” is virtually continuous as there is a shortage for this type of specialist around the world. Above all, for this type of migrant the income disparity between countries is not a priority, however the important and often decisive motive is the nature of the creative activities. The country of origin of the migrant (the emigration state) usually terms this type of migration as “brain drain”. It is a partial aspect of the economic connection and globalisation of the world’s economies and a factor in the permanent advancement of the social-economic development of the most developed countries.

The types and forms of migratory movements of skilled labour which are discussed the most in foreign literature are briefly characterised in Annex 1.
CHAPTER TWO  
The Brain Drain in the European Union and Incentive Programmes for Attracting Highly Qualified Specialists

It is no secret that the European Union is facing a brain drain problem. The leading scientific and engineering talents are looking to work outside the European zone, mainly in the USA, Canada, Australia and other overseas countries. Even though the EU produces more university graduates with doctorates than the USA, it has a smaller share of scientists in its population – in the EU there are 5.36 scientists per 1000 working people, in the USA this is 8.66 and in Japan it is 9.72. [61] In order to achieve its ambitious target of investing 3 % of total GDP into research and development the EU will need a further 700 000 scientists. “If the Union does not take adequate steps to keep (maintain) its scientist talents and unless it invests in science and research the situation will become even worse”, warns the European Commissioner for Science and Research, Philippe Busquin. [95]

There are considerable differences between individual countries in terms of their attraction for potential migrants. Scientists and the top intelligentsia from the continent find the UK and the USA attractive. For example, the number of German scientists in the UK has doubled over the past five years. While scientists and top specialists are leaving the CR to earn a living, their German colleagues are being attracted to the UK due to the more flexible system of the universities and science facilities there for example.³ There is a problem in many Western European countries for young scientists and other specialists to find suitable positions on their return home from abroad (most often from working in the USA), as they cannot find corresponding working conditions. This is one of the typical features of the Czech Republic, which still is not able to properly make use of the experience and know-how of its migrants returning from abroad.

After the expansion of the EU there has been increased debate about the outflow of highly qualified specialists from the new member countries to old Europe countries. According to the European Commission it is expected that the new EU member states will lose 10% of its most qualified students. The departure of the most qualified young people can seriously threaten the potential economic growth of the new EU member states.

In view of the unfavourable demographic prognosis the departure of young people as a whole will become a problem as the unfavourable age structure balance of the working population in the countries of origin will become worse and worse. It is clear from studies carried out on the

³ While there were 1 820 Germans being taught in the UK in the 1998 to 1999 school year, five years later the figure was 2 575. This is not a transitional feature but a permanent one according to the British agency for university statistics HESA. This trend is confirmed by the latest surveys from the German company Berlinopolis performed with three hundred German scientists at British and American universities. It was ascertained that only a third of them wanted to return home.

http://www.jobpilot.cz/content/service/jobjournal/aktuality/tema.html
attitudes to migration of the population that young, qualified and single people are leaving to live abroad.⁴

The mobility of scientists and other top experts is positive in terms of the country of origin if they return to their home countries and make use of the knowledge they have gained. In other cases it is mainly the target countries which gain from the mobility of scientific and engineering talent.⁵

In other words the **brain drain can be beneficial for the origin country it is followed by an inflow.** Most people around the world give priority to returning home as opposed to permanent exile.

The Swiss professor, Jean-Pierre Lehmann, thinks that the brain drain can also be beneficial for the country which the specialists are leaving. It creates considerable pressure on countries which are losing their best people and forces them to take steps to improve their system of government, their institutions and the level of economic and social freedoms. For example, Spain has witnessed an outflow of its talent for five centuries, particularly after the victory of fascism in its civil war. The once poor dictatorship which used to be overlooked by the rest of Europe has undergone one of the most successful transformations over the last quarter century. It has become a prosperous country, where capable people no longer look for a way to escape and many of the most talented Spanish citizens have returned home. A more important fact is that qualified and talented people from abroad are migrating to Spain to work. [28]

Some poorer countries compared to target migration countries are more vulnerable to the departure of their top experts. The level of brain drain depends on the economic resources of the given country, the level of scientific and technological development, the social prestige enjoyed by scientists and specialists, the inclination of that country towards innovation, opportunities for additional education and the remuneration levels for top specialists etc.

**The brain drain represents a real threat to Europe which must be avoided.** The United Kingdom, Ireland and Germany, i.e. some of the more developed European countries have reached the conclusion that they must give maximum support to people interested in desired fields from their own countries and also they must actively recruit skilled labour from abroad. Attracting talent from abroad has become a new trend in Europe but has had a long tradition in other continents. The USA, Canada, New Zealand or Australia has long been aware of the importance of an active immigration policy aimed at importing highly skilled labour from abroad.

The competition for highly qualified labour has led the more developed European countries to amend their immigration laws and to **promote selective immigration assisted by a number of incentive programmes in order to attract specialists from abroad.**

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⁴ Two thirds of potential Czech migrants are made up from the age group of up to 29 and roughly 60% of these have high school and higher education. Vavrečková, J.: The Migration Potential of the Czech Population during the European Integration Process. Prague, RILSA 2003.

⁵ E.g. American universities gained great benefits from German Jewish refugees fleeing Adolf Hitler.
2.1 INCENTIVE PROGRAMMES FOR QUALIFIED SPECIALISTS IN SELECTED EU COUNTRIES [2]

2.1.1 Ireland

Ireland is a classic example of a country where an economic turn around has lead to a substantial brain drain about turn. In the past Ireland was a traditional “exporter” of people who had been leaving the country for centuries (mainly to the USA and the UK) due to the poor living conditions and poverty. Over the past 30 years Ireland has managed to turn itself into an economically strong country. The key element in Ireland’s economic success was the emphasis placed on education and its emphatic transition from an industrial to a service and information technology based economy. A part was also played by an advantageous tax policy aimed at attracting foreign direct investment (including venture capital), pro-investment policies and support for financial services. Gradually Ireland built itself a reputation for being a centre for the technology industry, for telecommunications infrastructure and as a country with good legal conditions for commerce. This turnaround in the overall economic policy caused considerable development in sectors which had high demand for high qualifications and finally resulted in a reverse of the brain drain, back into Ireland. [93]

Due to the sharp growth in the Irish economy a shortage of skilled labour was recognised in the information technology and construction sectors as well as a broad range of medical professions in the healthcare sector (doctors, nurses, physiotherapists etc.). Information of shortages in skilled labour is regularly published on the websites of the Education and Employment Office (FAS) and the Industry and Technology Development Support Office (Forfás).

Initiatives Supporting the Growth of Native Specialists

In 1996, at the Government’s request an expert group was set up whose main task was to analyse and assess the supply and demand in industrial sectors requiring a high level of qualifications. According to the group’s analyses and recommendations the Government allocated a significant growth in resources to support new university students studying technical subjects. If it was ascertained that the numbers of applicants for IT or technical university courses were dropping at any point, the mediatisation of the prospects for careers in these fields aimed at the Irish public would be immediately supported.

The “Skill Awareness Programme” attempts to focus the attention of the media on the situation on the labour markets in the highly qualified labour segment. It creates various promotional materials supporting the technology or IT sectors in the eyes of high school students, their parents and their teachers. All this is played out with the strong support of the Ministry for Education and Science. Ireland also supports mobility between the industrial and the academic spheres, i.e. the mutually beneficial co-operation between academics, research workers and specialists in the respective fields.

Initiatives to Attract Foreign Specialists

Ireland is aware of the fact that its further economic growth could be limited by its national labour potential. Therefore, in addition to supporting its native intelligentsia, it is attempting to
attract specialists from abroad. This is not only focused on experienced workers in a desired field, but also on students with the required qualifications.

**It continues to count on an inflow of immigrants particularly in the services sector** and has particular interest in workers from the new member states of the EU. In the medium term it is estimated that there will be a need for new skilled labour up until 2010, and they calculate the need for about 234 000 people.

To support the recruitment of highly skilled labour from countries outside the EEA Ireland introduced a managed immigration policy using its Working Visa and Work Authorisation programmes. These programmes are intended to attract qualified specialists from abroad into specified sectors and firmly fixed professions. This involves, for example, experts on information technology, healthcare professionals (doctors, nurses, dentists, therapists...), specialists in the technical professions (particularly construction engineers), and planning experts (e.g. architects, town planners ...) science and development workers and representatives from a number of fields.

### 2.1.2 The United Kingdom

The United Kingdom is traditionally a country with strong industry. Since the end of the 80s and beginning of the 90s the economic trend has moved away from heavy industry and towards the tertiary industries. Demand on the labour markets therefore is determined by the services sector, which is generally characterised by a high dependency on qualifications. For a long time the UK has experienced a shortage of qualified labour, (so-called skill gaps). There is a long-term trend of transition from manual work to non-manual work. The increasing importance of qualifications for being successful on the labour market has been confirmed by analyses of the labour market in relation to unemployment levels at various education groups. Over the past ten years there has been a noticeable drop in unemployment for groups with higher and university education.

A predominant demand from employers over the supply of labour exists in the UK particularly in the information technology, engineering, healthcare and welfare sectors and in education and training which exists throughout the territory. The construction sector is having difficulties in finding workers and there is a shortage of qualified labour in mechanical engineering, mainly in the South East of the country.

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6 Employment in the manufacturing sphere should remain stable, while analysts expect a drop in the agricultural and construction sectors.

7 Work visas must be obtained by citizens from countries which have visa relations with Ireland, and who have obtained employment in one of the defined fields. Work permits may be obtained by citizens from countries which have a non-visa relationship with Ireland and who have offers of work which also come under the defined categories. These programmes enable applicants who have been promised work in Ireland to obtain visas and work permits from Irish consulates or embassies in their own countries. Applications are also submitted in their country of origin, directly at the Irish representation offices. Visas and permits are generally valid for two years. Holders may change employers during the validity period but only within the same employment category. See [http://www.entemp.ie/labour/workpermits/authorisation.htm](http://www.entemp.ie/labour/workpermits/authorisation.htm)
The Government therefore decided to resolve the shortage of qualified labour and to attract specialists from abroad. In 2002 it announced a new points programme for immigrants with high skills potential and subsequently started the HSMP – Highly Skilled Migration Programme.

The programmes objective was to remove barriers to foreigners finding work for groups of highly qualified applicants. The programme was primarily focused on experienced professionals, who had already achieved considerable success in their home countries. Participants in this programme do not have to find an employer before they arrive in the UK and are issued with visas with which they may work in the UK for a year. A month before this period expires the participant may request an extension to the visa and it is then generally extended for a further three years. After the whole maximum four year period expires, if the foreign worker is interested in continuing to work they may settle in the UK and apply for a permanent residency permit (Settlement Visa).

The programme is based on a points system for assessing the suitability of candidates. The following factors are assessed:

- age,
- qualifications,
- relevant work experience,
- previous income,
- professional success.
- priority professions (currently only doctors),
- the professional success of partners.

The programme for highly qualified migrants has been very successful in the UK. During its existence it has experienced changes which reacted to trends in the British labour market and the need for workers which were in short supply. Already in its first year the view prevailed that it should be used to a larger extent, amended to include young people, emphasise previous qualifications more and reduce the points limit, thus expanding the group of potential participants. In general, the minimum points level was reduced, and young people up to 28 years of age and participants with spouses or partners with university educations were given preference. The requirements for previous work experience and income were also reduced. [97]

In addition to this the UK has a number of programmes for attracting science and research talent into the country. One of these schemes is the Dorothy Hodgkin post-graduate prize. The idea of this programme is to sponsor post-graduate studies in the UK for applicants from third world countries. It has a budget of GBP 10 million and is focused on young scientists from India, China, Russia and Hong Kong. In addition to this the programme sponsors their studies and allows them to stay in the UK for a year after they complete their studies. This is enough time for graduates of the programme to find corresponding work in the UK.

The UK has expressed its liberal approach to immigration as such when, together with Ireland and Sweden it allowed nationals from all the new EU member states to work there without applying any restrictions to its labour markets. The British Government cancelled work visa requirements for EU 10 nationals, and introduced only a register which is obligatory for all job seekers.
2.1.3 The Federal Republic of Germany

In the first two decades after the Second World War there was an economic miracle in Germany (the Wirtschaftswunder). There was not enough labour for the sharp growth of industry and this need was covered by so-called gastarbeiters (unqualified labour from abroad), mainly from Turkey.

The German economy has been stagnating since roughly 2003. Businesses are being forced to rationalise production, introduce new technologies to remain competitive and to optimise wage costs. These events have logically led to a reduction in personnel requirements (human potential). This trend has been reflected in statistics by a noticeable reduction in employment and a concurrent increase in the number of people without stable employment. For example in 2003 there was a 1.2 % year-on-year decrease in employment with a corresponding 4 % increase in unemployment. As a result of the weak economic dynamic there has been a reduction in the number of job vacancies in nearly all fields and sectors.

Qualified Jobs Required in Germany

The trends for the demand for jobs have copied the trends of the past few years – a country-wide transformation into a service society. The highest drop in employment has been recorded in the industrial manufacturing sector, followed by the construction sector. There has also been an employment reduction in agriculture and forestry. Contrary to this a growth in jobs in business services, healthcare and welfare and education and training has been recorded. In Germany already 70 % of all economically active people work in the services sector (in comparison, according to the 2004 Statistical Yearbook 56 % of economically active people in the CR work in services).

In accordance with globalisation supply on the labour market is focused on jobs which require high qualifications and applicants with the best academic educations are much sought after.

At the end of the last century Germany found itself in a situation where it could not cover its growing industry with developed technology and the overall transformation from the industrial to the services sector with its domestic supply of qualified labour. The problem of unification has not been successfully resolved to this day and the consequences of mass migration of skilled labour form the East to the West are still clear in the Federal Lande.

In Germany the skilled labour migration was not only within the single state, from East to West (the migration flow has been considerably reduced by the gradual convergence of the two German countries), however as a result of the economic stagnation much of Germany’s scientific and technical talent went abroad. This fact can also be seen as one of the causes of the low economic growth.

The supply and demand for highly qualified jobs is regularly monitored by the various professional associations of the respective employee groups and according to their findings the balance in a number of sectors is not very encouraging. For example, according to information from the Professional Association Of German Electricians, Electrical Engineers and Information Technicians (Verein der Elektronik, Elektrotechnik, Informationstechnik – VDE) in the fields of medical equipment and optical technology alone there is a shortage of 20000 qualified
workers. In the electronics industry in 2004 every second vacancy for graduates (starting in the field) remained vacant.

The Association of German Engineers (Verein Deutscher Ingenieure – VDI) is warning of the fact that in Germany there is an annual shortage of 15 000 technical engineers. The statistics for future graduates show that in the near future the existing situation will remain more or less the same.

On the other hand according to the VDI in the FRG 64 000 certified engineers are unemployed. 60% of these are older than 50 (i.e. these are workers with little knowledge of High-Technology).

At the same time the quotas for highly qualified engineers have doubled in German factories from the period 1988-2004. Currently this represents 16 % of employees and this figure will rise in the future.

In addition to the classic technical engineers the German labour market needs (albeit a limited amount) of physicists, chemists and science graduates. These will find work in research (development requires technical engineers for their more detailed and analytical knowledge). [88]

In heated political discussions the opinion is being voiced increasingly strongly that if Germany is to maintain its leading position in traditionally German fields (e.g. medical equipment, optical technology...), it can only do so by taking the following two steps:

– improving its own educational possibilities,
– encouraging selective migration of highly qualified labour from abroad.

Initiatives for Obtaining Skilled Labour from Abroad

The Federal Government’s “Green Card” (Grüne Karten) programme for information technology specialists, which is restricted to this field, is generally well known. It was introduced in 2000 using the model of the American green card. The green card is issued if an applicant submits a university diploma and a promise from a German employer that the minimal wage will be € 50 000 a year. If these conditions are fulfilled the visa will be issued within three or four business days. Applicants may take their families with them to Germany. The duration of the work permit is limited to five years. Since its existence Berlin has already issued 16 000 cards. The green card programme ceased on 31.12.2004 and assessments of it are varied.

Germany took a great step towards creating favourable conditions for obtaining qualified job applicants from abroad by passing a new immigration law. The new Immigration law which passed through the legislative processed after three years of political negotiations was passed in June 2004 and became effective as of 1.1.2005. Its main purpose is to attract highly qualified labour to the largest European economy and to fill the labour deficit mainly in the information technology, healthcare and engineering sectors.

Germany, which has the highest share of foreigners per capita in the whole of the European Union (cca 9 % of the population are foreigners, compared with 2.35 % in the CR), did not manage to systematically support the inflow of skilled labour until 2005. This task is placed on the new Immigration Act, which contains the following provisions, for example:
– highly qualified workers such as scientists or IT specialists may receive mainly unrestricted residency permits (Unbefristete Aufenthaltserlaubnis), which will allow them to settle in the country permanently,
– Foreign students are allowed to remain in the country for a year after completing their studies and may use this period to look for work on the German labour market.

Scientists, specialists and managers from third countries (new member states) may also relatively easily obtain work permits in Germany, if they have university diplomas and if their employment is deemed to be in the communal interest (i.e. the country doesn’t have enough of its own experts in the field).

2.1.4 Austria

In Austria the economic development has also not contributed to a significant growth in job opportunities (in 2004 GDP growth was only 0.5 %). The decline in job vacancies affected different economic sectors to varying extents, with industrial manufacturing being the most affected. Employment growth was only recorded in the tertiary sector. The drop in employment was most obvious in the capital, Vienna, which had an employment reduction of 5 500 people in 2004, which is blamed on the growing competition of the labour force in the new EU states, in particular that of its nearest neighbouring city, Bratislava.

As part of the European Union’s vision Austria is attempting to establish itself as one of the five European countries with the strongest innovation potential. This is based on the conviction that this goal can be achieved only by supporting research, the sciences and innovation with highly qualified and creative human potential. Currently there is a shortage of 900-1 400 researchers and scientists in Austria. The problem of insufficient highly skilled labour cannot be resolves by raising student quotas as demographic trends indicate that as of 2005 the strong school years will be reduced by 15 %.

Initiatives for Obtaining Top Scientific Talent [73]

With regard to the above-mentioned facts, the Austrian Government has declared its “BRAIN-POWER AUSTRIA” programme with the objective of attracting Austrian scientists working abroad back for scientific (research) work in the country. It is estimated that there are 1 500 – 2 000 of these people who are working mainly in the USA, Canada, the FRG and the UK. This clearly shows that the typical brain drain is not just an issue for economically backward countries, but that it can also be a characteristic of countries like Austria. Austrian scientists are not leaving to work overseas or in EU countries because they don’t have suitable work at home. They are leaving for better working and income conditions.

The reasons for the outflow of top specialists from Austria can be summaries by the following points:
– relatively limited career possibilities,
– relatively low incomes compared with salaries abroad,
– Austria’s insufficient international connections with the rest of the world,
– compared with the more developed world, relatively poorly equipped research facilities and local universities.
Austrians are aware of the fact that if a number of renowned scientists and specialists leave a country (region) permanently this will as a rule lead to the stagnation of domestic science and research.

The idea behind the programme which is part of the “Human Resource” project is principally to reduce the outflow of Austrian scientists and by using specific resources to encourage Austrian scientists living abroad to return to the country. The approval of the programme should contribute considerably to transforming the brain drain into a brain gain. The programme endeavours to support scientific talent in key industrial qualifications and to create attractive scientific facilities in the country. At the same time there should be an improvement in scientific transfers between universities and businesses and an increase in the number of companies and businesses which operate there own research and development.

People interested in the programme must have finished the doctoral studies in the past ten years. Two thirds of the costs of scientists wishing to return and who fulfil the set conditions will be met by the relevant Ministry, with the rest being paid by the company for whom the scientist will work. According to estimates, in North America alone there are 1 500 Austrian scientists. Most of these will be approach using the database of the office for science and technology at the embassy in Washington, and their attitudes to a possible return home will be sounded out.

At the same time Austrian scientists/research workers are expected to be sent abroad to increase the KNOW-HOW of Austrian experts (there is a quota of cca 400 experts a year).

As part of the BRAIN POWER AUSTRIA programme an online employment exchange specialising exclusively for science and research workers has been set up – it carries the supply of these workers and the demand for vacancies from Austrian employers. The opportunity for individual advice and support has also been provided for this group. Specific assistance is offered in finding suitable housing, schools for children and employment for family members. All the above-mentioned activities should be provided by the recently set up Support and Care for Scientists and Research Workers Office. [86]

Incentive programmes for obtaining highly qualified specialists have also been set up in other countries. From Europe this includes Holland for example, where the Government approved a resolution for the simplified access to the Dutch labour market for highly qualified labour from third countries and the new member states. Permits for these professionals are issued for 5 years or according to the employment contracts. If a contract is for an unspecified period, the respective work permit will not have a time limit. Processing work permits should not take more than 2 weeks. Employees who have not completed university educations are not considered as being qualified.

Other developed countries are also attracting foreign experts, such as Spain and Italy. Overseas the main countries are the USA, Canada, Australia, New Zealand and others. As we know, a

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8 In Austria the programmes are meant to attract top scientists of all nationalities, however emphasis is placed on Austrians working abroad.
9 Workers who will have an annual gross income of at least € 45 000, or € 30 000 if they are under 30, will not require any sort of work permit at all. An important condition for participating in the project is for employers to conclude an agreement with the Immigration and Naturalisation Service, IND. If an employer wishes to employ a highly qualified worker it does not have to organise a classic work permit for them.
typical brain drain has been experienced for some years by the USA, where only a half of the scientists (researchers) working there are also educated there, with the other half being recruited from abroad.

To sum up, it can be states that a number of programmes (concept) are being set which have differing characteristics and which endeavour to attract foreign experts. The separate programmes show some similarities and some differences depending on the specific national attitudes, requirements, needs and experiences.

According to Anglo-Saxon literature [Salt, McLaughlan 2002] government activities in “attracting” foreign specialists can be set out in a few basic categories:

– countries which have comprehensive immigration programmes (e.g. the “green card” system in Germany),
– countries which have introduced basic, positive measures to the existing work permit system, leading to easier access for specialists to the local labour markets (e.g. “fast-track” visas for IT specialists in Holland),
– countries which have dropped work permit requirements or relaxed regulations for them for certain categories of specialists (e.g. as part of multi-national companies internal transfers – ICTs, intra-company transfers – “corporate” migrants are coming Ireland who do not require work permits),
– countries who have introduced tax incentives to reduce the tax burden for foreign workers with high incomes (e.g. Scandinavian countries),
– countries who have established programmes for the return of their own highly qualified specialists from abroad (e.g. Austria).\(^\text{10}\)

\(^{10}\) http://www.homeoffice.gov.uk/rds/pdfs2/migrationpolicies.pdf
CHAPTER THREE
The Active Selection of Qualified Foreign Workers in the Czech Republic

The Czech Republic has been implementing a certain type of incentive programme to attract qualified specialists from abroad since 2003. It is known by the name of the pilot project “Active Selection of Qualified Foreign Workers”. This involves the managed selective immigration of skilled labour from countries which are outside the EU.

The basic principle of the project is to allow foreigners to apply for residency permits in the CR in a shorter time than regular applications.

The specific objective is to bring into the Czech Republic qualified specialists from abroad who will want to live there with their families and who will fill in the gaps in the local labour market. The Ministries of the Interior (MI) and Foreign Affairs (MFA) have shared in setting up the project together with the Ministry for Labour and Social Affairs (MLSA). By way of this initiative the CR has become the first transformation county to try managed migration.

Participation in the project is limited for the time being according to migrants’ country of origin. During the first year only applicants from Bulgaria, Croatia and Kazakhstan could participate, and there was a maximum quota of 300 citizens from these countries.

The project was expanded from October 2004 to include two other countries – Belorussia and Moldova, with the quota being increased to 700 applicants. As of 2004 foreign graduates of Czech universities could also apply for the project, without regard to their country of origin.

A further expansion of the project took place in June 2005 when citizens from Serbia, Montenegro and Canada were included. Another new feature was to allow participation from graduates of Czech secondary schools (without regard to country of origin) who completed their studies in 2000 or later. At the same time the time limit for participation of foreign graduates of universities was put back to 1995.

A fundamental change in the number of participants is expected in 2006, when applicants from the Ukraine will be able to apply from 1.1.2006. By introducing this step the Government has accommodated the repeated requests of Czech employers who have great interest in Ukrainian workers. Ukrainians are the second largest nationality group in the CR after Slovaks. According to CZSO statistics, at the end of 2004 there were 41,885 Ukrainians working in the CR, of which 22,399 had the status of employees, i.e. they had work permits, which is one of the conditions for participation in the project. This expansion anticipates a several fold increase in the number of applicants which will also test its capacity capabilities.

The number of countries from which applicants may apply is still limited however the managers of the project have stated that it could be opened to skilled labour from all countries during the next five years.

Conditions for participating are the migrant’s country of origin and having agreed employment in the CR, i.e. obtaining a residency permit for the purpose of employment. In practice this means that the project organisers do not help applicants find jobs or help them obtain work permits. The
principle still applies that migrants from third countries can only get jobs in the CR which cannot be filled in the long-term by Czech workers or workers from the EU.

**One basic advantage of participation in the** “Active Selection of Qualified Foreign Workers” project is the fact that participants can apply for permanent residency in the CR after a shorten period of 2.5 years, when the existing legislation requires a minimum of 10 years before making this application. Permanent residency can also be applied for by family members. Another advantage is a protective period of one month to look for other work if the original job is lost through no fault of the employee (the foreigner does not have to leave the CR during this time).

The pilot project uses the Canadian model for immigrants, i.e. a points assessment and computer selection of applicants.

The assessment criteria for the qualification for the project are:

– the achieved education and work experience in the origin country and in the,
– age (applicants between 23-35 will achieve the best assessment grade),
– language skills,
– experience with living in the CR,
– family assessment.

A condition for participation s to achieve at least 25 points from a possible 66 and to gain a place in the quota for the given period.

As of 5.8.2005 301 people entered the programme and at this date no applicants from Canada or graduates from Czech secondary schools used the opportunity to enter it.

**Analyses of the structure of accepted applicants** show that there is a slight prevalence of men (53.8 %) and that more than half of the applicants have secondary school education (51.2 %). 147 of the total 301 had university education, of which 20 % was in technical subjects, 8 % in information technology, with the same percentage working in healthcare. Science workers only make up 6 % of the overall participants.

In the age structure there was a prevalence of participants in the 24-35 age group (54.8). This was a positive finding as these are young people of productive age and there is hope that as they work they will contribute to the Czech tax and social security system.

An interesting fact is that 70 % of accepted participants indicated a knowledge of Czech.

**The basic problem with the pilot project is** the small number of participants which do not fill the set quotas for the respective years by a long way (300 people in the first year, 700 in the second). In the first year the quota for eligible nationals was filled by 60 %, and in the second year this figure was roughly one fifth. After two and a half years a total of 301 people had been selected.

One of the main barriers for successful inclusion into the programme was shown to the obligation to have employment in the CR agreed in advance. As a result of this the MLSA set up a new Internet site (www.praceprocizince.cz), which is intended for Czech employers and foreigners interested in working in the CR. However this step does not seem to resolve the situation as the
demand for jobs exceeds the number of vacancies which Czech employers are offering several folds. The problem remains not only the quantity but also the quality of jobs offered. It appears that Czech employers have little interest in foreign skilled labour for various reasons (administrative barriers, poor Czech language skills etc.) and there is doubt whether the CR can effectively use the specialists which are arriving effectively in comparison to the activities of more developed Western European countries.\textsuperscript{11}

\textsuperscript{11} On browsing web sites we ascertained that there are employers offering vacancies requiring low qualifications and job seekers from non EU countries who have high standards of qualifications. Many of them have completed secondary school and some have completed doctorate studies and have good knowledge of English or other world languages.
CHAPTER FOUR
The Demand for Specialists in Foreign (European) Labour Markets

The information on the demand for specialists in European labour markets set out below is based on two basic sources:

a) Quantitative data obtained from monitoring the demand for qualified labour (hereafter only QL) on European mobility networks – specifically the EURES and ERA-MORE systems,

b) Field studies of employment agencies which broker legal employment for Czech specialists abroad.

4.1 REFERENCE SOURCES CHARACTERISTICS

a) The European Job Mobility Portal in the EURES network – EURopean Employment Services is available at the following Internet address: http://europa.eu.int/eures, or http://portal.mpsv.cz/eures.

This is a network made up of national employment services the main purpose of which is to support the free movement of labour throughout the European economic area.\(^{12}\) As an instrument for employment mobility EURES assists employees who are interested in countries other than their own and also employers who are considering employing workers from abroad.\(^{13}\) The Czech Republic joined in with the network as part of the accession treaty of 1\(^{st}\) May 2004 and Czech citizens may use EURES advisory and information services via their labour offices (the Czech network has 15 Euro advisors, 66 contact persons at labour offices and covers the entire territory of the CR).

The European Researchers Mobility portal – ERA-MORE is available at http://europa.eu.int/eracareers and is aimed at European science and research employees. Its function is guaranteed by the European Commission. The reasoning behind the portal is to provide an optimum allocation of the science and research capacity within the EEC and to minimise the “Brain Drain” to countries outside Europe.\(^{14}\)

The centre for scientific and research worker mobility is just establishing itself. The Academy of Sciences of the Czech Republic is responsible for the preparation and functioning of the Czech centre for mobility, which should have a total of eight regional contact points in throughout the country.

The aim of monitoring the demand on European mobility networks was to quantify and specify advertised jobs for the qualified labour (QL) segment.

\(^{12}\) European Economic Community (EEC) includes EU member states and also Norway, Iceland and Switzerland; EURES activities commenced in 1994.

\(^{13}\) EURES also provides useful information on employment and living conditions in other countries and provides assistance to businesses which want to expand their activities outside their own country, particularly in cross border areas.

\(^{14}\) The system further assists science and research employees when they go to work abroad (e.g. by simplifying visa and registration formalities) and helps resolve problems in host countries.
Only highly qualified employment was monitored according to the “Employment Classification” CZSO KZAM\textsuperscript{15} – employment groups 1 + 2, in the third and fourth classification levels.\textsuperscript{16}

**Survey frequency.** A total of four weekly surveys were performed as part of the monitoring:

- 2004 – October, December;
- 2005 – February, March,

Ad b) **The qualitative resources** for Czech specialists abroad was the field study of employment agencies which have licences for brokering the legal employment of Czech labour abroad. **The aim of the field study** was to ascertain the demand for qualified Czech specialists abroad and other and other resources which are closely related to the migration of Czech specialists.

Only agencies which have licences to do so grant by the MLSA and which fulfil the conditions laid down by law (e.g. clean criminal records and relevant experience) may broker employment abroad. A list of these agencies is available at: http://portal.mlsa.cz.

During October and November 2004 individual interviews with representatives of twelve personnel agencies were carried out based and a pre-prepared exploratory question structure. Most of the agencies were from Prague, where they have most of their clients, however in view of regional specifics agencies from Ostrava, České Budejovice, Třebíč etc. were also represented in the sample. The vast majority of the interviews were performed using Dictaphones with the information obtained subsequently being transcribed. The strict anonymity of all respondents was preserved throughout the study.

\textsuperscript{15} The KZAM employment classification is maintained by the CZSO (Czech Statistical Office); it corresponds to the ISCO 88 international standard (the ILO standard). The classification concerns employment as a specific activity which an employee performs and which is the source of their income. There are five levels in the classification (5 digits). The international standard has a four figure digit, which the KZAM has extended to five for national specifications.

\textsuperscript{16} Specifically this involves the following employment categories:
- groups 12 and 13 – Management and heads large organisations, companies or businesses including their organisational units, the directors and heads of small businesses, organisations or companies;
- group 21 – Scientists and specialists in physics or related sciences, architects and technical engineers / creative workers:
  - scientists and specialists in physics, chemistry or related fields,
  - scientists and specialists in mathematics, statistics and related fields,
  - scientists and specialists in computer technology,
  - architects, designers, construction engineers, technical engineers, constructors…,
  - Scientists, specialists and graduates in biology and related fields;
- group 22 - scientists, specialists and graduates in biology, medicine and related fields (medical doctors, interns, dentists, vets, pharmacists, medical equipment sales people etc.);
- group 23 – specialists educators;
- group 24 – other scientists and specialists and specialist white collar workers (specialists in business, in law, the social scientists and workers in the arts, etc.).
4.2 SURVEY RESULTS

4.2.1 Quantitive Survey Conclusions [5]

There was only a very low share of vacancies for highly qualified specialists in the overall jobs in the EURES system (those in the 1st and 2nd KZAM classes) – in the total number of advertised jobs this fluctuated in 0.5 intervals – nearly 2 %.

Table 1 The Demand for Vacancies in the Survey on European Employment Mobility Networks

<table>
<thead>
<tr>
<th>Survey period</th>
<th>Total vacancies</th>
<th>Vacancies in the monitored Jobs in the 1st and 2nd KZAM main categories</th>
<th>Share of KZAM 1st and 2nd main category vacancies in overall vacancies in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.-29.10.2004</td>
<td>50 788</td>
<td>200</td>
<td>0.39</td>
</tr>
<tr>
<td>13.-17.12.2004</td>
<td>52 574</td>
<td>938</td>
<td>1.78</td>
</tr>
<tr>
<td>7.-11.2.2005</td>
<td>62 026</td>
<td>348</td>
<td>0.56</td>
</tr>
<tr>
<td>4.-8.4.2005</td>
<td>178 524</td>
<td>269</td>
<td>0.15</td>
</tr>
<tr>
<td>Total</td>
<td>343 912</td>
<td>1 755</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Source: The European Job Mobility Portal – only EURES, The Researcher’s Mobility Portal, RILSA figures

In terms of employers, EURES clients are predominantly small and medium enterprises, with large companies using either the services of specialised personnel agencies or in the case of multinationals their own international systems of employee selection. University and science-research institutes use their own information systems and structured systems for professional relations and contacts.

Fluctuations in the overall number of monitored QL have appeared in the separate surveys (these may have been caused by booms in the economies of separate countries (regions) or changes in the methodologies used by national employment services), however the demand for highly qualified specialists remains more or less constant. An exception to this was the December fluctuation in the demand for university educated employees which reflected the one-off needs in the United Kingdom.17

During the analysis of the demand for highly qualified professions in the KZAM 1st and 2nd classes according to individual countries it was ascertained that the highest number of vacancies for the monitored segment were being offered in developed countries by the Atlantic. It was quite evident that the most job opportunities for QL were offered by the UK, followed after a significant gap by Ireland and France. There are relatively high figures also for Holland, Belgium and Italy.

17 Average demand in October 2004 and February and March 2005 fluctuated around 50–67 vacant highly qualified jobs (HQJ), in December it reached a value of 673 as a result of searches for specialists in business, IT and management.
### Table 2  Jobs Offered in the Monitored KZAM 1\textsuperscript{st} and 2\textsuperscript{nd} main categories

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>30</td>
<td>55</td>
<td>67</td>
<td>61</td>
<td>213</td>
<td>53</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>50</td>
<td>673</td>
<td>67</td>
<td>51</td>
<td>841</td>
<td>210</td>
</tr>
<tr>
<td>Norway</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Denmark</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Sweden</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Finland</td>
<td>13</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>FRG</td>
<td>4</td>
<td>17</td>
<td>29</td>
<td>14</td>
<td>64</td>
<td>16</td>
</tr>
<tr>
<td>Belgium</td>
<td>37</td>
<td>29</td>
<td>27</td>
<td>6</td>
<td>99</td>
<td>25</td>
</tr>
<tr>
<td>Holland</td>
<td>39</td>
<td>8</td>
<td>54</td>
<td>18</td>
<td>119</td>
<td>30</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>France</td>
<td>14</td>
<td>106</td>
<td>41</td>
<td>41</td>
<td>202</td>
<td>50</td>
</tr>
<tr>
<td>Liechtenstein</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Austria</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>15</td>
<td>31</td>
<td>8</td>
</tr>
<tr>
<td>Spain</td>
<td>3</td>
<td>11</td>
<td>3</td>
<td>10</td>
<td>27</td>
<td>7</td>
</tr>
<tr>
<td>Portugal</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Italy</td>
<td>4</td>
<td>20</td>
<td>33</td>
<td>34</td>
<td>91</td>
<td>23</td>
</tr>
<tr>
<td>Greece</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Iceland</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>938</td>
<td>348</td>
<td>269</td>
<td>1 755</td>
<td>439</td>
</tr>
</tbody>
</table>

**Source:** The European Job Mobility Portal – only EURES, The Researcher’s Mobility Portal, RILSA calculations

In terms of the share of monitored professions in the overall number of advertised jobs

France was in first place (a total of 1 404 vacancies with HQJ 14 %), then acme Finland (total demand for 195 jobs – HQJ 11 %) and Portugal (total demand for 41 jobs – HQJ 10 %, see table 3).

Germany offers a high number of overall, however its share of qualified jobs on the European mobility portals was minimal.

### Table 3  The Regional Structure of Vacancies on the EURES and ERA-MORE networks

<table>
<thead>
<tr>
<th>Country</th>
<th>Total vacancies</th>
<th>Vacancies with university qualifications</th>
<th>University qualifications as a share of total demand, in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>22 878</td>
<td>213</td>
<td>0.93</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>45 907</td>
<td>841</td>
<td>1.83</td>
</tr>
<tr>
<td>Norway</td>
<td>5 686</td>
<td>12</td>
<td>0.21</td>
</tr>
<tr>
<td>Denmark</td>
<td>15 618</td>
<td>10</td>
<td>0.06</td>
</tr>
<tr>
<td>Sweden</td>
<td>33 773</td>
<td>9</td>
<td>0.03</td>
</tr>
<tr>
<td>Finland</td>
<td>195</td>
<td>22</td>
<td>11.28</td>
</tr>
<tr>
<td>FRG</td>
<td>117 097</td>
<td>64</td>
<td>0.05</td>
</tr>
<tr>
<td>Belgium</td>
<td>74 054</td>
<td>99</td>
<td>0.13</td>
</tr>
<tr>
<td>Holland</td>
<td>2 033</td>
<td>119</td>
<td>5.85</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>231</td>
<td>5</td>
<td>2.16</td>
</tr>
<tr>
<td>France</td>
<td>1 404</td>
<td>202</td>
<td>14.39</td>
</tr>
<tr>
<td>Lichtenstein</td>
<td>64</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Austria</td>
<td>7 245</td>
<td>31</td>
<td>0.43</td>
</tr>
<tr>
<td>Spain</td>
<td>863</td>
<td>27</td>
<td>3.13</td>
</tr>
</tbody>
</table>
Table 3 The Regional Structure of Vacancies on the EURES and ERA-MORE networks - cont.

<table>
<thead>
<tr>
<th></th>
<th>Total vacancies</th>
<th>Vacancies with university qualifications</th>
<th>University qualifications as a share of total demand, in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>41</td>
<td>4</td>
<td>9.76</td>
</tr>
<tr>
<td>Italy</td>
<td>1,984</td>
<td>91</td>
<td>4.59</td>
</tr>
<tr>
<td>Greece</td>
<td>14,691</td>
<td>3</td>
<td>0.02</td>
</tr>
<tr>
<td>Iceland</td>
<td>148</td>
<td>3</td>
<td>2.03</td>
</tr>
<tr>
<td>Total</td>
<td>343,912</td>
<td>1,755</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Source: The European Job Employment Mobility Portal – only EURES, The Researcher’s Mobility Portal, RILSA figures

In the profession structure there is a clear demand for specialists in business and management and the advertised demand for medical doctors is in third place on this portal followed by IT specialists.

Table 4 The Demand Structure for Qualified Work in Terms of KZAM Classification in %

<table>
<thead>
<tr>
<th>KZAM</th>
<th>Occupation</th>
<th>share as %</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200 + 1300</td>
<td>management</td>
<td>17.06</td>
<td>2</td>
</tr>
<tr>
<td>2110</td>
<td>scientists and specialists in the physics, chemistry and related fields</td>
<td>3.32</td>
<td>7</td>
</tr>
<tr>
<td>2120</td>
<td>Mathematics and statistics scientists and specialists and related fields</td>
<td>0.46</td>
<td>8</td>
</tr>
<tr>
<td>2130</td>
<td>Computer technology scientists and specialists</td>
<td>11.62</td>
<td>4</td>
</tr>
<tr>
<td>2140</td>
<td>architects, planners, constructors, technicians, scientists and engineers</td>
<td>9.85</td>
<td>5</td>
</tr>
<tr>
<td>2200</td>
<td>scientists, specialists, engineers in biology, medicine and related fields</td>
<td>15.46</td>
<td>3</td>
</tr>
<tr>
<td>2300</td>
<td>Specialist education workers</td>
<td>4.92</td>
<td>6</td>
</tr>
<tr>
<td>2400</td>
<td>Other scientists and white collar workers in business and related fields</td>
<td>37.32</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>

Source: The European Job Mobility Portal EURES, The Researcher’s Mobility Portal, RILSA calculations

In the “management” group demand was focused on the “Heads of organisational units, departments etc.” class and “managers, directors of small businesses and organisations”. The balance of the “architects, planners, constructors, technicians and engineers” was clearly determined by machine engineers and electrical engineers. The demand for doctors was determined by the class “scientists, specialists and engineers in the biological, medicinal and associated fields”.

An analysis of the professional structure in terms of the target regions shows that economic professions related to business are sought in nearly all the participating countries. A high number of advertised management jobs, which is concentrated in the UK is related to the business activities.

Interest in the healthcare professions, particularly doctors, appears above all in Ireland, and the Finland and other Northern countries. A demand for IT specialists is advertised particularly in the UK and Holland. Nearly all of the countries showed a need for jobs for engineers and electronic engineers. The need for teachers is published in the ERA-MORE portal.
Other employment classes which were monitored in the survey (scientists and specialists, physicists and chemists and associated fields and mathematics and statistical scientists and specialists etc.), did not show any significant differences in terms of country. Their share in the monitored HQJ was very low (from 0% for mathematicians and statisticians to 4.2% for physicists and chemists).

Table 5 The Demand Structure for Qualified Jobs In Countries with the Highest Advertised Need (%)

<table>
<thead>
<tr>
<th>KZAM</th>
<th>Occupation</th>
<th>UK</th>
<th>Ireland</th>
<th>France</th>
<th>Holland</th>
<th>Belgium</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>management</td>
<td>29.96</td>
<td>3.76</td>
<td>6.93</td>
<td>1.68</td>
<td>6.06</td>
</tr>
<tr>
<td>2110</td>
<td>scientists and specialists in the physics,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>chemistry and related fields</td>
<td>0.48</td>
<td>0.94</td>
<td>3.47</td>
<td>31.09</td>
<td>1.01</td>
</tr>
<tr>
<td>2120</td>
<td>Mathematics and statistics scientists and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>specialists and related fields</td>
<td>0.00</td>
<td>2.82</td>
<td>0.00</td>
<td>0.84</td>
<td>0.00</td>
</tr>
<tr>
<td>2130</td>
<td>Computer technology scientists and specialists</td>
<td>8.68</td>
<td>23.00</td>
<td>20.30</td>
<td>7.56</td>
<td>14.14</td>
</tr>
<tr>
<td>2140</td>
<td>architects, planners, constructors, technicians,</td>
<td>3.69</td>
<td>12.21</td>
<td>16.34</td>
<td>5.04</td>
<td>21.21</td>
</tr>
<tr>
<td></td>
<td>scientists and engineers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2200</td>
<td>scientists, specialists, engineers in biology,</td>
<td>23.66</td>
<td>6.10</td>
<td>3.96</td>
<td>6.72</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>medicine and related fields</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2300</td>
<td>Specialist education workers</td>
<td>1.19</td>
<td>4.69</td>
<td>1.49</td>
<td>29.41</td>
<td>10.10</td>
</tr>
<tr>
<td>2400</td>
<td>Other scientists and white collar workers in</td>
<td>32.34</td>
<td>46.48</td>
<td>47.52</td>
<td>17.65</td>
<td>46.46</td>
</tr>
<tr>
<td></td>
<td>business and related fields</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>share in sought jobs of KZAM 1 and 2 cat. in the</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td></td>
<td>EEA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: The European Job Mobility Portal – only EURES, The Researcher’s Mobility Portal, RILSA figures

4.2.2 Qualitative Survey Conclusions [3]

a) Opinions and Attitudes of experts on Target Migration Countries

The research ascertained that most of the agencies that were approached found work for Czech citizens in Ireland, the UK and Germany. Employment was found less frequently in Austria, Switzerland, France, Italy and very rarely in the USA, Canada, New Zealand, Australia or Saudi Arabia.

In Ireland nearly all types of professions, from tradesmen to highly qualified specialists are being recruited, with the greatest interest being for specialists information technology and healthcare.

In the UK and Germany they are also looking for IT experts (programmers, network administrators and developers etc.) and doctors of nearly all specialist fields (vets, nurses and attendants are also welcome). A demand for nurses, physiotherapists and senior attendants was also noted, mainly in Austria and Switzerland, however shortages of nurses and attendants are typically for other more developed EU countries.

New Zealand, as a country with a rapidly growing economy, is suffering a shortage of qualified specialists in a number of fields. They have a list of professions with shortages, which includes
particularly university graduates in technical fields as well as people from the trades. There are also doctors of various specialist fields and secondary school teachers and university lecturers on the list. Filling the teaching posts is a problem as they require a perfect knowledge of English.

**Australia** does not have a list of professions which have shortages, but it does have a list of professions for immigrants. It places high demands on migrants and people without university educations have virtually no chances there. Most vacancies are for jobs in the technical fields.

High requirements for immigrants are also characteristic of the **USA and Canada**. To gain work in these countries requires high quality skills as the competition from “old Europe” and developing countries (with English as a native language) is very strong. The USA is a classic “head hunter” which tries to attract very highly qualified specialists and in particularly renowned scientists and researchers. Here, the Czech Republic has a peripheral position in competition with other countries. In the US there is interest in Czech nurses, however the hospitals are also very selective.\(^{18}\) Gaining work in the USA is also problematical due to the fact that the immigration laws require that educational qualifications and other required documentation is verified first and then language tests and tests of candidates knowledge of their field must be passed.

It is interesting to note the fact that around 70 healthcare workers (doctors and nurses) leave the CR due to the services of one of the agencies that were approached. However this figure represents only one fifth of all people interested in these jobs. A more specific idea can be had from the fact that of the twenty agencies that were approached, only two were involved in intermediating employment in the USA, Canada, Australia and New Zealand.

**b) Opinions and Attitudes of the Experts on the Required Profession Structure**

The approached agencies particularly recruit the following Czech specialists:

– **Specialist doctors from nearly all fields and qualified healthcare workers**

For doctors there is interest in anaesthetists, interns, orthopaedists, paediatricians, stomatologists, psychiatrists and therapists etc. There is demand for qualified nurses, physiotherapists and carers for the long-term sick and senior citizens. Interest in doctors has grown with CR entry into the EU and the subsequent recognition of Czech attestation by EU countries.

– **Information technology and communications experts**

The most sought out are analysts, programmers and network administrators etc. (for the JAWA, C++, languages and UNIX operating systems). Some agencies were directly connected to the German Green Card programme for IT specialists. In the opinion of the experts all people with language skills and knowledge of the latest technology could generally find work. Middle and top management jobs are not demanded in the IT field.

\(^{18}\) According to information from one of the agencies which recruits to the USA, over the next 20 years there will be a shortage of up to 2 million nurses there.
– Managers of various levels and in various fields

The requirements for placing Czech workers in management jobs abroad are excellent language skills, flexibility and the capability to positively motivate teams, management experience and knowledge of the business practises in the respective country. Czech job seekers have obtained experience in management abroad mainly through internal transfers in multinational companies. Over the past few years the agencies have noted an increased demand for Czech skilled labour for management positions. There already exists a group of managers with comparable capabilities to their foreign colleagues. The priority skills of Czech managers are knowledge of the Czech language, Russian or other Slavonic languages, knowledge of the environment in Eastern countries, or direct contacts with the so-called Eastern Block managers are knowledge of the Czech language, Russian or other Slav languages, knowledge of the environment in Eastern countries, or direct contacts with the so-called Eastern Block.

– Pharmacists and healthcare and pharmacy scientists

Most pharmaceutical companies on the European labour markets have not been hit by the economic crisis. These companies are looking for healthcare workers, most frequently doctors or pharmaceutical faculty graduates for various specialist positions, including, science, research and pharmaceutical development.

– University educated engineering positions

In a number of the larger European countries (e.g. Germany, the UK etc.) there is a lack of experts to fill engineering positions - mechanical and electrical engineers, electronics specialists and experts in other technical fields.

c) Other notes on the migration of Czech specialists abroad

Foreign employers place emphasis on specialisation and experience in one’s field. It has been shown that education in its self is not enough and applicants must have excellent language skills and know something specific which will make them sought after on local markets where the demand cannot be filled by local labour sources.

The following characteristics are displayed in the profiles of successful highly qualified job seekers; self-discipline, ambitious, the ability to work alone, creativity and the ability to keep improving oneself.19

One barrier to Czech specialists finding work abroad is, above all, knowledge of foreign languages (this is the biggest problem for Czech job seekers overall and also for the QL group). When considering the basic advantages and disadvantages of Czech job seekers the following facts apply. The basic advantages Czechs have are; they are hardworking, have skills, a generally high level of specialist knowledge, they are adaptable, creative and can work alone. Their disadvantages are bad language skills (abroad even people in lower functions speak a second language)

19 e.g. the typical nurse looking for work abroad: She passed out of school with honours, generally she has also post-graduate education, work experience in clinics, ARO, heart surgery, intensive care, she has excellent language skills (as rule learnt during a stay abroad, mainly as an au pair), she is between 27-30 years old and as a rule is not married.
language), insufficient confidence (Czechs are less assertive in a foreign environment), and generally lower levels of flexibility and reliability (in the West even oral agreements are binding). There are of course many individual differences in practise.

In terms of the length (duration) of skilled labour migration the main view amongst the experts was that it would be temporary and the specialists would generally return home. The expectation is that they will be able to use the experience they gain, the contacts and language skills effectively. As there is further growth of multinational companies there will be a huge interest in such people. Contracts abroad are concluded for at least one year, and at most five years. There is a higher risk of migrants settling abroad if their stay is longer than five years or if they have repeated stays abroad. These people lose contact with their original home and do not generally return.

The highest numbers of people looking for qualified work abroad were from Prague, or other Czech cities. These people apparently have better language skills and their life-styles make it easier to adapt abroad. The agencies also noted an increased interest in work abroad from specialists from regions with levels of unemployment (e.g. Western Bohemia, North Moravia). This is due to the fact that if there is little hope of finding work in the local town, young, qualified individuals will use the opportunity to legally work abroad. Unemployed people, even with higher education levels, did not as a rule acquit themselves very well abroad.

The main focus of labour migration abroad will continue to shift towards skilled labour. The growth of technical fields which have high demands for qualifications, increasing globalisation and unfavourable demographics all point to the need for young, educated and linguistically competent specialists.

d) Assessment of the reference sources used

The Europe-wide public portals operated by the European Commission cover the commercial spheres, social and health services and science and research institutions. There is a problem with the quantity and quality of the published data. This reflects national practices and different methods of transforming national classification systems to the international system, in spite of the attempts at European standardisation. There are doubts about the seriousness of some of the positions on offer for the economics and management professions in EURES. An interpretation of the outputs from the Researcher’s Mobility Portal must take into consideration its short active history (since mid 2004). As yet the Portal does not enable the demand for “academics” within the EEC to be precisely quantified.

For the assessment of the employment agencies intermediating employment abroad for Czech specialists it can be said that during the duration of the research their activities were disparate, unsystematic and haphazard. It should be remembered that for most of them their licences for these activities were tied to the date of CR entry into the EU (05/2004, the research took place in 10/11 2004). Even though there was a marked difference in the know-how of the individual experts that were approached, generally most of them did not have a lot of experience with this type of activity. Most of the agencies based their demand on a single employer and not the overall demand on the labour market of the target country. The agencies either work with a partner company abroad or have personal contacts in the target countries. Another isolated
method comes from the ambition, qualifications and experience of Czech job seekers. The try adhere to the client’s requirements and find them a corresponding position abroad. Of the twenty experts that were approached only one of them indicated they were connected to a central reference source for intermediating employment in target countries.
CHAPTER FIVE
The Demand for Specialist on the Czech Labour Market

This Chapter also draws on two reference sources of quantitative and qualitative nature:

- the quantitative source of information on specialists on demand in the Czech labour market included monitoring of the press and designated web portals,
- the qualitative source of knowledge were employment agency surveys in the field for specialists on the local labour market.

5.1 REFERENCE SOURCE CHARACTERISTICS

The objective of job advertising analysis in the Czech Republic (in the media and in the Internet) was to become acquainted with the demand side of the domestic labour market in the specialist segments of the market.

The identification of monitored employee segments was the same as for the monitoring of European mobility portals – i.e. based on “Employment Classification” KZAM of 1 + 2 employee group at the third and fourth level.

The sources of data included:

- advertisements in the daily press,
- job advertisements in the web portal for job intermediation,
- advertised vacant jobs in Czech Labour Offices (ÚP).

For press monitoring the following national dailies were selected: Hospodářské noviny, Mladá fronta Dnes, Lidové noviny, Právo, Zdravotnické noviny. In Hospodářské noviny (the Economic News) job offers are published in the “Kariéra Business” Annex, in the “Mladá fronta” there is the “Zaměstnání” (Employment) annex. In the “Právo” daily the advertisements for university educated candidates were rare; in “Lidové noviny” (the Popular News) primarily competitions for academic or teaching posts were published, the “Zdravotní noviny” (the Health News) is a specialised newspaper for health professionals.

Among the Internet sources, the popular portal www.prace.cz (LMC company) was selected where demand from mainly private firms is concentrated and the www.mpsv.cz website – the employment services portal which contains job offers from labour offices.

As demand for health professionals (medical doctors and nurses) is implemented through different channels in practice, advertised vacant jobs for medical doctors and nurses in ten selected hospitals were monitored simultaneously. All teaching hospitals in Prague, large hospitals in regional cities and hospitals in border areas with Germany and Austria were considered.

The frequency of press monitoring for advertising and selected web portals was two months and job offers in hospitals and in the “Zdravotní noviny” were monitored on a monthly basis.
In addition to the specialised monitoring of job offers for healthcare professionals, 14 surveys were carried out in total, including four in labour offices, five in the Internet and in the press – every first week of each month.

The time schedule for the monitoring of vacant jobs

<table>
<thead>
<tr>
<th>Source</th>
<th>month/ year</th>
</tr>
</thead>
<tbody>
<tr>
<td>labour office</td>
<td>X/04</td>
</tr>
<tr>
<td></td>
<td>XII/04</td>
</tr>
<tr>
<td></td>
<td>II/05</td>
</tr>
<tr>
<td></td>
<td>VI/05</td>
</tr>
<tr>
<td>the press</td>
<td>X/04</td>
</tr>
<tr>
<td></td>
<td>XII/04</td>
</tr>
<tr>
<td></td>
<td>II/05</td>
</tr>
<tr>
<td></td>
<td>IV/05</td>
</tr>
<tr>
<td></td>
<td>VI/05</td>
</tr>
<tr>
<td><a href="http://www.prace.cz">www.prace.cz</a></td>
<td>XI/04</td>
</tr>
<tr>
<td></td>
<td>I/05</td>
</tr>
<tr>
<td></td>
<td>III/05</td>
</tr>
<tr>
<td></td>
<td>V/05</td>
</tr>
<tr>
<td></td>
<td>VI/05</td>
</tr>
</tbody>
</table>

The survey of recruitment agencies followed up on a similar field survey last year and this time it was focused on employment (recruitment and placements) of Czech specialists on the domestic labour market. In May 2005 20 recruitment agencies were contacted in order to specify the demand for highly skilled labour in the Czech Republic.

Controlled, standardised interviews were conducted with representatives of the selected agencies. An exploration scheme was prepared in advance and the respondents were strictly anonymous.

Although the agencies were selected randomly, the reputation of the agencies and minimum five years of operation in the Czech market were important criteria. Regional criteria, in particular the rate of unemployment in the region and proximity to the border with old member states, were taken into account in selecting the agencies. Both reputable international agencies with subsidiaries in the CR and private Czech firms are included in the survey.

Two thirds of the respondents are from Prague whereas most multinational agencies with headquarters in Prague are represented in the regions.

5.2 SURVEY RESULTS

5.2.1 Quantitative Survey Conclusions [6]

In the reference period between October 2004 and June 2005 a total of 3 130 advertised vacant jobs for university educated specialists were found.

There is strong demand for skilled labour in the traditional engineering sector. This is without doubt the result of the influx of job opportunities resulting from foreign investment in the CR. The monitoring confirmed great demand on the part of employers for skilled technicians – in the KZAM terminology group 214: architects, construction engineers, technicians, machine designers etc. The group also includes designers of electrical equipment, electrical engineers, designers of electronic and communications systems, electronic engineers, chemical engineers and technologists, mining engineers and technologists, cartographers and surveyors. This group is the most important one in the monitoring of vacant highly skill jobs; it represents almost a third (31.4 %) of all professionals in demand.

The second largest group on the web portals and in job advertisements in the press was the demand for business professionals and for experts in related fields. In KZAM terminology
**This is group 241** which includes professionals in the field of accounting, finance, budgeting, tax etc. and professionals in employment and human resources as well as experts in finance and insurance. The group 244 professionals make up almost a fourth (23.8 %) of all professionals in demand. All professions are directly linked to the development of the tertiary (service) sector.

**Healthcare and veterinary professionals** (KZAM 222), **scientists, experts in biology and related fields** (including e.g. pharmaceuticals experts – KZAM 221) made up 16 % of the total demand and thus were the third largest group in the demand for skilled professionals.

**Senior managers in TOP management group** KZAM 12 and 13 (managers and directors in large organisations, companies and firms and managers and directors in small companies, organisations and firms) represent 14 % of the total demand.

**There is about half as much demand** (6.6 %) for **scientists and IT experts** (KZAM 213); including designers and analysts of IT systems, programmers and other professionals in IT with a university degree.

**About the same share of demand** (7.7 %) was reported for **education experts** – KZAM 231 and 232 – scientists and teachers at universities and secondary schools.

<table>
<thead>
<tr>
<th>employment groups</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>managers*</td>
<td>14.0</td>
</tr>
<tr>
<td>natural scientists</td>
<td>1.9</td>
</tr>
<tr>
<td>experts (scientists) in IT</td>
<td>6.4</td>
</tr>
<tr>
<td>architects, machine designers, construction engineers, technicians etc.</td>
<td>31.4</td>
</tr>
<tr>
<td>healthcare and veterinary professionals</td>
<td>15.5</td>
</tr>
<tr>
<td>teachers and education experts at universities and secondary schools</td>
<td>7.0</td>
</tr>
<tr>
<td>specialists in business** etc</td>
<td>23.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note: * managers, executive directors, directors and managers in organisations, companies and firms,
**specialists in the fields of accounting, finance, tax, employment and human resources, specialists in finance and insurance...*

**In technical professions the largest demand is for machine designers and engineers** (almost 40 %). Construction designers and engineers follow after a large gap (18 %), the third group most in demand are electrical engineers and designers of electrical facilities. Demand for other professionals is affected regionally, e.g. in the Ústí region there is demand for chemical engineers resulting from the investment in the region. Mining engineers, cartographers etc. are demanded exceptionally. Most professionals were in demand almost exclusively for production operations.
Table 7  **Structure of demand for QL in technical fields**

<table>
<thead>
<tr>
<th>Architects, designers, construction engineers, technicians, machine designers</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>City planners, architects, town and transport network planners</td>
<td>3.8</td>
</tr>
<tr>
<td>Designers, construction engineers</td>
<td>17.5</td>
</tr>
<tr>
<td>Designers of electrical equipment, electrical engineers</td>
<td>11.6</td>
</tr>
<tr>
<td>Designers of telecommunication networks, electronic systems, engineers – electrical engineers</td>
<td>5.4</td>
</tr>
<tr>
<td>Designers of machine equipment constructions, machine engineers</td>
<td>38.7</td>
</tr>
<tr>
<td>Chemical engineers, technology experts</td>
<td>6.0</td>
</tr>
<tr>
<td>Mining engineers and technology experts</td>
<td>2.3</td>
</tr>
<tr>
<td>Cartographers, surveyors and other skilled labour of the above qualifications</td>
<td>1.5</td>
</tr>
<tr>
<td>Other</td>
<td>13.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Most jobs advertised for business professionals are for** qualified accountants, chief accountants and university educated financial and tax experts.\(^{20}\)

**In healthcare professions** (monitored using the above sources) 2/3 of all jobs are those of medical doctors and interns which includes a large share of assessment physicians, 14 % i.e. 66 job offers were open for university educated pharmaceuticals experts, pharmacists.\(^{21}\)

Table 8  **Structure of demand for QL in healthcare**

<table>
<thead>
<tr>
<th>Healthcare</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientists, experts and biologists and related fields</td>
<td>10.1</td>
</tr>
<tr>
<td>Healthcare and veterinary professionals</td>
<td></td>
</tr>
<tr>
<td>Including:</td>
<td></td>
</tr>
<tr>
<td>Medical doctors, interns</td>
<td>63.6</td>
</tr>
<tr>
<td>Dentists</td>
<td>3.7</td>
</tr>
<tr>
<td>Veterinary doctors</td>
<td>1.2</td>
</tr>
<tr>
<td>Pharmaceuticals experts, pharmacists, apothecaries</td>
<td>13.6</td>
</tr>
<tr>
<td>Hygienists, medical doctors – sellers of health technology, pharmaceutical experts – pharmaceutical companies</td>
<td>4.5</td>
</tr>
<tr>
<td>Other</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

A detailed overview of the structure of monitored demand is in Annex 3

**Results of the Monitoring Surveys of Job Advertisements in Selected Hospitals**

Great demand for skilled labour in healthcare is a continuous trend. This is proved by the results of the monitoring of job advertisements in selected hospitals in the period from September 2004 to August 2005 incl. (see Table 1). In this period the monitored hospitals advertised 580 jobs in total.

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\(^{20}\) The final summary of this group eventually included also social scientists and lawyers but the demand in the monitored sources was very low.

\(^{21}\) Nurses were not monitored in this instance. The demand for nurses was determined as part of the monitoring of job advertised in selected hospitals.
Jobs for medical doctors represented 54 % of the total.\(^{22}\) Highly specialised doctors as well as doctors before or after their 1\(^{st}\) attestation.

The rest of the vacant jobs on offer are mostly health service personnel with higher vocational or tertiary education (23 \%) or (20 \%) with secondary education (the qualification categorisation valid before the law No. 96/2004 Coll. on non-medical professions came into force was used here).

Table 9  **Number of Jobs offered between IX.2004 and VIII.2005**  
(monitoring of jobs advertised in selected hospitals)

<table>
<thead>
<tr>
<th>category</th>
<th>number</th>
</tr>
</thead>
<tbody>
<tr>
<td>secondary school – nurses, laboratory assistants, assistants</td>
<td>118</td>
</tr>
<tr>
<td>nurses, laboratory assistants and assistants with post-secondary specialisation in the field (PSS) or university</td>
<td>136</td>
</tr>
<tr>
<td>medical doctors with 1. attestation or before the 1(^{st}) attestation + housemen</td>
<td>166</td>
</tr>
<tr>
<td>specialised doctors – head physicians, interns, doctors with 2(^{nd}) attestation</td>
<td>146</td>
</tr>
<tr>
<td>pharmaceutical experts</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>580</td>
</tr>
</tbody>
</table>

The real movement on the labour market is proved by the fact that more than half (55 \%) of all job advertisements remained published only for 1 month. It can therefore be assumed that vacant jobs including competitions were filled fairly quickly. The average duration of 1 job advertisement, however, was 2.67 months and **12 \% of all jobs were not filled even after half a year of repeated advertising.**

The findings concerning the specialisation of doctors are also interesting. The so called large fields, i.e. internal medicine, surgery, ARO, gynaecology and paediatrics prevail.

In other fields traditionally the largest demand has been in pharmaceuticals, neurology and radio diagnostics – see chart 1.

The data on the average duration of one job advertisement for a particular specialisation are very interesting. The results prove the following:

Almost six months of repeated advertising proves a chronic shortage of **anaesthetists.**

As regards glycraecology and obstetrics, this is a so called large specialisation where doctors mostly prefer to have private practice and often only work part-time in a hospital in order to be authorised to operate. Hospitals often suffer from a shortage of young gynaecologists and obstetricians as the average duration of advertising is more than 6 and half months.

It is also very difficult to find young doctors (less qualified) for pathology; the average duration of advertising is as long as 7 months.

\(^{22}\) Healthcare facilities use qualification categorisation valid before entry into force of Law No. 95/2004 Coll. on medical professions. The existing legislation only recognises one attestation, at the level of the former 2nd attestation.
The average duration of job advertising for doctors specialised in geriatrics is 4 months whereas this situation is expected to deteriorate in the future. The reason is that so far it has been possible to fill these jobs with doctors specialised in internal medicine. At present, however, as per the existing law on medical professions it will be necessary to fill these vacancies exclusively with doctors specialised in geriatrics.

Chart 1  **Numbers of medical doctors by specialisation required in selected hospitals**  
(period from 1.9.2004 to 31.8.2005 – monitoring of advertised vacant jobs)

Table 10  **Average duration of 1 job advertising for selected specialisations (in months)**

<table>
<thead>
<tr>
<th>Specialisation</th>
<th>Duration (in months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pathology</td>
<td>7.00</td>
</tr>
<tr>
<td>gynaecology</td>
<td>6.67</td>
</tr>
<tr>
<td>ARO</td>
<td>5.89</td>
</tr>
<tr>
<td>geriatrics</td>
<td>4.20</td>
</tr>
<tr>
<td>internal medicine</td>
<td>2.89</td>
</tr>
<tr>
<td>RDG</td>
<td>2.57</td>
</tr>
</tbody>
</table>
5.2.2 Qualitative Survey Conclusions [4]

a) Views on the Structure of Highly Skilled Labour Demand in the CR

Field surveys by recruitment agency representatives showed that the nature of demand for skilled specialists on the domestic labour market results both from the development of industries (segments of industries) in the CR and from the specific situation on the labour market in a particular region. Recently, investment in specific locations has played a decisive role; in most cases these are foreign investments.

A typical example is ŠKODA AUTO Mladá Boleslav and the newly arrived car manufacturing plant of TPCA. These key investors together with a broad range of suppliers provide a great incentive to the present development of machine engineering in the CR and basically determine the current needs for skilled labour on the domestic labour market.

According to experts, the most demand on the Czech labour market is for technicians. University educated experts in technology and design – i.e. graduates from machine engineering and electro-technical universities are most in demand. Experts with the above education and language skills are sought after for management positions in production (assembly line managers, shift managers, production managers, quality assurance managers, production directors …) and for specialist posts (machine designers, technology experts, development specialists, quality control specialists, logistics experts, designers …). There is considerable demand for these specialists both from domestic as well as international firms.

The need for technicians with language skills has been reported in almost all regions of the CR. This is understandable because the expanding machine engineering sector and the car manufacturing industry in particular is represented in almost every region of the CR.

Neighbouring regions to Germany and Austria also report increased demand for machine engineering experts. Simple production is no longer the only development in the border regions. Investors are opening their own development centres here. There is still concern over relocations of investments further to the East but there have been grounds for optimism recently; foreign investors are becoming more settled in the CR. It raises hopes that the production will not only remain in the CR but will also bring development and innovations.

The shortage of technicians with good language skills has been apparent on the Czech labour market for several years now; it has become even greater now because of the expansion of engineering.

Skilled salespeople are also in short supply on the labour market (trade representatives). Firms doing business in the CR are still short of skilled salespeople. The specialisation of required salespeople differs and the nature of their work depends on the products they are selling. Internal and external salespeople are in demand. Sales are no longer about the traditional travelling salesman with a briefcase full of catalogues. Good communication skills alone are no longer sufficient and sound technical knowledge is a condition for success. It means that applicants have to meet to conditions – technical knowledge in the field and sales and communication skills.
A typical example is the often advertised **job of pharmaceuticals representatives**. Their work requires specialised knowledge of medicine and good communication skills with customers. A university degree is required for this job (pharmaceutics, medicine, natural sciences or chemistry) but experienced nurses are also successful in this job. Unlike some years ago, at present at least two years experience in healthcare is required. It is generally known that applicants from the healthcare sector go into pharmaceuticals because of the low wages in healthcare.

Several years ago, medical doctors were almost exclusively recruited to be pharmaceutical representatives. Despite high salaries, it is difficult to find doctors for the posts of pharmaceutical representatives. After five years in pharmaceuticals, a career as a medical doctor in medicine becomes practically impossible. **If Czech doctors now wish to increase their income and remain in medicine they go and work abroad.** On the other hand, for nurses a job in pharmaceuticals is attractive because it represents a good opportunity to earn better wages and increase their living standards.

Experts predict that work in pharmaceuticals will remain attractive and offer good prospects also for the future.

Europe has accelerated its technological development and **software engineers** are generally in demand. The need for skilled experts in IT and telecommunications is apparent also in the Czech Republic. After certain stagnation at the start of the millennium there is again a growing trend here. Professionals in this field are of a high standard and earn relatively high wages.

Specifically there is demand for experts in the latest technologies and there is a shortage of experts with narrow specialisations and database specialists. Surveys have shown that there is a shortage of experts able to combine technical knowledge with an overall system solution and specialists able to communicate both with technicians and users.

A very important group of software professionals much in demand are **customer service specialists**. The problem is that software specialists are mostly introverts but they are required to be extroverts to be able to communicate and sell.

**There is great demand in Prague for development specialists**, database development specialists and purely technical experts responsible for network administration and database applications. Increased demand has been reported in Prague in connection with the establishment of multinational companies to perform customer service abroad.\(^\text{23}\)

**It has been mentioned during the surveys that economics professionals are already past their peak demand.** Companies operating in the Czech Republic are generally already well established. In most cases they have set up their business structures and there is stagnating demand for marketing specialists and staffs are merely supplemented. Economics professionals most in demand (excluding salespeople who are required in all sectors) are **economists at various levels of management, economists actively involved in financial services and tax advisors.**

\(^\text{23}\) A typical example is DHL established last year which opened its Central European office in Prague. This required the recruitment of 500 new IT specialists who were “headhunted” from other firms if they were not available and the demand for IT experts has logically multiplied as a result.
The experts who were contacted predict that the increase in demand in financial services is due to outsourcing of financial processes (again particularly in the capital).

In particular graduates in economics with good language skills are required in this respect.\textsuperscript{24}

**b) Views on Development of Demand for Skilled Labour in the Last Five Years**

As already indicated the demand for specialists in the CR has moved from marketing to technical professionals and specialists. In the last five years, the demand for engineering professionals has multiplied. Most experts who have been contacted are convinced this is the case. Marketing, market research and everything related to customers was the preferred field. At present there is primarily demand for technical specialists.\textsuperscript{25}

There is less demand for senior managers and lower level managers are more sought after. E.g. the recent demand for financial managers has now been replaced by a need for financial controllers.\textsuperscript{26} One of the reasons is that firms must focus more on saving. Candidates from within the company are preferred as part of their career advancement in comparison to “ready made” and expensive outside candidates.

In practice it is common that a Czech manager in a foreign firm who has practically built the company is suddenly fired because everything is “running smoothly” and s/he is too expensive (or sometimes too old) for the company. S/he is then replaced by a new, usually younger and considerably cheaper candidate.

The HR experts who have been contacted mostly believe that the Czech market is already saturated with economists and lawyers and graduates of various management and social science schools are having difficulties with finding employment.

The evaluation of language skills is changing. Knowledge of English alone is not sufficient for a high level well paid job. In the first half of the 90’s an applicant was recruited by a foreign firm if s/he had good communication and language skills, subsequently a suitable job was found for them. At present good knowledge of English (or another language required) is a necessary pre-condition (a standard requirement) and the candidate has to offer something more.

\textsuperscript{24} “A key employer in Prague is for example Accenture which recruited 600 employees in the spring of 2003; by October 2004 it planned to recruit 1000 persons – junior accountant positions with the knowledge of foreign languages. Graduates from secondary economic schools are ideal candidates for these positions but they generally do not have the required language knowledge. Accenture was forced to recruit social science graduates (e.g. various language combinations) with excellent language skills but without the required business knowledge. As a result, demand for accountants “with a language” has multiplied and there was a great drain in this field on the Prague labour market’’.

\textsuperscript{25} “When international firms were starting to operate on the Czech market, they needed a lawyer to set the company up, then a manager to start it up and run it, and only afterwards they needed financial experts to make good prices and salespeople to sell it. All of sudden everything has changed and the greatest demand is in middle management positions and competent specialists.”

\textsuperscript{26} “There is little demand for people who are already high up but there is great interest for those who are upwardly moving. A candidate working as sales representatives does not demand such a high salary when offered the post of a sales manager as a present or former sales manager.”
The age of an ideal candidate is changing; formerly it was 28 years (candidates aged less than 30 were preferred) now it has moved to 35 to 40 and sometimes more. Companies are now more interested in practical experience.

Czech applicants find more employment in the management of foreign firms – in posts almost exclusively occupied by foreigners five years ago. In almost all cases they are highly skilled experts with experience in multinational companies or people who have worked abroad.

5.3 OPINIONS AND STANDPOINTS ON DEMAND TRENDS FOR QUALIFIED SPECIALISTS IN THE NEXT FIVE YEARS

The experts who were contacted predict that the demand for specialists with technical education and middle level managers will grow. At the same time the importance of tertiary education will grow and it will become a necessary pre-condition for jobs where presently secondary education is still tolerated (e.g. sales representatives, IT specialists…). The importance of B.A. degrees will grow.

Requirements for language skills are growing. In addition to fluent English, the knowledge of a second language (German, Spanish, French, Russian) will be more frequently required for high management positions.

There will continue to be demand for people with a clear-cut CV – i.e. people who have studied a particular discipline (specialisation), got experience, currently are working and having a career in the same field.

In the future, there will be increased merging of disciplines and posts. E.g. IT specialists will be required to have knowledge of finance etc.

The arrival of foreign capital will create job positions that will appear unusual. E.g. some Japanese firms already require their HR managers to be responsible not only for personnel but also for suppliers and the entire administration.

In the next five years, experts predict increasing importance of Prague as the centre of shared services for a part of Europe, or other parts of the world. This will depend on the state policy of incentives for foreign investors. In the best case, it will open up opportunities for employment for a broad range of Czech experts and specialists in the field of finance, IT, telecommunications etc.

The use of agencies for outsourcing of technical work will make the labour market more flexible. Agency staff will be lent by the agency to perform specific, time limited professional activities (tasks, projects…). Outsourcing still works only to a limited extent in the Czech Republic, e.g. for student jobs, but there are fields (e.g. IT, personnel services etc.) where it could be used much more.27

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27 “E.g. a firm gets an order for a 3 to 6 months project. It will have to decide whether to use its current staff to 150 % to 200 % and risk their resignation (now frequent) or to recruit new staff for half a year with uncertainty as to what to do with them afterwards, or whether to contact a firm which will provide the required professionals for the specific period of time. In the long term, the third option is the best solution”. 
Methods of recruitment for higher posts are gradually changing. Traditional newspaper advertising is giving way to the Internet and for higher positions the recruitment is carried out by personnel professionals, top positions in multinational companies are filled by using headhunting.

5.4 EVALUATION OF THE REFERENCE SOURCES USED

**Monitoring of vacant skilled labour position** on designated web portals and in the press covers the commercial sector; primarily small and medium sized businesses advertise here; e.g. personnel agencies searching for a suitable candidate.

Certain difficulties appeared in categorising the advertised high skill jobs into employment groups according to KZAM classification which does not always correspond to actual requirements in practice. A number of firms define vacant job position using their own criteria. E.g. some companies do not define the jobs based on educational criteria but rather in terms of characteristics and abilities (independence, creativity, language skills, communication skills etc.).

As demand for medical doctors and skilled healthcare personnel was very limited in the press and on web portals, it has turned out that jobs on offer have to be monitored directly in hospitals and in the specialised publications.

The duration of the reference period is of course a restriction.

**Field research by recruitment agencies** confirmed that the arrival of foreign capital resulted in the establishment of branches of international companies with strong know how and simultaneously a number of Czech companies experienced in recruitment. Professional recruitment of highly skilled experts is carried out by the agencies exclusively for the private sector, a small share of the clients came from foreign firms and multinationals and the rest came from Czech companies with more than 100 employees.

Some agencies focus on a particular segment or industry, e.g. pharmaceuticals, IT, production in engineering etc. However, most agencies recruit professionals according to their client requirements for management positions (ranging from the top management to executive middle and lower managers) and for specialist positions in different sectors of the economy.

Given the many years of experience in recruitment, the information provided by recruitment experts in the commercial sector can be treated as a relevant source of knowledge.
CHAPTER SIX
Income Motivation for Specialists to Work Abroad – Characteristics
Summary

1. The level of earned income (wages) abroad compared to the country of origin (CR) is
an important factor amongst the many factors which motivate specialists to travel abroad
to work. The wage difference however does not have such a dominant position as for the
international migration of labour with medium and lower qualifications that do regular or manual
work. An important impulse for specialists to migrate is equally to obtain professional skills
and experience in top foreign teams, which will be beneficial for future jobs and career
development on their return home to the CR.

Income motivation to work abroad is (generally for specialists) more intense, the higher the
difference between the level attained earnings between abroad and the CR. In practise this is
the difference between the wages (salary). The proportion (relation) of the wage level abroad and
in the CR can be described as being the wage (income, salary) differential.

For orientation purposes the level and boundaries of income motivation to work abroad can be
described as follows:

– a very strong inclination to migrate exists in situations where the wage level (wage
differential) is many times higher (at least three times) in the target (host) country than the
sender country (reciprocally the wage level is three times lower in this country),
– a strong inclination to migrate continues if the wage level in the target country fluctuates
around double the level of the sender country,
– migration is suppressed if the wage level of the sender country is roughly three quarters
(75%) of the income level of the target country (reciprocally the wage differential is around
133% in favour of the host country). The costs of migration (economic and personal) out-
weigh the benefits.

2. The material content of wages (the type, nature) and the differential depends on the basic
type of specialist migration abroad. This involves as a rule both a temporary working stay by a
specialists for a few years, with a return home (the CR) after the employment is completed,\(^{28}\) and
the selective type of migration, where the specialists accepts an offer of employment abroad.

2.1 The income criteria which correspond to the temporary stay type migration is the
differential between the net real parity (internationally comparable) wages (i.e. between the
real purchasing power) attained abroad and in the CR.

The net wage (i.e. that part of the gross wage – salary which remains after income tax and social
and health fund deductions) represents the disposable cash income which can be used to buy
(purchase) goods and services or to invest at the employee’s own free will. The part of the net
wages remaining after covering reasonable (corresponding) needs in consumer prices of the host

\(^{28}\) Commuter migration, i.e., cross border commuting to work with daily or at most weekly returns back to the CR,
is quite exceptional for specialists.
country may be transferred to the country of origin – the CR (using the exchange rate between the two different currencies).

**Real wages** are the amount of goods and services (consumer basket) which can buy with the nominal net wage. The real purchasing power of every county depends on relationship between the nominal wage level in the local currency and the price levels of consumer goods and services.

**Parity, internationally comparable real wage levels** is obtained by calculating the nominal net wage (expressed in a single currency) multiplied by the relative price level (coefficient) of expenditure prices for the final household consumption at the average EU-25 level.\(^{29}\)

2.2 A consequence of the selective nature of specialist migration is the fact that the offered (agree, accepted) income (wage, salary) is known before departure and that this offer is highly individualised and differentiated according to the specific conditions of the foreign employer. At the same time the wage differentials are quite individual both in terms of the specific wage offers and the wages earned by the specialist in their own country. This connection represents significant deviations from the more collective average wage relations and will be analyses in the research stage in 2006.

3. Attempts at providing analyses which would roughly characterised the more collective general wage position of specialists and an international comparison are restricted due to insufficiencies and methodology differences of the information bases.

Reliable international information systems on gross wages (salaries) are just being set up in the EU. The only available databases are data on average wages of KZAM classes (categories), which were published by Eurostat in 2002.\(^{30}\)

Methodologies for other available data essential for transformation calculations (income tax rates, social fund deductions and the relative price levels of expenditure on household goods) are not fully compatible with the information of gross wages.\(^{31}\)

The limited quality of the information bases leads to the fact that the resulting values for the wage differentials of net real parity wages (salaries) are limited to 2002 and have only an approximate nature.

4. The wage level of specialists can be summarised and compared internationally as earnings for 1\(^{st}\), 2\(^{nd}\) and 3\(^{rd}\) KZAM classes. Virtually all groups of skilled labour are concentrated in these classes (university education, specialists with medium levels of preparation).

Basic information on the transformation approach to wage levels and differentials are set out in the following overview:

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29 The relative level of price expenditure for final household consumption is taken from the international comparison of prices at a national level and a less extension sample of goods and services. The actual values of relative price levels of EU countries for 1999 to 2003 are contained in the European Comparison Programme performed by Eurostat.

30 CZSO: Employee Wage differentials in 2004, Prague, 2005

### Table 11  A Comparison of the Wage Level of Specialists in the Given Countries (1\textsuperscript{st}, 2\textsuperscript{nd}, and 3\textsuperscript{rd} KZAM groups)

<table>
<thead>
<tr>
<th>Class, country</th>
<th>Values for 2002</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>nominal gross</td>
<td>aggregate</td>
<td>nominal</td>
<td>relative</td>
<td>real net parity</td>
<td>Relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>wage (Euro)</td>
<td>tax quota (%)</td>
<td>wage (Euro)</td>
<td>price level (coefficient)</td>
<td>wage (Euro)</td>
<td>abroad/CR(^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
<td>f</td>
<td>g</td>
<td></td>
</tr>
<tr>
<td>KZAM-1 Managers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CZ</td>
<td>14 482</td>
<td>26.8</td>
<td>10 601</td>
<td>0.547</td>
<td>19 380</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>66 628</td>
<td>47.8</td>
<td>48 779</td>
<td>1.075</td>
<td>45 376</td>
<td>234</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>86 488</td>
<td>35.4</td>
<td>55 871</td>
<td>1.052</td>
<td>53 109</td>
<td>274</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>64 730</td>
<td>26.1</td>
<td>47 835</td>
<td>1.107</td>
<td>43 211</td>
<td>223</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>51 664</td>
<td>27.3</td>
<td>37 560</td>
<td>1.224</td>
<td>30 636</td>
<td>158</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KZAM-2 Scientists and professionals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CZ</td>
<td>9 227</td>
<td>26.8</td>
<td>6 754</td>
<td>0.547</td>
<td>12 347</td>
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<td></td>
</tr>
<tr>
<td>Germany</td>
<td>60 779</td>
<td>47.8</td>
<td>44 490</td>
<td>1.075</td>
<td>41 387</td>
<td>335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>59 368</td>
<td>35.4</td>
<td>3 832</td>
<td>1.051</td>
<td>36 456</td>
<td>295</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>52 496</td>
<td>26.1</td>
<td>38 795</td>
<td>1.107</td>
<td>35 045</td>
<td>260</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>43 068</td>
<td>27.3</td>
<td>31 310</td>
<td>1.224</td>
<td>25 580</td>
<td>207</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KZAM-3 technicians, health and education workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CZ</td>
<td>7 544</td>
<td>25.3</td>
<td>5 635</td>
<td>0.547</td>
<td>10 302</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>43 908</td>
<td>44.5</td>
<td>24 369</td>
<td>1.075</td>
<td>22 669</td>
<td>220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>44 895</td>
<td>32.0</td>
<td>30 529</td>
<td>1.052</td>
<td>29 002</td>
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<td>UK</td>
<td>42 464</td>
<td>24.7</td>
<td>31 975</td>
<td>1.107</td>
<td>28 884</td>
<td>280</td>
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<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>36 096</td>
<td>21.9</td>
<td>28 227</td>
<td>1.224</td>
<td>23 061</td>
<td>224</td>
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</tbody>
</table>

\(^1\) Gross wages after reduction by the tax quota (col. c); \(^2\) Relative price level of expenditure on final household consumption according to the European Comparison Programme. The basis of relative price levels for individual countries is the average price level of the EU 25 countries; \(^3\) This represents the real purchasing power of the average net wage of individual countries in average price levels of the EU-25 expressed in Euro; the calculation is by: value in col. d/value in col. e in the rows of the different countries; \(^4\) value in col. f spread to the value for the CR equals 100; the material values represent the relationships of the real purchasing power of net average parity wages of the different countries compared to the CR (at the EU-25 price level).

The real purchasing power of net parity wages of the KZAM basic classes 1-3 are (were in 2002) roughly 1.6 times (Ireland class 1) to 3.3 times (Germany class 2) higher than in the CR. In practise this means that the purchasing power of specialists wages abroad exceed by 60 – 230 % the level in the CR, i.e. annually by 11 to 29 thousands parity Euro (monthly by 920 to 2 420). This is at the average price levels of goods and services for household consumption for the EU 25 states.\(^32\)

These wage differentials represent a significant income motivation for specialists to migrate. They are (were in 2002) more intensive than those for blue collar workers in the manufacturing industries which fluctuated around 1.6 to 2.3.

\(^{32}\) The differences in parity Euro (or national currencies) are different in the price levels of individual countries. At the CR price level and parity CZK the difference of average wages between the CR and compared countries was roughly CZK 189 thousand (monthly CZK 15.8 thous.) to CZK 490 (monthly CZK 41 thous.).
The highest relative level of real net wages in the CR are shown by KZAM class 1 (managers) and the lowest level in relation to Germany and Austria by KZAM class 2 (scientists and white collar workers) and to the UK and Ireland by KZAM class 3 (technicians, health and education workers).
7.1 AN INTERNATIONAL COMPARISON OF THE EDUCATION LEVEL OF THE CZECH LABOUR FORCE

The current education level of the labour force in the Czech Republic can be characterised by the high share of people with secondary education. In 2004 this reached nearly 80% of the total of the economically active population. The other qualification levels are represented by low shares in the total.

People who achieved only basic education or did not even complete this made up only 7.8% of the total labour force in the CR in 2004. This is a very favourable characteristic for the Czech active population, and puts it apart from the other EU countries, particularly the EU-15. In these countries people with the lowest education levels made up 28.7% of the total which is 20.9 percentage points above the level in the CR. The new member states have a qualification structure similar to the CR, however the average share of people with low qualifications is 12.7%, which is 4.9 percentage points more than the CR.

The share of people with secondary education in the CR is the highest in Europe and fluctuated around 79.2% in 2004. The average for old member states reached 46.5% in 2003 which is 32.7 percentage points less than the CR for that year. In new member states the focal point for labour force education also shifted towards secondary qualifications (their share was 70.5%) but it did not reach the level of the CR (it was 8.7 percentage points less).

In order to perform a comparison analysis of labour force education structures date was chosen from Eurostat and the Selective Labour Force Survey, which is based on a uniform Eurostat methodology used by all EU member states. Only in rare cases was other data used which had a compatible methodology with Eurostat’s, and only where these values were missing from some of the Eurostat time segments, e.g. OECD. The data for the CR for 2004 is calculated and supplemented by data from the Selective Labour Force Survey by the CZSO, which is methodologically identical to the LFS (it is a part of it). The source for the description of tertiary education and its analysis here was from the CR Education Development Yearbook 1995/96–2004/05, which was published by the Institute for Education Information in Prague in 2005.
Due to the high share of secondary education, the Czech Republic has already basically fulfilled its Lisbon target set by the European Commission for 2010. According to this reference value related to the quality of the European population at least 80% of the population in the 25-64 age range should have at least secondary education. In the Czech Republic the share is 89%. The low share of university education as part of this characteristic is balanced out by the high share of secondary education. Even though this target applies to the education level of the whole population in the age range, a similar evaluation can be applied to the education level of the labour force.

The proportion of the labour force with the highest qualifications is represented in the Czech Republic by a distinctly low share. In 2004 this was only 13.2% which is nearly a half of the EU-15 figure where the share of people with tertiary education reached 24.65 in 2003. Even the new member states whose economic levels are below that of the CR having average shares of highly qualified labour force of 16.5%, which is 3.8 percentage more than the CR.

7.2 THE SHARE OF TERTIARY QUALIFICATIONS IN THE LABOUR FORCES OF THE CR AND SELECTED EU COUNTRIES

The share of the highly qualified labour force in the CR is one of the lowest in Europe. It is nearly 12 percentage points lower than the average share reached by the old member states and is even lower than the average of the new member states. The level of education of the labour force does not reflect the economic level and the structure of the economy. The difference does not lie only in the fact that less qualified activities are represented to a higher extent than should correspond to the economic structure of the given GDP. As can be seen from other analysis, the shortage of labour with tertiary qualifications can be seen from the fact that the professions requiring the highest qualifications in KZAM classes 1, 2 and 3 are performed by workers with insufficient qualifications. For managers (KZAM 1) only every third worker has a university

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35 Analysis of the profession groups requiring high qualifications – internal NOZV material.
education, for the technicians, health and education workers (KZAM 3) the figure is one in every six. In the science and white collar worker category (KZAM 2) roughly two thirds of the people have tertiary education.

Graph 3  The Education Structure in the CR and Selected EU Old Member States (2003)

Note: The countries are rank in reverse order according to ISCED 5.6 share.

Of the old member countries, which neighbour the CR or who have opened their labour markets, the United Kingdom, Ireland and Sweden have the highest shares of tertiary education with figures between 26.7 % and 29.6 %. In Germany the share is roughly one quarter. Except for Austria, these countries have above average shares of tertiary educated labour forces. Their education structures are overall shifted towards the higher levels. The labour forces in these countries, with the exception of Ireland, have strong representation in the secondary education segment, at the expense of the basic education segment.

When assessing the differences between the countries in the percentage of tertiary education workers in the labour force consideration should also be given to the internal education programme structures which these people underwent and in particular the duration and focuses of the programmes. The study structure of various tertiary programmes differs greatly between the various countries. In most of the old EU member states there has been an internal differentiation of tertiary studies much early than in the CR. A large share of graduates with tertiary education in these countries has studied shorter programmes, unlike the case in the CR. It is clear from the following graph that most young people in the CR achieve their tertiary qualifications by studying longer programmes, i.e. 5 to 6 years for masters’ degrees. The level of participation in these courses is similar to Germany and Austria and is even higher than in Ireland, the UK and Sweden, where there are shorter courses, mostly at bachelor degree level.

Currently in the CR there is a rapid development in three year bachelors’ course at universities and two and a half year programmes at the higher technical colleges (ISCED 5B), however these course have a very short history. As can be seen from the following graph, the scope of the shorter form of studies had not reached the level of other countries in 2002. The
level of studying at ISCED 5B was roughly half that of Germany, the UK and Ireland. The level of bachelors’ studies in the CR was up to ten times lower than in these countries. The current development of bachelors’ studies in the CR is described in the following chapter.

Graph 4 **The Share of Tertiary Level Graduates in the Population Group with Age Typical For Completing the Given Type of Tertiary Education** (2002, in %)

Note: Austria – data on the share if graduates of ISCED 5B type studies is not available
ISCED 5A (D) – “longer” – education programmes of 5–6 year duration (masters studies in the CR)
ISCED 5A (K) – “shorter” – education programmes of 1 to 3 year duration (bachelors’ studies in the CR)

It is typical for most developed European countries that participation by young people in these short programmes at ISCED 5A level (bachelors’) or the practical programmes of ISCED 5B level. This trend corresponds to the demand for qualified labour on the European market and the CR is adapting to this trend, albeit belatedly.

The education structures of the labour forces in new member states do not differ with that of the CR as greatly as those of old member states. However compared to these countries the figures of people with tertiary education in the CR are low. If we overlook Slovakia, whose qualification level is nearly the same as the CR’s, the share of these countries is greater by between up to a quarter and a half. In 2003 this share in Poland was 3.1 percentage points higher than the CR, in Hungary it was 5.4 percentage points and for Slovenia it was 6.2 percentage points. These two last countries have labour force education structures with very similar characteristics to that of Austria.
The demand for workers with the highest qualifications has grown in selected old member countries in the previous period (1998–2003) mostly at the same or a considerably quicker pace than the overall demand for labour. In some countries the more rapid growth in employment has also been seen in the profession require low qualifications. This information comes from analyses published by the European Commission.36 If employment continues to grow in these countries it might lead to highly qualified and less qualified foreign workers people being drawn away from other countries.

7.3 **CR TERTIARY EDUCATION TRENDS ANALYSIS AND AN OVERVIEW FOR THE PERIOD UP TO 2009**

University education in the CR is undergoing an expansion which has dramatically increased pace over the past two years. This is undoubtedly due to the **intensive introduction of bachelors’ degree programmes at universities over the past two years**. The number of enrolled students for bachelors’ degrees at public universities for the 2003/2004 year exceeded the number enrolled for masters courses and in the following year 2004/2005 the enrolment numbers for the shorter course were 51,193 compared to 15,910 for the masters course.

**Increasingly more applicants are applying to universities.** In the 1998/1999 school year 94,000 students applied for university courses, in the 2003/2004 school year 117,500 students applied. However, there has been a period of decline in the number of applicants in the meantime which is due to the extension of compulsory school attendance as in 2000/2001 almost no

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graduates left secondary school after the secondary school leaving exams, with the exception of graduates from multi-annual grammar schools.

The number of Czech citizens accepted for bachelors’ and masters degree course is growing. The average growth rate between the 1999/2000 and 2004/2005 school years were 3.14 %. Between 2002/2003 and 2004/2005 the average growth rate was 9.5 %. Even if this growth rate was to stop in the coming years there would be an increase in the number of graduates in the medium term of three to five years.

The number of university graduates has grown and the rate of this growth has increased. The total number of graduates in 2004 exceeded by 40 % the number in 1999. The average growth rate for this period was 7 % per annum, and 12.7 % in the last two years. In view of the fact that in 2007 the first massive year studying the bachelors’ degrees will be graduating together with the masters’ degree graduates, this rate will be exceeded considerably.

If we consider that the size of the population’s economic activity will not grow in the next few years and the average growth rate of tertiary education will be 4.8 % (the value for the last two years), then in 2009 roughly 16.7 % of the economically active population will have tertiary education, which are approximately 860 thousand people. With this figure we would exceed the tertiary education level of Hungary (16.2 %) and draw near to the 2003 figures for Austria (17.2 %) and Slovenia (18.9 %).
SUMMARY – CONCLUSIONS

The Czech Republic has been an official member of the European Union since May 2004, yet with the exception of Great Britain, Ireland and Sweden the European labour market is closed off to Czech citizens. Many economically developed European states, however, have work vacancies for highly skilled labour. Suitably qualified Czech specialists can thus today already find legal work in the richest EU countries and a number of them have taken this opportunity. The European Commission, for example, has stated that new member countries can be expected to lose 10% of their most talented students.

To judge the risk of a brain drain from the Czech Republic, the current demand for qualified labour in the Czech Republic and in countries that are attractive for migrants has been monitored.

Although it is not possible to put an exact figure on the demand for qualified workers, this need can be specified in terms of the sectoral/field structure and professions of the experts in demand. In this context it was found that there is practically no systematic monitoring of in-demand qualified professions in the Czech Republic, if we overlook what tend to be one-off (commissioned by a client) surveys by private on-line recruitment agencies. Though the labour offices do keep statistics regarding vacancies, skilled jobs (requiring completed tertiary education) account for less than one-tenth of job vacancies registered by the labour offices.

Conducted quantitative and qualitative surveys have confirmed that the Czech labour market has a critical shortage of machine engineers for development, technology and construction. In terms of KZAM (classification of occupations used in the Czech Republic; compatible with ISCO) this is category 244 (architects, planners, building engineers, technical engineers, constructors etc.), with machine engineers significantly outnumbering building engineers. A need for technical specialists was found in almost all regions of the Czech Republic, as the expanding automobile industry and its suppliers are today represented in almost all Czech regions.

Other professions in demand on the Czech job market are software engineers, highly specialised IT experts, customer services specialists (capable of communicating with both technicians and users), and database developers. The demand for engineers and IT experts has multiplied in the last five years: today the state is critical and continuing to worsen. The research found that technical graduates in particular lack the required standard of language skills that would help them occupy senior positions in supranational (foreign) companies.

Another group in demand besides technical professions is business professionals (KZAM 241). These are workers skilled in accounting, finance, budgets, insurance, personnel and employer matters. These specialists are highly sought-after by small and medium-sized enterprises in particular.

Supranational corporations, foreign companies and large Czech firms are looking for managers in different fields and at different levels. In the past five years the demand for senior management posts has fallen (firms tend to give precedence to promoting their own employees) and it is mainly lower management positions that are in need of filling. Another preferred group in supranational companies consists of executive professionals and sales representatives.
Another particularly deficit group consists in sales representatives with sound knowledge of the field and good communication skills. A typical example is the increased demand for pharmaceutical sales reps. The required combination of well-grounded knowledge of the field and sales skills is a considerable problem for many candidates. On the Czech market in general, there is a shift in demand from economic professions (market research, marketing…) to technical executive professionals.

Monitoring of classified advertisements for vacancies in selected hospitals confirmed that demand for skilled medical staff in the Czech Republic is a persisting phenomenon. Doctors (with primary and secondary attestation) and skilled nurses are in demand. Most in demand are doctors specialising in internal medicine, anaesthesiologists, gynaecologists and obstetricians, and paediatricians. Judging by the duration of advertisements for workers in the monitored hospitals, the biggest problems were with filling positions in pathology, gynaecology and anaesthesiology (intensive-care), where in many cases hospitals ran the advertisements for up to six months.

The foreign labour market needs professions with universally applicable experience and education. Most European companies offer employment primarily for doctors and highly skilled healthcare personnel. There is particular demand for anaesthesiologists, internal medicine specialists, therapists, paediatricians and dentists; experienced, skilled nurses, rehabilitation staff and carers for the chronically ill and elderly in the ageing populations of most European countries can also find good work.

Information technologies and communications experts also have a good chance of finding work abroad, particularly analysts, programmers, network administrators, developers and other IT specialists. Throughout the European Union, there is demand for IT experts skilled and experienced in cutting-edge technologies and possessing the necessary language abilities.

There is also demand in Europe for highly skilled managers and business professionals. To find work, they need management experience either abroad or in a foreign firm operating in the Czech Republic and, of course, excellent language skills. Czech candidates with a knowledge of Russian and with business contacts in eastern Europe are welcomed.

In view of the expanding tertiary sector in the area of skill-intensive services and the upsurge in electrical engineering and other engineering-based fields, the European labour market also has a shortage of experienced electrical, electronic and machine engineering professions.

A simple comparison of the specialists in demand in the Czech Republic and abroad reveals that the Czech and European labour markets suffer from shortages in almost identical sectors/fields and professions. The comparison is, understandably, a guideline and does not apply absolutely for all professional categories. Even so, the common demand for qualified medical staff, information technologies and communications experts and the general shift towards professional careers in hi-tech fields is relevant.

A number of economically developed European countries have realised that their national labour potential could hold back further economic growth. If we generalise the philosophy behind the creation of European migration programmes for foreign specialists we find that, despite minor differences between countries, the programmes are based on supply and demand on the
local job market and foreign specialists are recruited to pre-defined fields and firmly specified professions. As part of these activities, countries perform regular monitoring and assessment of the situation on the labour market in the high skills segment. By comparing the supply and demand they identify qualified professions/fields that the country is most in need of at the given time. Employment forecasts structured by fields form the basis for determining future requirements (in Germany, for example, these are performed by professional associations).

Subsequent action then tackles the identified personnel shortage in a particular field/profession in two ways, by supporting “home-grown” experts and through immigration policy targeting the needed specialists from abroad.

In some EU countries, support for the development of domestic qualification levels is centrally managed and implemented on a relatively broad basis - from monitoring interest in studying at technical universities and in IT fields, through supporting media presentations of the good prospects offered by these fields for secondary school students, parents, teachers, careers advisors and the general public. The number of current and future school-leavers possessing the required qualifications relative to the demographic development of the country etc. is regularly monitored.

Initiatives designed to attract the identified specialists from abroad target both experienced specialists and foreign students in the required fields. Residence and work permits in the host country are not permanent as a rule, but the programmes are flexibly modified to match developments on the local job market. They generally cover a relatively short period of time, with the option of extending the stay in the country. For example, foreign students are given the option of a one-year stay in the country once they have finished their studies in the host country.

The Czech Republic is one of the countries competing for qualified specialists from abroad; in 2003 it launched a pilot project titled “Active Selection of Qualified Foreign Workers”. The project is the first step towards creating the Czech Republic’s future immigration policy and is without doubt a significant initiative. Its weakness is the low number of participants (selected candidates), falling far short of the set quotas. The concept of the programme is based on the nationality of candidates; no required professions, fields or other professional characteristics are specified. It would be worth considering broadening (modifying) the project to accommodate the current needs of the Czech labour market in skill-intensive fields suffering a shortage of domestic specialists.

The Czech Republic has always had the image of a country with a highly skilled labour force. This applies today with regard to the fact that the proportion of the work force accounted for by low-skilled labour is lower in the Czech Republic than in any other EU country. Workers with intermediate skill levels form the core of the Czech workforce; that structure corresponded to the hitherto existing professional demand structure of the Czech labour market. In more developed European economies the requirements for equivalent professions are shifted towards an increased requirement for certified education; examples are nurses, certain educational professions, social care and IT fields.

Specialists with tertiary education in the Czech Republic account for 13 % of the labour force, roughly half the proportion found across the EU (average: 25 %). The gap between the Czech Republic and old EU countries in terms of tertiary education is not positive; nor is a comparison with other new member countries. Although the difference is not that pronounced, it
is only the Slovak Republic that has a similar breakdown of qualification levels. The current shortage of workers with tertiary education is also reflected in the fact that skill-intensive professions in KZAM categories 1, 2 and 3 are carried out by workers with insufficient qualifications.

When assessing the difference between countries in the proportion of the tertiary-educated population, however, one should also take into account the **length of education programmes and their focus**. Internal differentiation in tertiary study came about much earlier in the old member countries, which have a greater proportion of school-leavers who studied a shorter education programme (baccalaureate programme, or two-and-a-half year programmes of higher technical schools). That fully matches demand on the job market. The Czech Republic is adapting to this trend (viz. the intensive growth in baccalaureate study in the past two years); the question remains whether the pace of adaptation is sufficiently rapid.

**Questions regarding the focus of study** evoke more serious concerns. Research has confirmed the hypothesis that higher technical schools and technical fields in general are grossly neglected. Present-day school-leavers from technical fields do not have the required standard of language skills and therefore do not meet the requirements of foreign employers. These phenomena are at variance with the expansion in machine engineering production and the promising influx and relative stabilisation of foreign investors. Czech schools continue to produce graduates in various management fields, social sciences and other fields that are sufficiently represented on the Czech job market – these graduates then have trouble finding suitable work. The lack of these technical specialists forced the biggest concern in the country, ŠKODA AUTO, to build its own new university complex to cover its personnel needs. That is undoubtedly a good signal for the Czech educational system, nevertheless linking the education system to the needs of the labour market is becoming an essential requirement. This requirement is all the more intensive if we consider that other countries (considerably richer than the Czech Republic) are also suffering from a shortage of qualified specialists, e.g. Germany, Great Britain, Ireland et al.) and are trying at least partially to cover the deficit by immigration from other countries, chiefly new EU member countries.

This is compounded by the fact that work in “old” Europe is indisputably advantageous for Czech specialists, because besides other impulses (developing professional skills, participating in international projects, state-of-the-art workplaces, possibilities for career advancement) it guarantees them a higher work income. The bigger the gap between earnings at home and abroad, the bigger the income motivation to work abroad. Foreign and domestic analyses have repeatedly thrown up the conclusion that there is a very strong incentive to work abroad if the level of foreign earnings is more than three times higher than in the Czech Republic and the tendency to migrate persists if incomes are twice as high.

Differences in the real purchasing power of net (internationally comparable) earnings abroad and in the Czech Republic are fundamental in determining the nature of working stay abroad. Analyses of the available international information indicate that the purchasing power of net earnings of specialists in the states under scrutiny (Germany, Austria, Great Britain and Ireland) is roughly 2.5 times that in the Czech Republic. The **real level of incomes among the specialists in question (KZAM 1 to 3) in the Czech Republic is thus roughly 40% of the income level of specialists in those states.** The income motivation of highly qualified Czech labour to work
abroad is thus (despite the ongoing process of convergence between east and west) still substantial.

If some groups of professionals who are already in short supply leave the Czech Republic to take up an offer of work abroad, the found discrepancies between supply and demand on the Czech labour market will continue to worsen, which may subsequently jeopardise the potential for economic growth.
### 1. Types and Forms of Highly Qualified Labour Migration

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>highly skilled mobility</strong></td>
<td>Specialist literature does not discuss the direction of these flows very much. It partially covers the types of mobility which the different partial forms come under. The cyclical nature of migration flows however are characteristic.</td>
</tr>
<tr>
<td><strong>brain drain</strong></td>
<td>This takes the form of a loss (emigration) of highly qualified (educated) people mainly in developing countries, which subsequently has negative socio-economic consequences.</td>
</tr>
<tr>
<td><strong>optimal brain drain</strong></td>
<td>Brain drain does not always have to have an negative impact on the economy of a (developing) country if it doesn’t exceed a certain threshold. The opportunity (vision) to emigrate for higher income corresponding to a certain level of qualifications or education can also be a stimulus for other people to achieve such levels of qualification or education. This then leads to an accumulation of human capital in the given country which can then have a positive affect on its economic development, if these people then stay in the country. Positive economic effects can be considered as being e.g. remittance, “know-how” transfer or investment inflows from emigrants.</td>
</tr>
<tr>
<td><strong>brain waste</strong></td>
<td>“Brain waste” occurs when developing countries cannot employ their own skilled labour adequately according to their qualifications, which then reduces the value of the country’s human capital. This is a similar case to the “underemployment” of immigrants in recipient countries. “Brain waste” is an economic threat to developing countries.</td>
</tr>
<tr>
<td><strong>re-emigration</strong></td>
<td>Re-emigration concerns the return of highly skilled (educated) people back to their country of origin. These people bring back to their countries “know-how”, the application of new technologies or investment.</td>
</tr>
<tr>
<td><strong>brain exchange</strong></td>
<td>The departure of highly skilled (educated) labour is compensated by the arrival of labour from abroad which has the same level of qualifications. This involves flows which are typical between developed countries.</td>
</tr>
<tr>
<td><strong>brain globalization</strong></td>
<td>The mobility of highly skilled people is basically an integrated part of the global economy which creates conditions for the international movement of specialists (e.g. transfers within a multinational company).</td>
</tr>
<tr>
<td><strong>brain circulation</strong></td>
<td>Migration movement (of specialists) as a rule between recipient and sender countries with relatively high intensities of receiving and sending.</td>
</tr>
<tr>
<td><strong>brain export</strong></td>
<td>Certain developing countries purposefully set up programmes aimed at supporting the education and emmigration of highly skilled (educated) people (e.g. as a part of bilateral agreements), in the expectation of gaining positive economic results by keeping contact with these immigrants or through their eventual return. Such gains include remittance, “know-how”, technology, or investment advantages, etc.</td>
</tr>
</tbody>
</table>

## 2. The Demand Structure of Qualified Jobs in the European Labour Market – Summary (monitoring in the EURES and ERA-MORE networks)

<table>
<thead>
<tr>
<th>KZAM</th>
<th>shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>1210</td>
<td>company Directors and Presidents of large companies</td>
</tr>
<tr>
<td>1220</td>
<td>managers of production and smaller units</td>
</tr>
<tr>
<td>1230</td>
<td>managers of universal smaller units</td>
</tr>
<tr>
<td>1310</td>
<td>managers and directors of small companies</td>
</tr>
<tr>
<td>12+13</td>
<td>management</td>
</tr>
<tr>
<td>2110</td>
<td>scientists and specialists in physics, chemistry and related fields</td>
</tr>
<tr>
<td>2120</td>
<td>scientists and specialists in mathematics, statistics and related fields and related fields</td>
</tr>
<tr>
<td>2130</td>
<td>scientists and specialists for computer technology</td>
</tr>
<tr>
<td>2131</td>
<td>computer systems designers and analysts</td>
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<tr>
<td>2132</td>
<td>programmers</td>
</tr>
<tr>
<td>2139</td>
<td>other specialists involved in computer technology</td>
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<tr>
<td>2140</td>
<td>architects, planners, construction engineers, technical engineers, constructers…</td>
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<tr>
<td>2141</td>
<td>urban planners, architects, town, village and transport network planners</td>
</tr>
<tr>
<td>2142</td>
<td>planners, construction engineers</td>
</tr>
<tr>
<td>2143</td>
<td>Electro-technical designers, electrical engineers</td>
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<td>telecommunications networks and electronic systems designers, engineers, electrical engineers</td>
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<td>2145</td>
<td>designers and constructers of machine tools, machine engineers</td>
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<tr>
<td>2146</td>
<td>chemical engineers, technologists</td>
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<tr>
<td>2147</td>
<td>mining and steel engineers, technologists</td>
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<tr>
<td>2148</td>
<td>cartographers, surveyors and other specialist in related fields</td>
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<tr>
<td>2200</td>
<td>scientists, specialists and engineers in biological and medicine related fields</td>
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<tr>
<td>2210</td>
<td>scientists, specialists and engineers in biology related fields</td>
</tr>
<tr>
<td>2221</td>
<td>doctors</td>
</tr>
<tr>
<td>2222</td>
<td>dentists</td>
</tr>
<tr>
<td>2223</td>
<td>veterinary doctors</td>
</tr>
<tr>
<td>2224</td>
<td>Pharmacists, post-graduate pharmacists, apothecaries</td>
</tr>
<tr>
<td>2225</td>
<td>hygienists</td>
</tr>
<tr>
<td>2300</td>
<td>specialist education workers</td>
</tr>
<tr>
<td>2310</td>
<td>science teachers and university lecturers</td>
</tr>
<tr>
<td>2320</td>
<td>secondary school teachers</td>
</tr>
<tr>
<td>2400</td>
<td>other scientists and specialists</td>
</tr>
<tr>
<td>2410</td>
<td>specialists, white collar workers in business and related fields</td>
</tr>
<tr>
<td>2420</td>
<td>specialists the law and legal field</td>
</tr>
<tr>
<td>2440</td>
<td>specialists in social sciences</td>
</tr>
<tr>
<td>2450</td>
<td>artistic university workers, journalists and editors</td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Total 1st – 2nd KZAM main categories</td>
<td>440</td>
</tr>
<tr>
<td>Vacancies total</td>
<td>85 978</td>
</tr>
<tr>
<td>share in vacancies in %</td>
<td>0.51</td>
</tr>
</tbody>
</table>
### 3. The Demand Structure for Advertised HQJ in the Czech Labour Market – Summary (pres and certain web portal monitoring)

<table>
<thead>
<tr>
<th>Occupation Group</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOP management and managers</td>
<td>14.0</td>
</tr>
<tr>
<td>Scientists and specialists in physics, chemistry, and related fields</td>
<td>1.9</td>
</tr>
<tr>
<td>Computer technology scientists and specialists</td>
<td>6.4</td>
</tr>
<tr>
<td>Architects, planners, construction engineers, technical engineers, constructors …</td>
<td>31.4</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
</tr>
<tr>
<td>Urban planners, architects, town, village and transport network planners</td>
<td>3.8</td>
</tr>
<tr>
<td>Planners, construction engineers</td>
<td>17.5</td>
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<tr>
<td>Electro-technical designers, electronics engineers</td>
<td>11.6</td>
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<tr>
<td>Telecommunications networks and electronic systems designers, engineers, electronic engineers</td>
<td>5.4</td>
</tr>
<tr>
<td>Machine tools designers and constructors, machine engineers</td>
<td>38.7</td>
</tr>
<tr>
<td>Chemical engineers, production engineers</td>
<td>6.0</td>
</tr>
<tr>
<td>Mining and steel engineers, production engineers</td>
<td>2.3</td>
</tr>
<tr>
<td>Cartographers, surveyors and other specialists with the above-mentioned orientation</td>
<td>1.5</td>
</tr>
<tr>
<td>Other</td>
<td>13.2</td>
</tr>
<tr>
<td>Professional health and veterinary workers</td>
<td>15.5</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
</tr>
<tr>
<td>Doctors, interns</td>
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</tr>
<tr>
<td>Dentists</td>
<td>3.7</td>
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<tr>
<td>Veterinary doctors</td>
<td>1.2</td>
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<tr>
<td>Pharmacists, post-graduate pharmacists, apothecaries</td>
<td>13.6</td>
</tr>
<tr>
<td>Hygienists, doctors – health equipment salesmen, pharmacists, pharm. companies</td>
<td>4.5</td>
</tr>
<tr>
<td>Scientists, specialists and engineers in biology and other related fields</td>
<td>10.1</td>
</tr>
<tr>
<td>Other</td>
<td>3.3</td>
</tr>
<tr>
<td>Science education workers and university lecturers and High school teachers, others</td>
<td>7.0</td>
</tr>
<tr>
<td>scientists and specialist white collar workers in business and related fields (specialists in accounting, finance, budgets, taxes, human resources, banking and insurance)</td>
<td>23.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
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4. The Relationship between Per Capita GDP and Average Wages in OECD Countries – EU Members

Legend and Basic Interpretation of the Table Below.

The table sets out data on the level of Gross National Product (GDP, in the c and d columns) per capita for 2003 in purchasing power parity. The data is expressed in EURO at the average price level of the 25 EU member states and calculated from values published by the CZSO from the European Comparison Programme [source 4]. This programme was performed by Eurostat for the 25 member states for the period 1999 to 2003.

The second group of information is data on average wages. This is the annual average gross wage. The first set of information (in columns e to j) is for average wages in 2002 published by Eurostat which for the first time includes a complete set of comparable data on the relationship between the 25 member states (the averages express the wages for OKEČ sectors C to K; an overview of the sectors is set out in the text study 41). The second set of information (columns k to n) on average wages for blue collar workers/manufacturing industry workers (OKEČ SCTOR D) FOR 2003 published by the OECD in its publication “Taxing Wages – Les impôts sur les Salaires 2002–2003” the averages set out the wages of single childless workers. Both sets of information on wages set out the data are in EURO, using both the average annual exchange rate and purchasing power parity at EU-25 price levels (according to values from the European Comparison Programme).

The comparison of GDP and average wage data clearly shows that the level of average nominal and real wages for individual countries is fundamentally limited by the per capita GDP level. This is apparently due to the fact that the ranking of the last seven countries is the same both according to the GDP parity level and according to the nominal and real average wage levels.

At the same time it is clear the average wage level is affected by a number of other factors, which affect the specific level and are reflected in fluctuations from the relationship with GDP. These factors include the level (rate) of direct employee contributions to social funds, or the entire social security mechanism, the level of wage proportionality (the difference between the relationship of GDP per capita and average wages against the EU-25 average values – compare columns d, f, and i) etc. A more detailed evaluation requires a special analysis.
### The Relationship between Per Capita GDP and Average Annual Gross Nominal and Real Wages (2003 and 2002)

<table>
<thead>
<tr>
<th></th>
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</thead>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nominal</td>
<td>Rel.</td>
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<tr>
<td>1</td>
<td>Luxembourg</td>
<td>45 883</td>
<td>215</td>
<td>38 103</td>
<td>136</td>
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<td>Ireland</td>
<td>28 303</td>
<td>133</td>
<td>32 912</td>
<td>117</td>
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<tr>
<td>3</td>
<td>Denmark</td>
<td>26 231</td>
<td>123</td>
<td>41 736</td>
<td>149</td>
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<tr>
<td>4</td>
<td>Austria</td>
<td>26 124</td>
<td>122</td>
<td>32 434</td>
<td>116</td>
</tr>
<tr>
<td>5</td>
<td>Holland</td>
<td>25 847</td>
<td>121</td>
<td>33 683</td>
<td>120</td>
</tr>
<tr>
<td>6</td>
<td>United Kingdom</td>
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<td>119</td>
<td>38 538</td>
<td>138</td>
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<tr>
<td>7</td>
<td>Belgium</td>
<td>25 035</td>
<td>117</td>
<td>30 694</td>
<td>110</td>
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<tr>
<td>8</td>
<td>Sweden</td>
<td>24 608</td>
<td>115</td>
<td>32 056</td>
<td>114</td>
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<tr>
<td>9</td>
<td>Finland</td>
<td>24 159</td>
<td>113</td>
<td>30 965</td>
<td>110</td>
</tr>
<tr>
<td>10</td>
<td>France</td>
<td>23 711</td>
<td>111</td>
<td>29 139</td>
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</tr>
<tr>
<td>11</td>
<td>Germany</td>
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<td>34 622</td>
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<tr>
<td>12</td>
<td>Italy</td>
<td>22 834</td>
<td>107</td>
<td>25 808</td>
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<tr>
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<td>Spain</td>
<td>20 912</td>
<td>98</td>
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<td>Greece</td>
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<td>Czech Republic</td>
<td>14 696</td>
<td>69</td>
<td>7 212</td>
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<tr>
<td>17</td>
<td>Hungary</td>
<td>12 923</td>
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<tr>
<td>18</td>
<td>Slovakia</td>
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<td>52</td>
<td>5 708</td>
<td>20</td>
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<tr>
<td>19</td>
<td>Poland</td>
<td>9 826</td>
<td>46</td>
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<tr>
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<td>23 326</td>
<td>109</td>
<td>31 675</td>
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<tr>
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<td>EU-10</td>
<td>11 279</td>
<td>53</td>
<td>6 710</td>
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<tr>
<td>22</td>
<td>EU-25</td>
<td>21 361</td>
<td>100</td>
<td>28 024</td>
<td>100</td>
</tr>
</tbody>
</table>

The free movement of labour is laid down in Article 39 of the Founding Treaties of the European Community. This Article states that the free movement of labour inside the Community must be ensured for member state citizens. This includes the rights to:

– seek employment which is actually being offered,
– for this purpose, to move freely throughout the territory of member states,
– to live in some of the member states for the purpose of working in accordance with the laws and regulations governing the employment of nationals of that member states.

Citizens from the EU fifteen countries (and later Iceland, Norway and Lichtenstein, after the establishment of the European Economic Area) can, without restriction and without the need to obtain work permits, work in other EU member countries.

On the 1st May 2004 the European Union expanded its membership by ten new countries from Central and Eastern Europe. The Czech Republic, Slovakia, Poland, Hungary, Latvia, Lithuania, Estonia, Slovenia, Malta and Cyprus became new EU countries after a number of years of accession negotiations.

The Treaty for Accession to the European Union was signed on the 16th March 2003 in Athens. In the Article concerning the free movement of labour the freedoms set out in the Founding Treaty of the EC were subject to transitional provisions. In the Accession Treaty it states that the free movement of workers from the new accession countries, with the exception of Malta and Cyprus, in its full extent is suspended. Nationals of the new member countries may accept employment in EU-15 countries only on the basis of measures in place at a national level or on the basis of measures set out in bilateral agreements. For the duration of the transition period the new eight EU countries (including the CR) do not have automatic access to the EU-15 labour markets and the system of work permits will remain in place.

In spite of preliminary assurances from a number of EU countries that they did not intend to enact the restrictions, on the 1st May 2004 only three member states opened their labour markets: the United Kingdom, Ireland and Sweden.

In the following text of this Annex we have selected five EU member states (three with open labour markets and two countries neighbouring the CR) and have provided brief information on the respective possibilities for employment in these countries.

a) Working Conditions for Czech Citizens in Ireland

Ireland is one of the countries which took an accommodating approach during the accession negotiations to opening the labour market. From 1.5.2004 it does not require that citizens from EU new member states have work permits when working on the Irish labour market. As European citizens, Czechs in Ireland are guaranteed full rights as set out in employment law in the exact same measure as Irish employees.
Accepting a job is not dependant on fulfilling any prescribed conditions, unless the Irish law states otherwise (some fields are subject to special regulations and requirements). Ireland may set requirements for individual qualifications.

Whilst they are seeking a job in Ireland citizens from new member states have no rights to social contributions from the Irish social system, however these are paid out after three months by their country of origin. It is generally recommended that citizens looking for work in Ireland have enough funds on arrival to provide for their living costs during the period before they find work.

After obtaining employment the employee must request the appropriate local social office (the Social Welfare Office) to issue them with a personal number for relations with the public authorities (a PPS Number; Personal Public Service Number). This number is used to identify the employee and for a number of other tasks in their relations with the state authorities (e.g. tax and insurance deductions). The conditions for issuance and the request form are set out at www.welfare.ie/topics/ppsn.

Employees are obliged to register with the tax office, which will calculate the annual tax deductions for them. Taxes are deducted from wages only when the income earned has reached the annual non-taxable amount of the pay. Registration must be carried out as soon as possible otherwise the employer will have the obligation after a certain amount of time to deduct taxes at the highest rate. The conditions for registration and the appropriate forms are available at www.revenue.ie. The separate entitlements to tax benefits and the structure of tax rates can also be found here.

Residency permits in Ireland must be organised within 3 months of arriving in the country. Applications are processed in Dublin at the Aliens Registration Office or at the local police station (the local Garda Síochána District) at other places. A valid passport or citizens identity card, photographs and a completed form are required when requesting residency permits. In cases of residency for employment purposes the employer will confirm this in the appropriate section of the form. Residency permits are valid for 5 years and can be extended, again at the appropriate institution. Family members (husbands/wives, children up to 21 years of age or older dependant children and dependants of a husband or wife) have the same residency rights as the employee themselves. The only obligation is to submit documents confirming the relationship (marriage certificate) of the person or a document confirming the dependency of the family member, in addition to the members own personal documents.

In order to obtain social support due to social needs an individual’s permanent residency will be verified. Individuals not having permanent residency in Ireland are considered as being those who have not lived in the country for at least two years. Citizens from new member states, i.e. also the Czech Republic, who are employed in Ireland, have access to individual social benefits subject to the fulfilment of the conditions set out in Irish regulations.

39 http://www.MLSA.cz/eures
b) Working Conditions for Czech Citizens in the United Kingdom

The United Kingdom is one of three countries which have fully opened its labour market to citizens from the new EU member states. Czechs seeking work can gain access to the British labour market via the Workers Registration Scheme –WRS), without having to obtain classic work permits. In practise this programme works as follows; as soon as a Czech citizen finds work in Britain they must complete a registration form and send it the address set out on the form.40

A copy of a letter from the employer confirming the employment, 2 photographs, an original valid passport or identity card and a 70 pound fee must be submitted along with the registration form. After this the citizen is issued with a registration certificate which allows them to live and work in Britain for the period they are performing the respective work. If they should change job before 12 months have passed they must register again. In such cases all the above mentioned documents must be submitted again, however without the 70 GBP fee. Employers in Britain are obliged to check the registration of citizens from new member states.

The obligation to register ceases to apply to workers who have legally worked in the United Kingdom without a break for a period of 12 months. In order to pay social and health insurance an employee must request a National Insurance Number.41 Tax and insurance administration is carried out by the financial authorities (the Inland Revenue).

As with other EU countries, the United Kingdom was concerned about a large influx of workers from abroad. Above all, there were concerns of abuse of the social benefits system. Whilst the British Government did open its labour market to the eight new member states (including the CR), it was decided that the stay of these workers in the United Kingdom would be subject to certain conditions. The most significant restriction involves access to social benefits, which was motivated by the Government’s attempts to limited social tourism. Czech employees gain full rights to social benefits only after working 12 continuous months. The British Government left open the possibility of introducing work permits if there was a significant increase in the number of immigrants.42

Since the 1st of May 2004 every Czech citizen who either works in the UK or has enough money to support them without claiming social benefits has the right to live in the UK.

c) Working Conditions for Czech Citizens in Sweden

Sweden similarly decided not to apply the transitional measures restricting the free movement of labour not only for Malta and Cyprus, but also for the other new member states. The employment conditions of new member state citizens are the same as those for citizens from old Europe.

40 The English version of the request form, a guide to completing it in Czech and an information booklet also in Czech can be found at: http://www.workingintheuk.gov.uk/ in the section “Schemes and Programmes” and then “Worker Registration Scheme”
41 www.inlandrevenue.gov.uk
Czech workers do not need a work permit to work in Sweden, however if they wish to stay in the country for more than three months they will be required to have a residency permit.

Residency permits are organised by the immigration authorities, with these services being free of charge. If a Czech citizen wants to work in Sweden they will need to submit a copy of their identity card or passport and written confirmation of their employment which will contain information on the length of the employment and on the working hours. In the event that an employment contract is concluded for a year, the citizen will obtain a residency permit for five years. If the contract is for a shorter period, the residency permit will be made out for a set period. Husbands or wives and children and parents who are financially dependant on the applicant may also apply for residency permits. In Sweden people may obtain residency permits if they are employed in the country, or if they have sufficient funds to live there and they have accommodation provided for them in the country.

Residency permit documentation is the concern of the financial authorities. Foreign citizens are issued a number which the authorities use for various purposes (e.g. for social insurance), and a tax card, which will have the amount of tax due from the employment income. In order to be issued with a residency permit you must prove that you will be employed or that you have sufficient funds to support yourself in Sweden. It is also essential to have accommodation.

If a Czech citizen is employed in a non-regulated profession they are entitled to do the work under the same as a Swedish national would be. The decision of accepting the employee remains solely with the potential employer. For regulated employment or activities the regulations set out certain requirements which govern the performance of such professions. These conditions include for example the level and filed of education, the length of experience, health suitability etc.

EU citizens have access to the entire Swedish social security system.

d) Working Conditions for Czech Citizens in Germany

During the accession process Germany advocated restricted access to the German labour market and the laying down of a transition period for restricting the free movement of labour from new member states in the Accession Treaty.

The impulse for his decision was fears of their labour market being inundated by people from the East. The cause was the economic situation in Germany at the time, the labour market crisis in the new federal lands and the large wage differential on both sides of the German-Czech and German-Polish borders. For this reason the country is applying the transitional restrictions on the free movement of labour and Czech job seekers still must organise work permits pursuant to the conditions set out in the national laws before they can accept any employment.

An Agreement on Mutual Employment has been concluded between the Czech Ministry of Labour and Social Affairs and the Federal Authorities in Nuremberg since 1991. Based on this agreement there are now the following types of legal employment available to Czech citizens in Germany:

1. An agreement on procedures for brokering employment in the FRG for Czech job seekers for a period of not more than 3 months as part of seasonal work,
2. An agreement on mutual employment of Czech and German citizens for the purpose of developing their professional and linguistic skills,
3. An agreement on sending Czech citizens from businesses registered in the CR to Germany as part of works contracts,
4. Cross-border commuting to German border areas with returning daily to the CR - commuting,
5. IT specialists working in the FRG under the “Green Card” programme for computer experts (see the programme of offers for qualified labour in the FRG).

ad 1) Seasonal Work

The agreement on brokering seasonal work allows Czech citizens to do ancillary or seasonal work for limited periods in defined a restricted sectors of the economy – the agriculture, forestry, hotel and catering sectors and fruit and vegetable processing and saw-mills. A permit for 3 months at the most for a period of one year can be issued (an exception is entertainment establishments where it is possible to work for a period of nine consecutive months once every two years).

Any Czech citizen may apply for seasonal work in the FRG via their local labour office. The number of accepted applications is decided exclusively by the German side, based on their needs and the fluctuations in their labour market. Essential conditions for accepting Czech citizens are:

– Interest from the German employer,
– Demonstrable efforts showing that it was not possible to fill the vacancy with a German citizen or a citizen from a country which is allowed the free movement of labour within the EU.

ad 2) Mutual Employment for a Period of 12–18 Months

The agreement on mutual employment for the purpose of developing qualifications enables CR citizens to do qualified work which has no time restrictions once in their lifetime in the FRG. This work is not restricted to a specific profession. This is available for a period of one year with the possibility of a maximum 18 months extension.

Conditions for applicants:

– applicant age between 18–40
– completed professional education
– 2–3 years professional experience
– interest in perfecting their language skills.

A condition acceptance of applicants is to pass a language test held by an independent body. For employers the conditions are to aim to give priority to employing German citizens or those with the right to free mobility.
ad 3) Employing CR Citizens as Part of Works Contracts

Employing CR citizens as part of works contracts is undertaken under the terms of the international agreement of 23.4.1991. The aim is to set quotas and structures of labour which receive work permits for a given year and to define the conditions under which Czech businesses may send their employees to Germany. This involves a form of sub-supplier contract with restricted conditions in the following sectors:

– construction,
– restoration work,
– other non construction professions (assembling, agriculture, forestry).

The employees of the business remain employed by the business for the entire duration of their stay in the FRG. The employment and tariff conditions of the host country apply to the employees.

ad 4) Cross-border commuting to work – Commuting

Commuting is regulated by a bilateral agreement which enables Czech citizens to work in German border areas under certain conditions with the expectation that the return to the CR every day. Pursuant to Section 6, paragraph 1 of the provisions for exceptions to the recruitment of labour (Anwerbestoppausnahmeverordnung) allow Czech citizens to work unrestrictedly in German border areas which are 50 km from the border. This quoted provision lists the regions and individual towns in the Bavarian and Saxony border areas where commuting is allowed for Czech (and Polish) citizens.44

The activities for which work permits may be issued, are set out in; bilateral agreements concluded between the CR and the FRG, the provisions of exceptions to the suspension of recruitment (Anwerbestoppausnahmeverordnung, ASAV) and the provisions for highly qualified labour. The conditions under which it is possible to issue work permits with consideration to the suspension of recruitment are set out in memorandum 7a of the Federal Employment Agency (Bundesagentur für Arbeit) and at www.arbeitsagentur.de. Work permits for Czech citizens may only be issued for certain precisely defined activities.45

Citizens who have been employed for a minimum period of twelve months by German employers at the time of accession or later also are entitled to be issued with work permits. This also applies to their family dependants under listed restricted conditions. This does not however apply to employees who have been sent to Germany as part of the free movement of services, works contracts or for au pairs and people on internships.46

Access contracts for workers from new countries require that they must be given priority before permits issued to workers from third countries (community preference).

44 viz Teilprojekt D-7 Pendlerpotenzial in den Grenzregionen an der EU-Aussengrenze. Methoden, Ergebnisse und Prognosen, Björn Alecke, Gerhard Untield, 2001
A residency permit must be obtained for stays of more than three months. These are issued by the appropriate foreigners authorities. Czech national will be issued with “Confirmation of the Right to Residency” if they will have accommodation in Germany and a work permit.

**e) Working Conditions for Czech Citizens in Austria**

**Residence and employment of Czech citizens in Austria** is also subject to provisions resulting from the transitional restriction on the free movement of labour in the EU-15 and the same employment regulations apply to Czechs wishing to work in Austria as to citizens of “third countries”.

There is an inter-governmental agreement between the Czech Republic and Austria on the exchange of internships in order to increase their professional and language skills and there is an agreement on employment in cross-border areas. After many years of waiting for approval in the Austrian Parliament both agreements came into force in 2005.

The following is required for Czech citizens in order to find legal employment in Austria:

- residency permit – Aufenthaltstitel,
- work permit – Zulassung zur Beschäftigung.

The residency permit „Niederlassungsbewilligung“ (NB) is determined by the Federal Government on the basis of quotas for foreigners. In addition, there is the so called „Arbeitssaufenthaltserlaubnis“ (AAE) for unusual employment where employees do not have a fixed residence in Austria (e.g. commuters). These people, except for commuters, are not included in the foreigners’ quota.

**Commuters** in Austria include two categories:

- commuters with a job and residence in Austria,
- commuters with a job in Austria who return every day to their country of origin; the so called “Grenzgänger”.

Both groups require a special residency permit, the so called “Arbeitssaufenthaltserlaubnis” which is limited to six months. They are included in the quota for foreigners with the exception of commuters who travel everyday back to the country of origin. An **unlimited residency permit** can be obtained after five years of residence if the applicant is able to provide evidence of employment and sufficient earnings. In other cases, the duration of residency is linked to the work permit.

There are three different types of **work permits in Austria. The principle is based on accumulation of rights with the length of stay and employment in the country.**

**1. Beschäftigungsbewilligung (BB)**

If a citizen of a “third country” wishes to work in Austria for the first time, it is necessary for the future employer to obtain the first type of work permit – BB. This can be issued only if “the situation and development on the labour market concerned allows for this employment”
(Aus/BG, § 4/1). If the vacancy can be filled by an Austrian citizen or a citizen from the “old” EU, the permit must not be issued.

Another means of protecting the Austrian labour market is the central quota for employment of foreigners for each federal state. The number of permits to foreign employees (except for EU-15 citizens) must not exceed 8% of the potential Austrian labour force. (see Aus/BG § 12a).

The “BB” work permit is issued for up to 1 year and it is tied to a specific employer. If the employee changes jobs, the future employer has to request a new permit. An extension of the “BB” work permit is possible but there is no entitlement.

2. Arbeitserlaubnis (AE) Work Permits

The “AE” type of work permit is issued if the foreigner has legally worked in Austria in the last 14 months. In this case, unlike the first type of work permit, there is no need for reviewing the Austrian labour market. This permit is valid for up to two years and it is limited to the federal state where it was issued and there can be a limitation on the type of employment. There is legal entitlement for extension if the applicant has worked legally in Austria for 18 months, during the period of 14 months before filing the application or during the last two years (Aus/BG, § 14 e).

3. Befreiungsschein (BS)

The third type of work permit – the “BS” is issued to foreigners who have legally worked for at least five years during the last eight years in Austria. It is valid for another five years. It can be extended providing the foreign applicant has been officially employed in the federal state concerned at least for 2.5 years during the last five years. (Aus/BG, § 15a/1).

Other possibilities to work legally in Austria are presented by the so called „übrigen Erteilungssarten“ (other types of permits). It is a list of possibilities based on a permit from the Government Agency AMS (Arbeitsamtservice) to foreign nationals with a long term residence in Austria (so called “Sicherungsbescheinigung – SB”). The number of these permits issued to Czech citizens in the past was so marginal that this type of permit is of practically no importance for them.

In addition to residency permit and work permit it is necessary to provide a certificate on accommodation and evidence of income. Without sufficient income it is not possible to issue a residency permit. As the residency in Austria is tied to the requirement to prove future income, foreigners are often forced to accept lower wages than the locals. It is very difficult to find work in Austria without experience.48

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47 Arbeitsmarktservice – místní Úřad práce: www.ams.or.at
Persons qualified to do a particular job have a good chance to get a work permit. Work permits for unskilled labour and manual work are issued on an exceptional basis. Highly skilled professionals have the best chance to get a work permit (the so called key workers).  

Those workers who held a work permit for at least twelve months without interruption as of May 1, 2004 are excluded from the transitional provisions. The transitional provisions do not apply to those workers. After termination of employment they can look for another job in Austria without limitation.

Free movement of Czech Workers in the Union in the Coming Years

The transitional period for restricting the free movement of workers from the new member states in the EU-15 was agreed in the following format: 2+3+2 years. I.e. the transitional period was laid down for at least 2 years after joining the Union; afterwards the European Commission shall examine the justification for this restriction and issue a report on the situation. It is expected that most countries will remove the restrictions at this point. If some old member states continue to demand protection for their labour markets, they will be invited to review their labour markets after further 3 years. Countries where there will be a danger to their labour markets even after this time will be able to extend the transitional period for a further two years; the final date for removing the transitional restrictions is 1/5/2011.

The transitional arrangement compared to the transitional periods used after the accession of Greece, Spain or Portugal is shorter, more flexible and more convenient. Each individual member state can by itself at any time allow for more access to its labour market, including complete freedom of access to the labour market. Despite this the transitional period provoked discontent in the new member states including the Czech Republic because it is a significant restriction of freedoms. This measure was initiated by Germany and Austria who justified their requirements by the fear of influx of cheap labour from the East, in particular, from the neighbouring countries.

However, the experience of countries which have already opened their labour markets show that fears of migration of workers from the new member states are not justified. On the contrary, opening up of the market brings a number of benefits (e.g. jobs that could not be filled for a long time with domestic workers is now being filled). Moreover, the Czechs represent a marginal share of incoming workers in terms of their migration potential, e.g. they make up only 7 per cent of all foreign workers in the U.K. However, in many countries of the Western Europe the decision making on this matter is a difficult political issue.

49  http://www.MLSA.cz/eures
According to this report published by the European Commission, labour mobility from Central and Eastern European EU member states has had mainly positive affects. Workers from EU-10 countries have assisted in resolving insufficiencies in labour markets and have contributed in improving the economic results in Europe. Countries which did not apply restrictions after May 2004 (the UK, Ireland and Sweden) have achieved high economic growth, reductions in unemployment and increased employment. In terms of the EU as a whole, the migration flows of workers have been rather restricted.

The statistics contained in the report which were supplied by the member states themselves to the Commission, show the inflow of labour from Central and Eastern Europe has on the whole been less than expected. There is no indication that compared with the previous two years, there had been a sharp increase in the number of workers or in social costs since the expansion. In the absolute majority of cases nationals from the new member states (the EU-10) have represented less than 1% of the labour force. The highest relative inflow of labour was experienced by Ireland. This contributed to its very good economic results. As the “Report on the Functioning of the Transitional Measures” states, EU-10 workers provided the required qualifications and there were a much lower percentage of unqualified workers from this group than among the native labour force.

The Commission recommended to the member states that they carefully consider the need to continue to apply the transitional measures in view of developments on their own labour markets and the data set out in its report. “The free movement of labour is one of the four basic freedoms of the EU” and the Commission’s report clearly shows that the free movement of labour does not disturb the labour markets of the EU-15.
Table 1  Populations of Productive Age According to Nationality - percent
(taken from a report by the European Commission – Brussels, February 2006)

<table>
<thead>
<tr>
<th>Destination country</th>
<th>Nationality</th>
<th>EU-15</th>
<th>EU-10</th>
<th>Third Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>91.3</td>
<td>5.8</td>
<td>0.2</td>
<td>2.8</td>
</tr>
<tr>
<td>Denmark</td>
<td>96.4</td>
<td>1.1</td>
<td>:</td>
<td>2.4</td>
</tr>
<tr>
<td>Germany</td>
<td>89.5</td>
<td>2.8</td>
<td>0.7</td>
<td>7.0</td>
</tr>
<tr>
<td>Greece</td>
<td>94.0</td>
<td>0.3</td>
<td>0.4</td>
<td>5.3</td>
</tr>
<tr>
<td>Spain</td>
<td>90.5</td>
<td>1.2</td>
<td>0.2</td>
<td>8.1</td>
</tr>
<tr>
<td>France</td>
<td>94.4</td>
<td>1.9</td>
<td>0.1</td>
<td>3.6</td>
</tr>
<tr>
<td>Ireland</td>
<td>92.3</td>
<td>3.0</td>
<td>2.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>57.9</td>
<td>37.6</td>
<td>0.3</td>
<td>4.2</td>
</tr>
<tr>
<td>Holland</td>
<td>95.7</td>
<td>1.4</td>
<td>0.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Austria</td>
<td>89.2</td>
<td>1.9</td>
<td>1.4</td>
<td>7.5</td>
</tr>
<tr>
<td>Portugal</td>
<td>97.0</td>
<td>0.4</td>
<td>:</td>
<td>2.6</td>
</tr>
<tr>
<td>Finland</td>
<td>98.3</td>
<td>0.4</td>
<td>0.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Sweden</td>
<td>94.8</td>
<td>2.3</td>
<td>0.2</td>
<td>2.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>93.8</td>
<td>1.7</td>
<td>0.4</td>
<td>4.1</td>
</tr>
<tr>
<td>EU-15</td>
<td>92.4</td>
<td>2.1</td>
<td>0.4</td>
<td>5.1</td>
</tr>
<tr>
<td>EU-10</td>
<td>98.4</td>
<td>0.2</td>
<td>0.2</td>
<td>1.2</td>
</tr>
<tr>
<td>EU-25</td>
<td>93.7</td>
<td>1.7</td>
<td>0.3</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Source: Eurostat, LFS, 2005, Q1, Ireland 2005Q2.
Note the symbol "::" means that the data is not reliable due to small sample ranges.
Italy has been left out because it does not distribute its data according to nationality. EU-15 and EU-25 country summaries are without Italy. EU-10 country summaries do not include Poland.
Table 2  Residency/Work Permits for EU Nationals – Absolute Figures and Percentages of Productive Age Populations in the Destination Country (working age population, WAP) from 15–64 years of age (taken from a European Commission Report – Brussels, February 2006)

<table>
<thead>
<tr>
<th>destination country</th>
<th>type of data</th>
<th>reference period</th>
<th>EU-15 number</th>
<th>EU-15 % wap</th>
<th>EU-10² number</th>
<th>EU-10² % wap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium³</td>
<td>Residency Permit</td>
<td>2003</td>
<td>184 695</td>
<td>2.7</td>
<td>9 351</td>
<td>0.1</td>
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<tr>
<td></td>
<td>Residency Permit</td>
<td>2004</td>
<td>183 019</td>
<td>2.7</td>
<td>12 918</td>
<td>0.2</td>
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<tr>
<td></td>
<td>Residency Permit</td>
<td>2005</td>
<td>178 155</td>
<td>2.6</td>
<td>15 408</td>
<td>0.2</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>No. of foreign workers</td>
<td>2003</td>
<td>4 903</td>
<td>0.1</td>
<td>64 198</td>
<td>0.9</td>
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<tr>
<td></td>
<td></td>
<td>2004</td>
<td>3 751</td>
<td>0.1</td>
<td>69 024</td>
<td>1.0</td>
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<td>Denmark</td>
<td>Residency Permit</td>
<td>2004</td>
<td>6 825</td>
<td>0.2</td>
<td>4 911</td>
<td>0.1</td>
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<tr>
<td>Germany</td>
<td>No. foreign workers</td>
<td>2003</td>
<td>560 230</td>
<td>1.0</td>
<td>108 162</td>
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<tr>
<td></td>
<td>Residency Permit</td>
<td>2004</td>
<td>:</td>
<td>:</td>
<td>497 298</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Residency Permit</td>
<td>May 2004 – September 2005</td>
<td>:</td>
<td>:</td>
<td>500 633</td>
<td>0.9</td>
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<tr>
<td>Estonia</td>
<td>Residency Permit</td>
<td>2004</td>
<td>705</td>
<td>0.1</td>
<td>155</td>
<td>0.0</td>
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<tr>
<td>Greece</td>
<td>Residency Permit</td>
<td>2004</td>
<td>:</td>
<td>:</td>
<td>3 711</td>
<td>0.1</td>
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<tr>
<td>Spain</td>
<td>Residency Permit</td>
<td>2004</td>
<td>21 986</td>
<td>0.1</td>
<td>11 255</td>
<td>0.0</td>
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<tr>
<td>France</td>
<td>Work Permit</td>
<td>2003</td>
<td>:</td>
<td>:</td>
<td>10 067</td>
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<td>Ireland³</td>
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<td>:</td>
<td>53 829</td>
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<td>January – November 2005</td>
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<td>Italy</td>
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<td>2004</td>
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<td>:</td>
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<td>49 454</td>
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<tr>
<td>Lithuania</td>
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<td>May 2004 – April 2005</td>
<td>742</td>
<td>0.0</td>
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<td>Latvia</td>
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<td>117</td>
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<td>Hungary</td>
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<td>2004</td>
<td>2 727</td>
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<td>Malta</td>
<td>Residency Permit</td>
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<td>2 095</td>
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<td>:</td>
<td>24 424</td>
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<td>:</td>
<td>:</td>
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<td>Austria</td>
<td>Av. annual no.</td>
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<td>:</td>
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<td>68 449</td>
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<td>:</td>
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<td>32 265</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>number</td>
<td>% wap</td>
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<td>Work Permit/registration</td>
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<td>151</td>
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<tr>
<td>Finland</td>
<td>Residency Permit</td>
<td>2004</td>
<td>727</td>
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<td></td>
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<td></td>
<td>1 651</td>
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<tr>
<td>Sweden²</td>
<td>Residency Permit</td>
<td>2004</td>
<td>2 698</td>
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<td>3 514</td>
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<tr>
<td>United Kingdom</td>
<td>App. Work Reg. Prog.</td>
<td>May – December 2004</td>
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<td>134 530</td>
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<td></td>
<td>156 165</td>
<td>0.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative data of member states

All the figures relate to the numbers of applicants/applications/registrations/issued permits (flows) except for; the Czech Republic, for which the figures relate to the number of workers; Germany where the first row relates to the number of workers and Austria for which the first two rows relate to the average annual numbers of jobs.

¹ The reference period usually lasts from January to December, otherwise it is stated.
² The figures for France, Italy, Austria, and the numbers of work permits for Germany relate to EU-8 countries.
³ The figures for Belgium relate to residency permits which were issued for various reasons; the summaries for EU-15 countries include permits issued to third country nationals born in Belgium.
⁴ The figures for Ireland relate to personal numbers for interacting with the state authorities (PPS Numbers) who were not only issued for employment but also for other administration purposes including social security and other public services.
⁵ The figures for Sweden relating to EU-10 nationals relate to the period May-December 2004. The Commission did not receive data for Cyprus and Luxembourg.
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Jana Vavrečková et al.

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