

# HUMAN RESOURCES IN THE CZECH REPUBLIC 1999

# **HUMAN RESOURCES IN THE CZECH REPUBLIC 1999**

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**Institute for Information on Education**



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Dear readers,

This is a publication entitled **Human Resources in the Czech Republic**. It is the first in a series of publications that will focus on the relationship between the labour market and the development of human resources in the context of the state of the economy and society. In this way, we believe, we will help to overcome a situation in which these areas are perceived in mutual isolation, and so with no attempt to grasp their interrelationship. Our intention is to indicate both the situation in the Czech Republic, together with the developmental factors by which it is determined, and the ways in which this situation compares to that of developed countries.

The development of human resources, based on permanent education and learning, is a prerequisite for the prosperity and social stability of a society. In the emerging global society of information and knowledge, which links the experience of individual nations with supranational trends and is gradually imprinting an increasingly wide range of developed world characteristics onto a still growing number of countries, the importance of the development of human resources for the professional self-realisation and fulfilment of each individual is growing. This will be increasingly important, not only for finding appropriate employment, but also for full integration into civic society. The aim of the publication is not merely to put forward these assertions, but also to attempt to defend them in a convincing manner.

There is much on which our efforts can build. This includes not only the foreign literature, which makes use of gradually – improving data collection and analysis as well as original research, but also an increasing number of domestic projects which – either in connection with international activities or independently – deal more and more frequently with the relationships mentioned above. One example might be the analytical **Report on the Development of Czech Society 1989–1998** which was produced by a broad range of experts in the field of social sciences and published by Academia. Another example is a series of studies which is the result of the Czech Republic's participation in a project organised by the Organisation for Economic Co-operation and Development entitled **The Transfer of Young People from School to Employment** which was published by the National Training Fund as the implementor of the project on the Czech side. The final example is the **Second International Adult Literacy Study**, known as SIALS. The Czech Republic joined this project through a team representing several institutions, one of them the Institute of Social Sciences of the Czech Republic's Academy of Sciences. It is no coincidence that some of the implementors of those projects are the authors of this publication.

We have emphasised the analytical and documentary nature of the publication. However, we intend to characterise the current situation and its causes as well as to specify particular urgent problems and suggest possible solutions. We consider it necessary to make comparisons with the situation and trends in developed countries, particularly those in the European Union, since we share common objectives with this world. Many problems that are occurring in our country have often been tackled by developed countries. Although we do not need to follow the same paths, we should learn from the developments those countries have experienced.

We believe that the knowledge this publication will bring will be another step for our society towards understanding what is expected of us at the turn of the 21<sup>st</sup> century, with a view to our accession to the European Union in the area of human resources development. We shall also understand how far from or close we are to meeting these expectations and what remains to be done.



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## INTRODUCTION

Czech society has undergone substantial changes during the transformation process since 1989. The former totalitarian state was abandoned and a society has been created that has significant features of democratic organisation has been created. A paternalistic state with a centrally-planned economy has been transformed into a country where the decentralisation of the state administration and self-government is well under way and where the characteristics of a market economy are gaining ground. There has been significant differentiation of ownership and disparities have grown between people and social groups primarily in terms of property and income. The situation in the labour market has changed as well – education and qualifications achieved are being acknowledged and rewarded more than they were before although this has not been the only axis around which the new social differentiation revolves. Unemployment has emerged as an entirely new phenomenon in the labour market.

All these changes seem, particularly in the initial stages, to have occurred without significant sacrifices. Since around 1997, however, numerous problems have emerged which had been hidden in the past or to which solutions had been postponed. The unemployment rate has soared and exceeded 8% at the beginning of 1999. This is the result of many employers' growing economic problems and, since 1998, the overall economic downturn.

These problems have had a considerable effect on human resources, the development of which is one of the essential points of departure for resolution of the existing problems. The exclusion from the labour market of a growing proportion of certain population groups – including young school graduates, women with small children, persons with low qualifications and the disabled – underlines the need for ever more extensive and targeted labour market programmes. The share of GDP resources allocated to labour market policies is relatively low, due to the fact that such policies were needed less in the past (approximately 0.4% of GDP compared to the average of some 3% of GDP in EU countries).

The Czech Republic in the period before 1989 was characterised by full employment which, however, was the result of low labour productivity and actual over-employment. The structure of the economically active population reflected the development of sectors which were demanding in terms of raw materials and energy but undemanding in terms of the qualifications of the labour force. This is why there is still a very low proportion of university-educated experts in the Czech Republic (11% of the productive population, compared to roughly double that figure in EU countries). Moreover, the competencies and structure of qualifications of the labour force may not satisfy prospective needs.

The period of transformation has been marked by considerable changes in the structure of employment. The proportion of employees in agriculture has decreased significantly and there has been a moderate decline in the percentage of people working in this industry. The proportion of the population involved in the tertiary sector of employment has risen significantly. However, we are still lagging behind developed countries in this area (53% in the CR compared to an average of 65% in EU countries). There has been a great movement of employees within sectors and professions – the consequence of the setting up of many businesses and the closure of many others, interest in new kinds of job, in better positions and income, and in private business. The question is whether these relatively smooth and massive transfers – with certain exceptions such as banking or businesses with foreign investment – merely reflect the comparatively undemanding conditions of most jobs, or whether they are an expression of the real adaptability of human resources. In this context, it is necessary to consider the pre-conditions which the education system creates for human resources development. The level of achievement at secondary education is satisfactory and there is a growing proportion of people with a full secondary education (with the “*maturita*” examination). The structure of the fields of study at a secondary education level is being adjusted to meet new requirements. The numbers of those enrolled in higher and post-secondary education have been rising. However, better access to higher levels of education has not, as yet, eliminated certain imbalances – particularly those of a socio-economic nature.

The most problematic of these is the position of in-service education as an important part of the process of lifelong learning. This kind of education is necessary in order to overcome qualification problems in the labour market as well as to ensure never-ending adjustment to the demands of society. In conditions of economic difficulty and insufficient financial motivation, companies have lost interest in the further education of their staff and the rate of the adult population's participation in such education has decreased. One frequently discussed issue is the actual content of education which should develop the key competencies necessary in the new social and labour market conditions. As research into educational achievements and functional literacy shows, there are certain enduring shortcomings in this area.

The level of funding of education has been low in recent years. Expenditure on education as a share of gross domestic product was 4.5% in 1998, i. e. 1.5% lower than the average in developed countries. There has been little use of sources of funding, including employers, other than public resources.

Issues of human resources and pre-conditions for their development established by education are the focus of considerable attention in the developed world, including that of EU countries. There is recognition that higher levels of educational attainment promote economic development and remove social tensions which indirectly influence the economy. This development is also partially reflected in the Czech Republic, where even government policy papers emphasise the qualification and education of citizens, the necessity for increased investment in lifelong learning and the preparation of the highest quality labour force possible both for national, European and global labour markets.

At the same time, it is clear that the transformation process will continue to be affected by a range of purely economic factors for a long time. The Czech Republic must complete privatisation, i. e. the transfer of companies in the hands of strategic owners which will speed up the restructuring of the economy. This will inevitably be accompanied by further layoffs and bankruptcies and so by growing unemployment which will only gradually be compensated for by the creation of new job opportunities, primarily in the tertiary sector and in small companies. At the same time, an intensification of innovation processes and an increase in labour productivity are expected. For all these reasons, it will primarily be competent, educated and adaptable people who will have a chance in the labour market.

\* \* \*

*Human Resources in the Czech Republic* is aimed to serve both the public and policy-makers, decision makers, managers at all levels, teachers, students and R&D workers. . . In addition to basic information about the topic, it therefore contains professionally-focused information and analysis. Human resources are perceived by the authors as the potential of the population in terms of the knowledge and skills gained via education as well as by other means which has an impact on economic and social developments in society. After the introduction, conceived as offering a basic insight into the issues being discussed and the ways in which they are linked, the authors focus on the preparation of human resources (through both initial and continuing education) within the concept of lifelong learning **Chapter I** considers how far processes have been initiated in the Czech Republic to modify the education system in such a way as effectively to foster the development and enhancement of human resources qualifications.

**Chapter II** attempts to answer the question of the way in which human resources are being used in the labour market under conditions of growing complexity in the activities being performed, and in particular, whether or not the education of the labour force is sufficient in this respect. Special attention is paid to the situation of school graduates entering the labour market and to policies aimed at e improving their chances of finding jobs.

The objective of **Chapter III** is to broaden the vantage point from which to view the level of preparedness for the labour market and to do so by creating a finer picture of the real competencies of the population. This is based on a survey of adult literacy which the Czech Republic joined in 1998.

**Chapter IV** examines the question of whether or not people are sufficiently motivated to perform efficiently at work both financially and in terms of values. Another question discussed here is whether or

not certain problems associated with necessary motivation may not be exacerbated by the way in which the social net currently functions.

Each chapter ends with recommendations concerning the future of the respective area. These are primarily directed to the decision-making authorities.

The textual part of the publication contains ample diagrams and tables. An appendix follows which provides an opportunity for a more thorough insight into the issues being discussed as well as independent analysis. Other appendices contain an education system chart, an explanation of basic educational terms, an account of statistical classifications and surveys used, and lists of EU and OECD countries used most frequently for purposes of comparison. There is also a bibliography plus data sources.

The coloured areas contain three types of information: first, the main features of the policies of Czech and international organisations.; secondly, a brief account of major surveys and projects; and, thirdly, a more detailed explanation of selected phenomena or concepts. The data used comes primarily from labour force surveys and from microcensuses and censuses initially carried out by the Federal Statistical Office and, at present, by the Czech Statistical Office. Other sources of data include unemployment statistics provided by the Ministry of Labour and Social Affairs, and the statistical monitoring of education carried out by the Institute for Information about Education. We have also used the results of a significant number of research projects and findings contained in both domestic and foreign professional literature. International data is primarily taken from EU and OECD statistics, although other sources have been used as well – such as international studies of social disparities, educational achievement surveys, etc.

It is obvious that this publication cannot consider these issues in their entirety. It is assumed that further papers on human resources will follow in coming years. Due attention may therefore be gradually given to topics which could not be included or discussed in more detail in this publication. These include, for example, the importance of R&D for the development of human resources and a more detailed explanation of inequalities in the labour market – e. g. those based on gender. Other such issues include regional aspects of the use of human resources, financial flows, co-operation in the shaping of HR between the parties involved, a more detailed elaboration of the issues of continuing education as well as a closer look at developments abroad, particularly within the EU.





# Chapter I



# I. LIFE-LONG LEARNING AS A FRAMEWORK FOR HUMAN RESOURCES DEVELOPMENT

## 1.1 The Concept of Life-long Learning in Developed Countries

*Developed countries are ever less inclined to see initial education before entry into the labour market as the beginning and end of an individual's educational experience and preparation for his/her occupation. Initial education is, indeed, no longer regarded as something that establishes all the educational pre-conditions for employment or in itself constitutes the means of selffulfilment. On the contrary, it is increasingly conceived as a part of life-long learning through which an individual continuously adapts to the changing conditions in the economy and society and therefore as a prerequisite for permanent development.*

The notion of integrated education and active learning permeating the entire course of the life of a human being is not new to history. (It was promoted by the 17th-Century Czech educator and philosopher Comenius, for example, and, in connection with the shaping of the human factor, the developed world began stressing life-long learning in the 1960s). However, the idea is gaining increasing ground today as the developed world experiences the rapid and, to a great extent, unexpected changes associated with the dawn of **a society of information and services, and of a learning society**. These processes are leading to increased competitiveness within individual countries as well as within an international context. The individual's perception of his or her self is changing with the space for his/her self-fulfilment, the perspective of his/her social perceptions and the forms of his/her integration into society. Education is increasingly becoming an indispensable requirement for getting one's bearings in the world of opportunities opening up before the modern individual. It is also a prerequisite for exploiting such opportunities effectively. One important role of education is to provide the individual with the capacity to find his or her direction when confronted by an ever-growing amount of information and expanding range of choice. At the same time, education is becoming an instrument that ensures social cohesion, equal opportunities and respect for other people's rights.

Emphasis is being placed on its active side - learning which is no longer dependent on the functioning of education systems but on the initiative of each individual.

This is why we are witnessing the growth of continuing education as an indispensable part of education systems. This is

still linked to initial education in many ways, but involves the recognition of qualifications acquired at any point in an individual's lifetime, opportunities for the later acquisition of qualifications and levels of education usually achieved through initial education (by common or alternative methods), and ensuring that the individual may build on each level of education at any stage in his/her career, joint use of institutions and personnel by both ini-

### **From the Theory of Human Capital to Life-long Learning**

The concepts of human resources development, life-long education and, later, life-long learning, which originated in the world's developed countries, have been accompanied by the theory of **human capital**. In the early 1960s this theory was used in relation to education by American economists (Theodor W. Schultz, Gary S. Becker and Jacob Mincer). It was based on an analogy between investment in education and in material capital. Both education and material capital involve costs and produce profits. With the establishment of this theory, progress had been made from the original view of education as simply an area of social consumption: a new discipline has come into being - **education economics**.

Profit in the case of human capital may mean purely personal benefits, and primarily income achieved. On the other hand, personal costs imply not only study fees but also, for example, the income lost during studies. Profit may be measured at the level of an



entire society in terms of the relationship between public expenditure on education and broader economic indicators such as the competitiveness of the economy, its capacity to introduce new technologies, advances in the area of research and development and the nature and rate of employment. Moreover, higher taxes on the higher income of better-educated people and the lower social expenditure required by the educated population may be considered as society's profit. At a political level, the relationship between human capital and social profit was discussed for the first time at a Conference of European Education Ministers, held in Rome in 1962.

The concept of human capital was then taken up by specialists in other areas of social sciences and, by means of the media, by the general public. Furthermore, research ensued on the impact of investment on education in the following areas: the effects on personal, and social satisfaction, the population's state of health, the crime rate, social cohesion and cultural developments. In sociology, the theory of human capital was used for the purpose of examining social reproduction (Pierre Bourdieu).

tial and continuing education, creating an encouraging environment for both, and efforts to secure continuing education in terms of funding, personnel and legislation.

The concept of **life-long learning as a prerequisite for and a framework of human resources development** has been elaborated and promoted by major international organisations in recent years. The increasingly frequent use of related terms - **human capital and human resources** - is associated with these developments.

The concept was revived in mid 1980s, while the EU in particular increasingly used the term **human resources**. Renewed interest in these issues was the result of growing economic uncertainty and an employment crisis, as well as the failure of traditional solutions. Politicians and economists stressed the importance of human resources in the new circumstances, dominated by technological changes and the rapidly changing structures of employment and labour. The emerging society, based on knowledge and compelled to adapt swiftly to local and global trends, underscored the role of education in the development of an individual's capacity to learn continuously, and to be creative and self-confident, since this directly affects

his/her quality and flexibility on the labour market. This approach also promoted new, non-traditional learning opportunities. Since the mid 1990s, the concept of **life-long learning** has been used - it is the subject of the EU's **White Paper on Education and Training. Teaching and learning. Towards the Learning Society** (1995) and of a publication discussed and approved at a conference of OECD Education Ministers, entitled *Life-long Learning for All* (1996). Both documents have a programme mission in the area of lifelong learning. The European Union declared 1996 the **Year of Life-long Learning**.

Increasing attention is being devoted to **measuring human capital**. This is not just about the number of years spent at school and the level of education achieved. What is important is how education systems support social growth, how they nurture the abilities of pupils and students which will be vital in their future lives and what is to become of these abilities and qualities during the course of their life. The measurement of **educational achievement** has been gaining momentum as well as the measurement of so-called "**functional literacy**".

The European Union's economic and social cohesion, the need to develop a European identity and to ensure permanent prosperity in EU countries as well as the employability of their population - all this calls for **the development of human resources**. The level of funding allocated to support HRD not only within the EU but also through programmes concerning the countries striving for EU accession is also evidence of this concern. The amount of funding earmarked for educational activities from the **Phare** programme has so far totalled approximately 90 million Euro in the Czech Republic alone. The various activities that are being financed by *Phare* include the TEMPUS programme for higher education institutions, a programme for training university teachers in European issues entitled *Jean Monnet*, a programme called the *Reform of Vocational Education and Training*, the activities of the Observatory for Vocational Education, a programme entitled the *Education of Corporate Management and Human Resources Management in Companies* (National Training Fund), and the carrying out and publication of an analytical study called *Czech Education and Europe* (1998) and other projects.

### Main Costs and Benefits of Human Capital Investment

	Costs	Direct Benefits	Indirect Benefits
<b>Public</b>	Public expenditure on education	Higher taxation on higher income and lower social transfers, higher employment of persons with higher levels of education	Healthier population low crime rate, better social cohesion, economic growth
<b>Private</b>	Private expenditure on education	Higher income associated with higher level of education, better chance of finding a job, better employment position	Greater personal satisfaction, health, culture

Source: *Human Capital Investment*, 1998.

#### Educational Programmes of the European Union as a Means of Integration

The EU has taken an important step, which indicates the emphasis it places on HRD as a prerequisite for future integration, by enabling associated countries to take part in the **European Educational Programmes: Socrates, Leonardo da Vinci and Youth for Europe**. The willingness of the associate countries to pay the programme entry fees which cover the participation of our institutions and individuals in projects, placements and exchanges (this is over 250 million CZK a year in the CR) indicates the importance that they assign to these activities and to European integration as such. The Czech Republic joined the three programmes fully in 1997.

The exchanges and placements of pupils, students and teachers or trainers as well as joint projects involving institutions and individuals from several European countries are facilitating the exchange of experience of education systems and of educational policy and its efficiency. Moreover, these initiatives, which are also designed to clarify qualifications awarded in individual countries and facilitate the recognition of study and working visits abroad, are enhancing mobility within Europe. It is also important that through the implementation of these projects, the associated countries learn to operate within the EU's administrative and technical conditions.

**The direct relationship between European educational programmes and the needs of the economy and employment** is expressed in the final conclusions of the Conference of European Education Ministers held in 1999 in Budapest on the new generation of programmes which are to become effective from 2000 (The European House of Education, 1999).

#### The European Union's Structural Policies

Through the so-called **Structural Funds – SF EU**, the structural policies of the EU are focused on reducing economic disparities between member states and regions. Assistance to support human resources in the area of education and employment is primarily provided by the *European Social Fund* and the *European Regional Co-operation fund*. From 2000, the Czech Republic will have access to so-called **pre-structural assistance** within the Phare programme. This will be granted according to the same principles that govern the *Structural Funds* allocation. In the CR, the preparation for the use of SF EU is being co-ordinated by the Ministry for Regional Development and involves other ministries as well as other interested parties (social partners, the representatives of public administration and self-government, higher education institutions and non-profit organisations, etc.). The responsibility for the area of **human resource development** lies with the Ministry of Labour and Social Affairs and the Ministry of Education, Youth and Sports. Granting assistance is conditional upon the drawing up of a **Regional Development Plan**. This task involves the participation of individual ministries and regions through preparation committees.

The objective is to ensure that use of EU assistance is closely tied to domestic developments and policy intentions. Financial assistance must be claimed for purposes that are already part of the policies of the country concerned and for which the country can already allocate resources. In practice, this is also a necessary result of the principle that EU funding is to be considered complementary to funding from national resources.

Overall pre-accession assistance for ten associated

countries, including the Czech Republic, in 2000 should total 1 billion EUR. At present, annual assistance from SF EU, which the Czech Republic will be able to use after it joins the EU, amounts to some 30 billion EUR.

For the purpose of statistical reporting to the EU and for the future use of SF EU, the European Union approved the administrative division of the Czech Republic into **8 European regions NUTS 2** (according to the *European Nomenclature of Statistical Territorial Units - Nomenclature des Unités Territoriales Statistiques*). Due to the European practice concerning the size of regions and the number of their population, several regions that had previously been approved have been merged for this purpose. The size of a European NUTS 1 is that of the whole of the CR; NUTS 3 regions are the size of districts and NUTS 4 regions are municipalities.

The development of human resources with the aim of encouraging the economic integration of European countries, their competitiveness and the employability of their populations, is given great emphasis by the programme of *EU Structural Funds*.

Considerable efforts are being made by the **Organisation for Economic Co-operation and Development** to define pre-conditions for **human capital development**, its measurement, achievement and international comparisons. Since the early 1990s, the Czech Republic has taken part in an OECD statistical programme entitled *Education Systems Indicators*. It has gradually been involved in research projects relating to the immediate tasks that must be addressed within the area of education. The results of some of the projects in which the Czech Republic has been involved will be discussed in greater detail in other parts of the publication.

## 1.2 Initial Education as Preparation for Life-long Learning

*In developed countries, many principles relating to life-long learning have been recognised as applicable within initial education, i.e. at a stage before the individual enters the labour market. These include the following:*

- the elimination of discrimination and support for disadvantaged sections of the population in terms of access to education and its highest possible levels
- the need to fuel interest in gaining knowledge and experience and the continuation of education after the completion of initial schooling
- strengthening the general basis of education as a prerequisite for continuing education and learning in future - related to this is the postponement of decisions concerning professional orientation until a higher age;
- to make participation in primary as well as secondary education universal;
- growing participation in higher education;
- the permeability of the education system, removing educational cul-de-sacs hindering changes in educational paths and the continuation of education;
- building up the information resources available to schools and the use of information to support the development of the information society;
- increasingly opening up schools to public activities and other educational activities; the development of alternative educational activities outside schools;
- the recognition of qualifications achieved both in initial and continuing education and the assurance of their international transparency;
- language education.

One of the aspects related to the successful functioning of education systems and their openness towards society is the way in which an education system is managed. Direct centralist management plays a less important role and is directed to the creation of a framework for the independent activity of schools both by means of national educational programmes and output standards and by means of funding and support for innovative practices. Higher education institutions enjoy considerable autonomy. The role of the centre also invol-

ves the promotion of the flows of information concerning the educational programmes available, the employment of gra-

duates and prospective requirements and the needs of the labour market. More and more importance is attached to the involvement of interested parties at all levels of education management, including schools themselves. Co-operation between these parties ensures the necessary accountability of schools to municipalities, regions and society as a whole, as well as the necessary links to employers' needs. School assessment mechanisms are increasingly based on self-assessment. The assessment processes stress advice and assistance to schools instead of control and sanctions. Assessment activities are undergoing decentralisation. One of the quality requirements is the relevant qualification and motivation of the teaching staff and senior administrators.

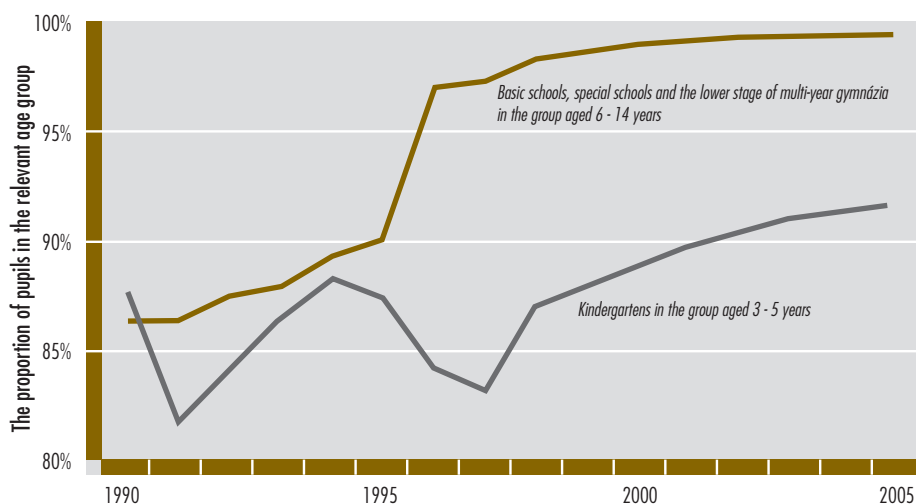
The following parts of this chapter aim to characterise the current position of the Czech education system in the light of the above principles.

### 1.2.1 Access to Education, Possibilities and Limits of Educational Paths

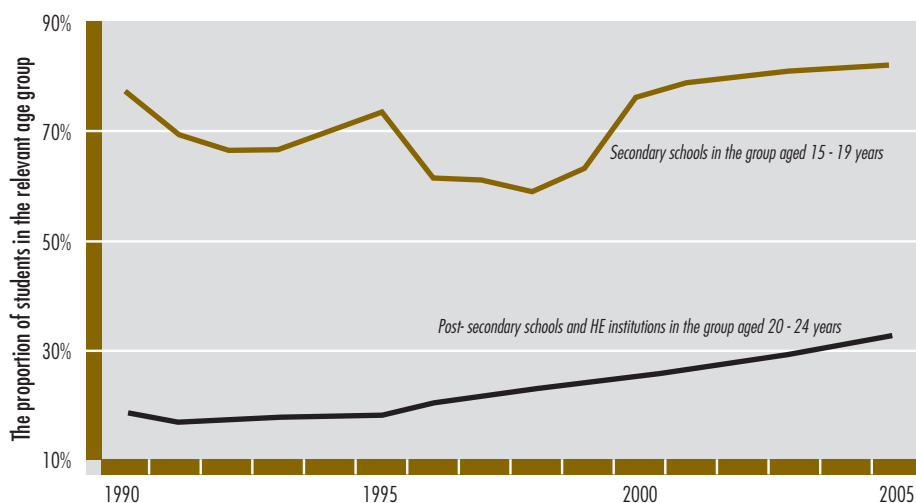
Improving access to education is a sign of the democratisation of the education system which should later have an impact on the economy in the form of higher educational mobility. In the CR, access to lower levels of education is highly satisfactory, including pre-school education (even in comparison with developed countries). However, participation in tertiary education is lower.

Over 85% of children attend pre-school establishments one year before the beginning of compulsory education, which places the CR in third place among OECD countries with the highest level of this indicator (the normal level in the OECD is 50% and more). Pre-school education is perceived as an important step in the child's social integration - this is particularly the case as regards children with a weaker socio-economic background.

**Graph 1.1**  
*Kindergarten and Basic School Pupils in the Relevant Age Group*  
 The Czech Republic 1990 - 2005



**Graph 1.2**  
*Students at Secondary Post-Secondary Schools and HE Institutions*  
 The Czech Republic 1990 - 2005



There is universal access to basic education in the CR. Only children with serious health disorders do not undergo a basic education. In recent years, there has been an increasing tendency to integrate children with health disabilities into the mainstream basic education - both in ordinary or special classes. The Czech Republic still has a rather high proportion of children placed in special schools - with subsequent problems concerning their further education and employability. While in countries with a high degree of integration this does not exceed 1%, in the CR this percentage is 3.8%. Policies are being implemented to improve the access of the Romany population to basic education (e.g. by means of establishing preparatory clas-

ses before compulsory education) and to ensure that they complete this education.

There is a high rate of participation in **secondary education** - over 95% of young people enrol in secondary schools every year and 92% of young people complete secondary education, either during the initial stage or later during employment (the EU average is 69%). However, the average length of studies is insufficient. This situation is only gradually being remedied by reduction of participation in three-year vocational training programmes and correspondingly raising participation in "maturita" courses - a change encouraged since 1996 by the introduction of the ninth grade in basic schools and by improving access to tertia-

ry education. The fact that some two thirds of young people are maturita certificate holders is a good pre-condition for growing participation in tertiary education.

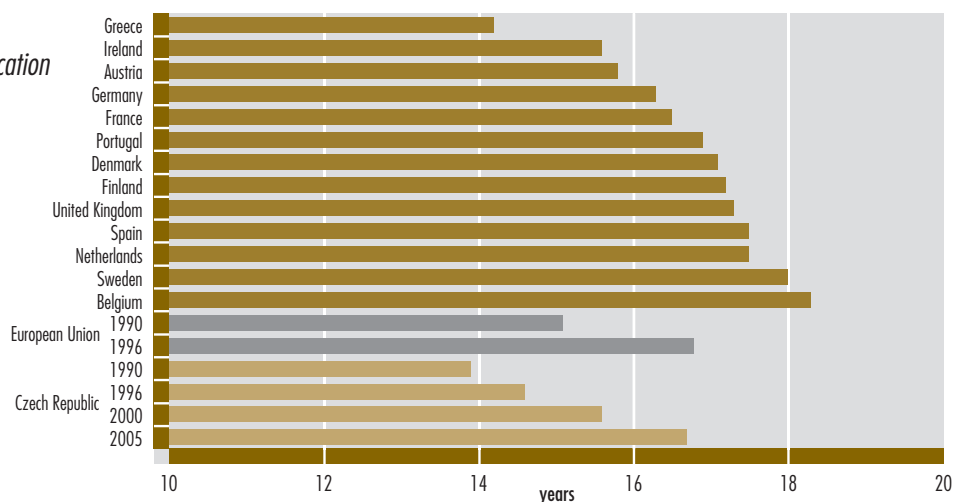
At present, about 30% of young people have access to **tertiary education**, i.e. to higher education institutions and, from 1991, to *vyšší odborné školy* (post-secondary technical schools). Another 5% complete their higher education during employment. We are thus approaching the situation in developed countries where between 40 and 60% of young people enrol in higher education. This is significant progress compared to the situation in the early 1990s, when enrolment was only 15%.

Despite these positive trends it is necessary to see consider access to education from perspectives that yield a rather different picture. An issue that is often discussed is the early selection of talented children for multi-year *gymnázia* (secondary general schools). This practice means not only the creation of an elite of children with better study aptitudes and, as a rule, a better socio-economic background, but also results in the deterioration of the educational achievement of other pupils.

While enrolment in multi-year *gymnázia* is 9%, some 17% of young people are enrolled in upper secondary education (four-year and multi-year *gymnázia*), and this figure is only a little more than at the beginning of the 1990s (15%). The share of comprehensive secondary education facilities (*gymnázia*) in the total number of young people enrolled in secondary education is low compared to other countries (the OCED average is 50%). This means that at present, most maturita courses are provided by secondary technical and secondary vocational schools.

There are a number of people in the CR who **have not completed their education or who have only completed their basic education**. These people must be considered to be at risk in terms of their future employment. Only 8% of young people up to 29 years of age are content with only a basic education or have not completed this level of education, although, as a rule, they have gone through the prescribed number of years of compulsory schooling. It is necessary to say that there are no major obstacles to the completion of one's education in the course of an individual's life.

**Graph 1.3**  
Total Average Length of Education  
The Czech Republic  
and the European Union 1996



Future developments may place higher demands placed on the education system in terms of **permeability** - i.e. the possibility of changing an educational path in an individual's course of the studies, and the **option to complete studies at their various stages and follow from the level achieved in the future**. As with other

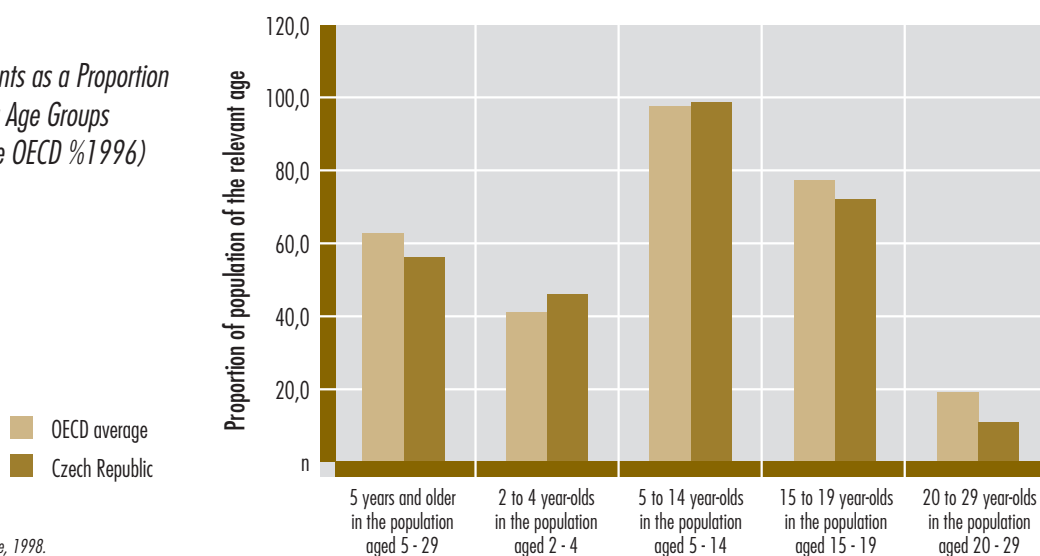
countries, people will increasingly strive to combine education and employment. Pressure will grow on the education system to provide motivation to complete education and to achieve its higher levels. In this sense, the capacity of the Czech education system has not been tested. It is possible that its rather rigid definition of indivi-

dual streams of education and lack of support for pupils and students who fail to achieve may cause problems in future.

**Socio-economic barriers** hindering access to education present a specific problem. The children of better educated and better-off parents usually have better conditions and a more stimulating environment at home, which has positive effects

on both their study aptitudes and their interest in education. The smaller supply of educational opportunities at tertiary level, in comparison with other countries, and its slow improvement in past decades combined with restrictions concerning access to *gymnázia*, has led in the longer term to a growth in disparities regarding access to higher levels of education (see chapter III.).

**Graph 1.4**  
*Pupils and Students as a Proportion of Corresponding Age Groups in the CR and the OECD %1996)*



Source: Education at a Glance, 1998.

### 1.2.2 Changes in Educational Content

The democratic changes in the early 1990s naturally affected the educational environment. Schools were given considerable freedom to decide on the content and focus of education. A host of new fields of study were introduced, as well as many non-traditional pedagogical initiatives which significantly enriched the educational environment. The establishment of private schools strengthened these developments. On the other hand, many problems that can only be solved slowly have emerged concerning **the system's efficiency** (the problem of the large number of small schools has increased as a result of negative demographic developments and the low transparency of new courses) as well as differentiation of education achievement. International studies as well as employers are signalling that, so far, the education system is still geared to **passive ways of acquiring knowledge** and that a great number of courses **take no account of the needs of**

**the labour market.** There are also shortcomings in abilities **to operate modern information technologies.** So-called **key competencies** are only finding their place in the content of education with difficulty.

#### Key Competencies - New Direction in Educational Content Changes

Key competencies are integrated abilities and skills which may be applied in various professions as well as to the individual's personal life. They facilitate the process of lifelong learning and help people adjust to new circumstances. They are not tied to individual subjects or curricula. They may and must be acquired both through diverse curricula and during employment, and may be used in various situations in life. They are therefore often described as **transferable competencies or skills.** Modern education systems are placing increasing emphasis on the need to develop key competencies, particularly within the framework of the general basics of education. The key competencies are as follows:

- communication skills, including foreign languages
- personal and interpersonal skills (ability to set and implement appropriate goals, maintain healthy life style, work in a team etc.)
- ability to solve problems and difficult situations
- ability to apply mathematics to the solution of problems
- ability to use information technologies, to work with information.

The differentiation of educational achievement may be seen, for example, in an experiment called "Maturant" which for three years has been testing the possibility of introducing a national, state-determined element into the "maturita" examination (completing full secondary education). It is expected that full implementation of such an element (in one's mother tongue, one major foreign language, the application of mathematics and working with information or in non-mandatory sub-

jects) combined with co-operation with higher education institutions, will restore the importance of the "maturita" results as a significant criterion for admission to tertiary education. It would also represent a clear indicator for employers and for foreigners, and the entire quality of education might be improved. In this experiment, the worst results have been recorded by graduates of "maturita" courses at secondary vocational schools, and labour market indicators signal that they also suffer from a relatively low rate of employment. It may, therefore, be useful to enhance general education at secondary vocational schools (as part of the "maturita" courses), since even if results are not sufficient for the continuation of studies, such education is certainly beneficial for prospective employment. It is expected that the state part of the "maturita" exam will have two stages, which will make it possible to differentiate between two basic functions.

Average Grade in Tests from the Maturant 98 Experiment by Type of School

	Average grade		
	Czech language	Foreign language	Mathematics
<b>All schools</b>	<b>2,61</b>	<b>2,60</b>	<b>2,60</b>
Gymnázia	1,83	1,79	1,99
SOŠ business	2,59	2,34	2,65
SOŠ engineering	2,91	2,95	2,37
SOŠ other	2,98	3,13	3,21
Integrated secondary schools	3,08	3,16	3,01
SOU	3,22	3,44	2,98

Source: Institute for Information on Education, 1998

Although the introduction of school-leaving examinations should not concern **basic schools**, several state-approved curricula constitute a form of regulation of the content of education that they provide. Schools may select from these curricula and adjust them to their own needs or create other, alternative programmes. This practice is aimed at encouraging schools to be creative. A similar role may be played by what are known as **framework educational programmes** which are currently being drawn up. These should focus on educational outputs and rules pertaining to each level and type of education. Schools will have considerable

freedom to create their curricula within these programmes. A framework programme is being planned for **pre-school education** as well.

Preparation for lifelong learning begins as early as the stage of pre-school and basic education. Ideas on how this function should best be achieved should emerge from a project entitled PISA. This was initiated in the CR in co-operation with the OECD in 1998 and consists of ten-year monitoring of the educational achievement of 15-year-olds.

The issue of the **content of general and vocational** education at secondary schools also has very specific features in this country. While the



ratio of students in general education in the CR (gymnázia) to total numbers in their age group is rather low in the context of international comparison, there is no doubt that the general base of secondary technical education (including secondary vocational schools) is being expanded. At the end of 1997, the Ministry of Education, Youth and Sports approved a Standard of Secondary Vocational Education which defines general key skills in vocational education. In order to bridge the gap between education at the lower level of multi-year gymnázia and the second stage of basic schools - so that the study achievement is comparable and transfer between the two parts of the education system is facilitated a framework education programme for the second stage of basic schooling has been drawn up. The Ministry of Education, Youth and Sports intends to apply the same programme to both types of institution.

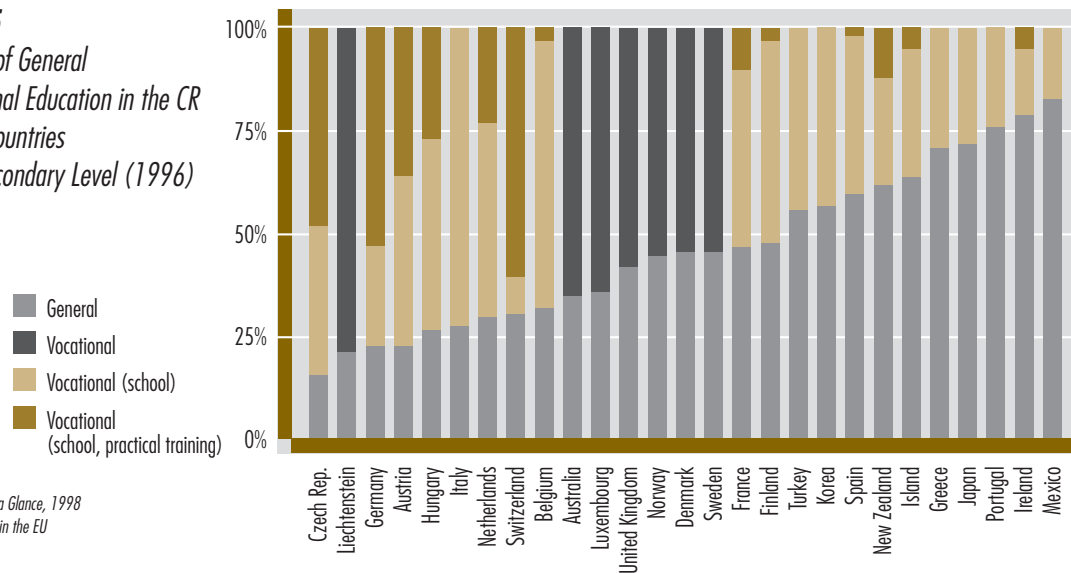
**The Benefits of the Phare Programme  
“Reform of Vocational Education and  
Training - VET”**

The programme entitled “Reform of Vocational Education and Training” has, without doubt, been beneficial in terms of VET changes in the Czech Republic and in terms of ideas about its future development. The programme was supported by approximately 4 million EURO. It started in 1994 as an experiment, testing several new competencies in the system of vocational education and practical training. At the pilot stage, 19 schools took part in the programme in

the following areas: school management and development (including partnership with schools in the EU), the framing of new curricula, school staff development, teaching materials, equipment and evaluation. The programme tested new methods of organising vocational education: its arrangement in ascending levels, the possibility of completing studies at various stages, links between courses (a modular structure), and emphasis on a broad educational base and key competencies. In 1997, the results of the programme were summarised and assessed by a few dozen experts. They were then published in a programming document entitled *Through Education to Prosperity - Towards a Learning Society*, which was subject to public discussion. Based on this, another document was prepared, called *Other Transformation Steps*, which was presented at a conference that marked the completion of the programme in September 1998. The paper defined the following measures as necessary for the further development of VET.

- to improve the management of VET
- to enhance the content of education and quality evaluation and control
- to improve the structure of educational programmes and paths
- to establish a link between educational programmes and the system of certification and professional standards
- to provide for better co-ordination between VET and the labour market
- to improve efficiency in VET funding
- to enhance the quality of teacher training and management education

**Graph 1.5**  
*Proportions of General  
and Vocational Education in the CR  
and Other Countries  
at Upper Secondary Level (1996)*



Source: Education at a Glance, 1998  
Secondary education in the EU

There are certain questions concerning educational content as regards **post-secondary technical education**. Although the amendment to the Education Act of 1995 laid down certain rules for this type of education (the connection of education with practical training, the length of studies as between 2 and 3.5 years, etc.), it did not clearly define which specific level of education these schools should provide. It seems that a number of erroneous assumptions continue to be made concerning secondary education and that these effect this sector of education as well. In future, not only links to industry but also the whole question of quality must be the focus of attention in this type of education.

**Higher education** institutions have considerable freedom to draft their own **study programmes**. Co-operation between HE institutions and faculties with the same focus on the drawing up of programmes. Modern methods of structuring and providing such programmes(modular structure, assessment by means of credits and distance education) are being introduced. Higher education, as well as lower levels of education, still falls short of meeting the requirements in full in terms of its relation to society, practical life and employers' requirements of graduates.

Education achievement surveys provide important evidence on educational content. These surveys show shortcomings in relation to the competencies that education should ensure in order to meet the changing needs of the labour market. If we look at international results, the higher the level of education, the worse the rating of our graduates compared to other monitored countries - in terms of their capacity to work with information. This has already been confirmed at secondary level by the TIMSS survey and, for the adult population, by studies of adult literacy - IALS and SIALS (for results, see chapter III.).

#### **TIMSS Surveys of Educational Achievement**

Over the course of the second half of the 20th century, many countries have introduced standardised tests to measure educational achievement. Their advantage is that they may be administered to a large number of students in a relatively short space of time. They are simple to process and they facilitate compa-

parison between individuals, schools or regions. A test of this kind may cover a significantly large area of subject-matter.

**The International Association for Evaluation of Educational Achievement** (IEA) has repeatedly examined students in various countries for their knowledge of mathematics, science, reading in the mother tongue, civic education, foreign languages, writing and information science. The Czech Republic joined these surveys in 1991. There is a general awareness of the results of a reading literacy survey among pupils in third and eighth grades at basic schools and of the results of the **Third International Mathematics and Science Education Survey - TIMSS**, which compares the achievement of pupils of fourth and eighth grades in basic schools and that of students in their last years at secondary schools.

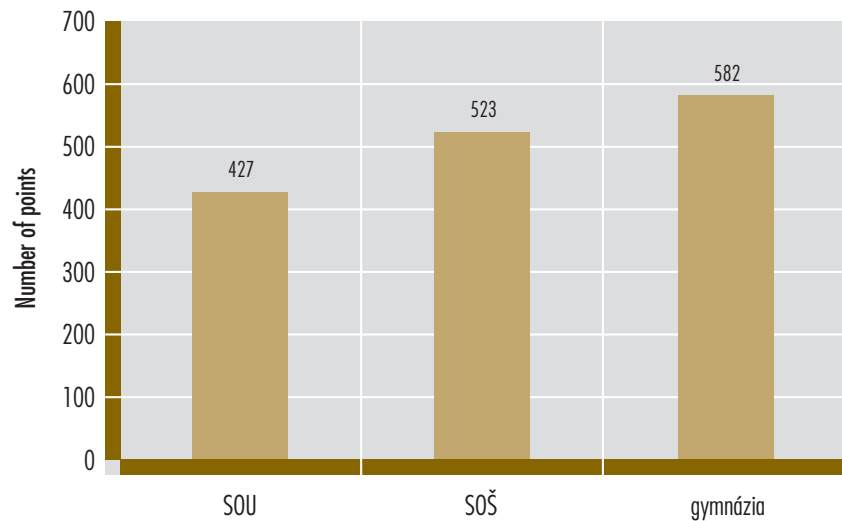
While the CR ranks among the best in terms of basic school achievement (there is a certain deficit of applied skills and, on the contrary, a good knowledge of facts and the handling of routine skills), Czech students in the last years at secondary schools rank in the last third of countries being monitored. The reasons for this situation must be sought in the structure of the education system which, so far, has placed lesser emphasis on the general component of education.

Surveys also showed great differences in results between various groups of students in the CR; between males and females, between gymnasium students and apprentices, between children of parents with a higher education and of those with a basic education, and between students who plan to continue their education after secondary school and those who do not. This points to the attention Czech society must devote to the issue of equal opportunities in education.

Source: *Education at a Crossroad*, 1998

**Information literacy**, which will be increasingly important as part of functional literacy, must be supported as early as the secondary education phase. We are not far from a situation in which each pupil and student will have to have access to information technology both at school and at home in order to meet the demands of ordinary life. The Czech Republic is not lagging in terms of access to information technologies, but the fact remains that education using information technologies is the exception rather than the rule. Distance-learning courses at HE institutions, sup-

**Graph 1.6**  
Overall Results of Students  
in Final Years of Different Types  
of Secondary Education in the CR  
- Test of Literacy in Mathematics  
and Science (1998)



Source: SIALS, 1998.

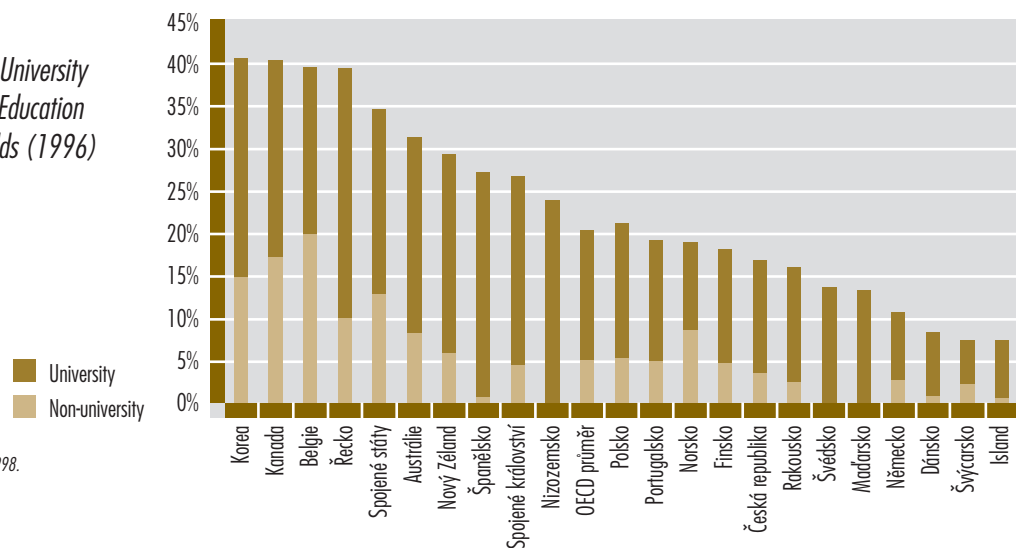
ported by a multinational project under the Phare programme, are only just beginning - although the use of information technologies by HE institutions is commonplace. The use of the Internet, computers and multi-media aids at lower levels of education has only just started. The activities of schools directed towards the information development of society has so far been insufficient.

### 1.2.3. Tertiary Education: Challenge for the Future

The division of the Czech sector of tertiary education into HE institutions and post-secondary tech-

nical schools was the equivalent, until recently, of the division between the university-type and non-university type of higher education known in other countries. However, fast and under-regulated development of post-secondary technical education has been caused by a demand considerably exceeding the supply of study places that HE institutions were able to provide (demand for tertiary education was double the supply over the course of the 1990s). Another reason for this situation has been the gap in the education system which, with the exception of *post-maturita* and follow-up courses, did not provide post-secondary education of a shorter and more practically focused type than

**Graph 1.7**  
The Participation in University  
and Non-University Education  
of 18 to 21 Year-Olds (1996)



Source: Education at a Glance, 1998.

ordinary HE studies for a Master's degree. Nor have Bachelor's degree programmes (provided for in the Higher Education Act of 1990) filled this gap although, as early as in the mid 1990s, these programmes were attended by almost a quarter of all students. Most graduates of Bachelor's courses went on to achieve a Master's degree and it took a long time for the expected inflow of higher numbers of graduates to reach the labour market. Moreover, many Bachelor's courses did not fulfil the function that had been assigned to them - providing a practical qualification. The labour market was unable to classify these graduates either in terms of profession or pay.

Certain post-secondary technical schools which took part in a pilot experiment for this type of education in the early 1990s, carried out with the support of a joint Czech-Dutch project, focused on a thorough monitoring of labour market needs. Based on this, they have made efforts to adapt their programmes to these needs and to integrate theoretical education and practical training provided by the industry.

It was only with the passing of Law no.111/1999 Coll. on *higher education institutions* that the establishment of **non-university higher education institutions** became possible, and Bachelor's programmes acquired clearer legal definition. At the same time, the law contained provisions allowing the existence of **private HE institutions** recognised by the State. These represent the legislative pre-conditions both for the establishment of entirely new institutions and for the inclusion within the sector of higher education approved by the State of institutions that have so far been excluded from this sector. These are primarily private institutions which co-operate with foreign partners and some post-secondary technical schools which are striving for the status of an HE institution.

The post-secondary technical education sector should retain those schools, since this will contribute to its establishment as an independent part of the education system with specific functions. As it develops further, it will be necessary to emphasise its regional importance, its function of complementing educational opportunities in the various fields provided by the tertiary sector, and the rationalisation of its operations (mergers of small institutions).

One important role of the tertiary sector is to

satisfy the demand for studies both among the young and among people who did not have the opportunity to enter higher education in the past. Another important role of this sector is to foster the research and development potential of the Czech Republic, both by means of educating young researchers and through research activities. The prospects of the tertiary sector of education are very good in view of the existing and future needs of the labour market, which will be increasingly urgent.

#### 1.2.4. *Changes in Management and Evaluation - Is Feedback Sufficient?*

Since the early 1990s, the Czech education system has undergone quite a considerable **devolution** of decision-making processes, although surveys show that many decisions made by schools have still been subject to consultation with higher administrative authorities and their freedom of action is still restricted by a number of regulations, particularly concerning the issue of funding. The continuing **decentralisation** of the administration of education - anticipated in connection with the functions of new regions approved by a law in 1998 - means that the importance of indirect mechanisms for the regulation of education will grow. The **subsidiarity** principle should be implemented more thoroughly, i.e. decision-making should be shifted to those levels where it is most efficient.

The establishment of new **regions** (14) will undoubtedly bring new elements to the decision-making processes. The conceptual, strategic and methodological functions of the centre will be strengthened. Direct links to the centre will be preserved in the instance of HE institutions (although, even here, the practice of bodies representing HE institutions, such as the Council of HE Institutions and Czech Rectors' Conference, is well developed). Particular priority will be given to regional networks of secondary and post-secondary technical schools as it is easier to learn about labour market needs and make use of findings at a regional level. These developments have already been initiated in 1998 through the setting up education authorities in the new regions. The participation of schools' representatives in regional co-ordination bodies will facilitate the involvement

of these schools in framing both national and European regional policies. At present, HE institutions and designated education authorities are taking part in the preparation for these policies. Pre-school and basic education should remain within the purview of **municipalities**, which will continue to contribute part of its funding (so far, this has been some 20% of the overall education budget).

Closer relationships between schools and the regional structure should not affect their professional management and relevant ways of funding. The role of the centre will be to supervise the application of framework educational programmes and mechanisms which ensure that education is adequately staffed. The centre will have to even out possible differences in funding which may be brought about by the differences in economic standards of regions and municipalities. The new arrangements up may raise the regions' interest in funding education.

The principle of **partnership** must be implemented at central as well as other levels. Joint negotiations are already under way between the Ministry of Education, Youth and Sports, the Ministry of Labour and Social Affairs and representatives of social partners. The input of employers and trade unions is increasingly being used in drawing up educational programmes, although this is still not entirely sufficient. Partners in education do not only include employers and trade unions, but also the management of schools, teachers and other staff, pupils and students within the school and parents, the representatives of regional and municipal authorities and other representatives of public life outside the school. Co-operation with partners makes it possible for schools to open up more to the needs of society and to its influence and to respond better to labour market changes. Furthermore, this co-operation facilitates contacts and the placement of graduates in the course of their professional life; it promotes the position of educational institutions and enlarges access to additional sources of funding.

Law no.111/1998 Coll. on *higher education institutions* provided for the establishment of boards of trustees at HE institutions and these bodies have already proved their worth. However, at lower schools, where it has been possible to set up councils following a 1995 amendment to the

Education Act, such councils in fact operate at fewer than 5% of schools. The across-the-board introduction of these councils, which should be stipulated in the new education legislation and which was recommended by the OECD among others, could become a mere formal burden if there is a lack of interest on the part of schools and the public. In Czech society, where the education system is still relatively closed, the system of participation can only be developed gradually.

A substantial part of management consists of **resources and information flows**. The system of statistical reporting as well as results of various surveys undoubtedly affects the ways in which the education system functions. Non-standard activities in this area, apart from educational achievement surveys, include a project entitled *Segment evaluation and Typology of the Education System - SET*, which deals with the various parameters of secondary school operations. The project covers everything from school facilities to the continuation of graduates at HE institutions. Its results are complemented appropriately by findings established during the Maturant experiment. A number of studies have been carried out recently that concern the position of graduates in the labour market (see chapter II. of this publication). It is important to ensure that, in the deteriorating employment situation, these activities are followed up and that they focus on various groups of users (education and job seekers, their parents, schools, the general public, employers etc.).

One important component of education management is evaluation. Schools are regularly evaluated by the *Czech School Inspectorate* and HE institutions by the Accreditation Commission. In the past, the Accreditation Commission carried out extensive evaluation of faculties providing courses in relevant fields. Besides providing a better picture of the standards of individual faculties and institutions, this evaluation resulted in better co-operation between the institutions concerned. It is necessary for this formal process of evaluation to be increasingly complemented by independent activities. These may either be carried out by individual HE institutions or groups of them, or by various independent organisations both in the domestic environment and by international comparison. One good practice is developing in higher education and post-secondary technical education

in the form of various self-evaluation and evaluation activities.

### EVOS - Guarantee of Quality

The EVOS logo is a symbol of the independent Programme for Quality Evaluation of Post-Secondary Technical Schools, organised by the Association of Post-Secondary Technical Schools. The objective of the programme is to provide the public with information about the quality of post-secondary technical schools and to assist such schools in their further development. The programme aims to identify schools which take care of the quality of their courses and which may be selected by applicants with confidence. The objectivity of the evaluation is guaranteed by the EVOS Steering Committee, which consists of representatives of professional associations (e.g. the Confederation of Industry and Transport) and renowned experts. Schools may join the programme on a voluntary basis.

Evaluation methods used within the programme are comparable with procedures that are applied in other European countries. The schools' achievements, their strengths and weaknesses are assessed by an evaluation commission composed of representatives of the industry, HE institutions, post-secondary technical schools and state administration. The commission visits the relevant school and is supplied with a precisely structured self-evaluation report compiled by the school. It may learn in detail about the school's activities and listen to the opinions of students, alumni and their employers. The result is a final report and recommendations to be applied in future.

If successful, the school receives a certificate of quality for the relevant course. The certificate has two levels - a High Quality Certificate is awarded to schools for a course of outstanding standards, a Quality Certificate means that the course concerned meets all quality requirements set by the EVOS programme, while some aspects of the course may still be improved. The certificate identifies quality schools but the results may not be interpreted in reverse - i.e., that a school which does not have the certificate lacks quality.

Evaluation by the public can provide a very realistic picture of the operations of schools. The fact that more and more people are expressing their opinions of the education situation may signal growing public interest in these issues, which may positively affect co-operation between the public and schools.

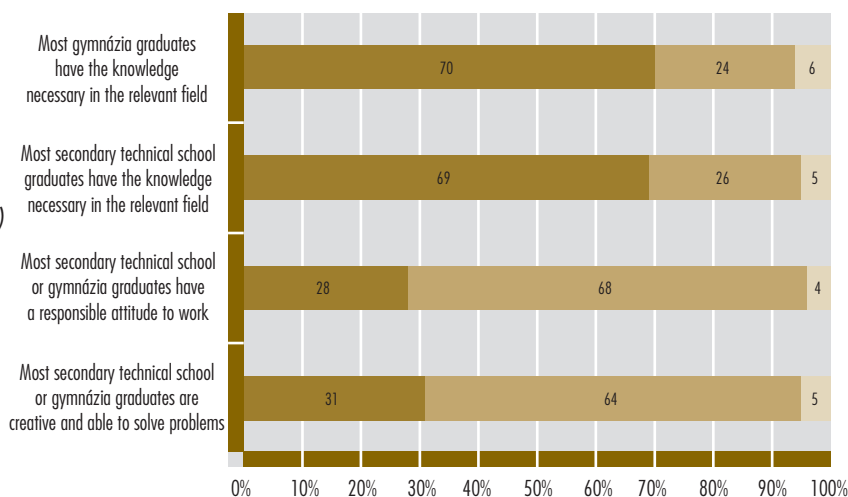
### 1.2.5. The Human Factor in the Provision of Education and Its Motivation

When discussing the development of human resources it is necessary to address the role of educators and their preparedness for the profession. These are primarily teachers and other educators (e.g. VET training instructors) but also include other staff and the management of schools or various lecturers involved in continuing education. The necessary internal changes within the education system must be based on the relevant staff.

### Graph 1.8

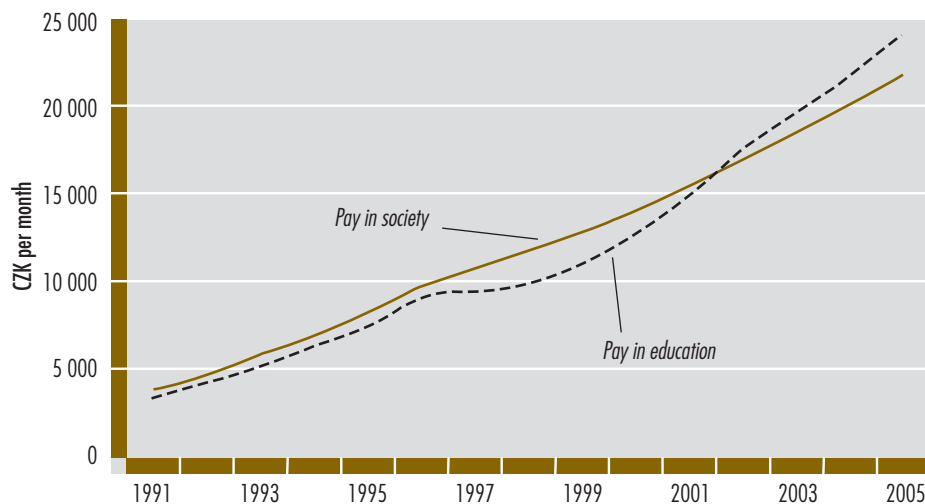
*Evaluation of the Standards of Gymnázia and Secondary Technical School Graduates by Citizens Aged 17 Years and More (in % of the total number of respondents)*

Agree  
 Do not agree  
 Do not know



Source: Institute for Information on Education, 1998.

**Graph 1.9**  
Average Pay in Society  
and in the Education Sector  
The Czech Republic  
1991 - 2005



Training for **education management** is not yet well developed in the Czech Republic, although some teacher-training faculties and other institutions provide specialised courses in this field. This type of education is not regularly required when selecting staff to fill senior management positions, despite the fact that managers in education are stressing the need for the relevant knowledge in economic and legal matters, in communication with subordinates and with the outside community, etc.

As regards **teachers**, many suggestions have been made about how to improve their training (specifically, training teachers in non-traditional teaching and educating methods and enlarging their knowledge through learning about foreign, primarily European education systems and European issues, language and inter-disciplinary competencies, computer literacy, training in providing career guidance to pupils and students, practical training in schools, etc.). However, nowadays the most important aspect is to provide sufficient motivation of teachers - this is seen as primarily as a question of remuneration and career development.

**The level of remuneration of teachers and other educators** is considered to be very bad (at crisis-point) by both these people themselves and by some politicians. While, in the early 1990s, educators' pay was slightly above the average pay in the CR as a whole, their present pay varies around the average, despite the fact that most of them are university graduates and that remuneration of university graduates as a group exceeds average

pay by 60- 65%. One of the consequences of the low remuneration of educators is the fact that a proportion leave the profession for better paid jobs in the the first two years of employment.

The present government intends to raise the pay of educators so that it will reach 130% of the average pay in the economy by 2005. The fulfilment of this goal is tied to overall economic development and the availability of public resources.

The issues of the **career development of educators** have been discussed intensively since the mid-1990s. Ideally, career development - which should be based on continuing education and out-of-work activities (e.g., work for the local community, work with children in leisure time, etc.) - should be linked to the remuneration system. Work on a draft system of this kind has been underway for a long time, but it not be implemented in the near future since it is very complex and demanding in terms of organisation and finance. The deadline for its completion, set by the Ministry of Education, Youth and Sports, is the year 2002.

At present, the continuing education of teachers and other educators is decentralised. Schools select courses offered by teacher training and other faculties, by centres for the continuing training of teachers and by other institutions at their own discretion. The relevant costs are covered from public funds which have been earmarked for this purpose. The link between the course and pay is up to the school management.

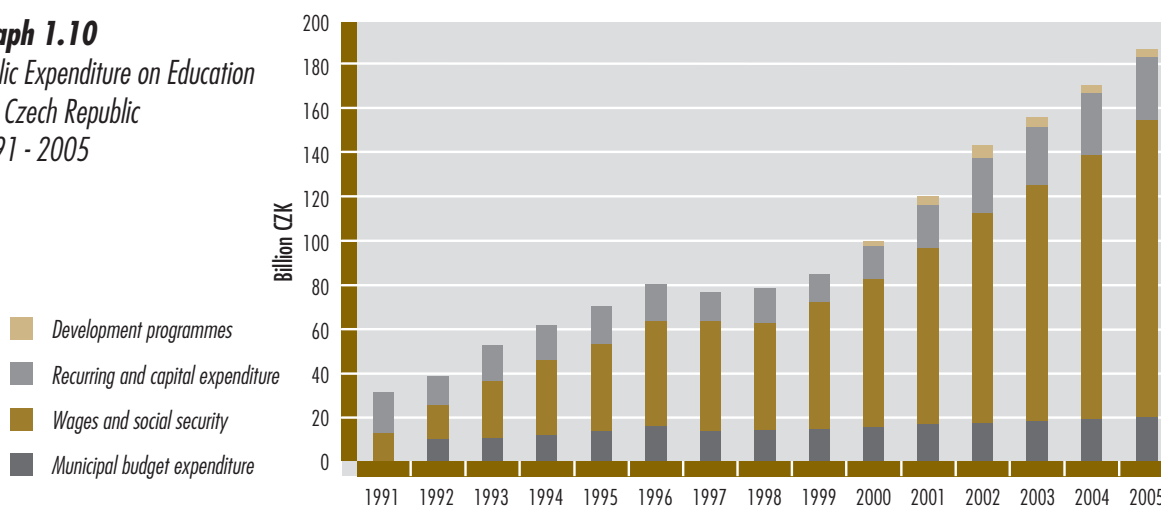
**Teachers in higher education** represent a distinct category. Their career development is based

on progress from the position of assistant to that of professor. Continuing education at this level consists of research training (including a pedagogical component) and, following this, an independent scientific paper may be prepared. HE institutions take part in certain international projects which focus on strengthening the teaching ability of their teachers. One example is the IGIP programme in the field of engineering studies. The high age of teachers, particularly of those who achieve the highest academic degrees, is a problem. Their proportion in the total number of teachers is relatively low. This is caused both by the hitherto low percentage of doctoral students (less than 7% of all students in higher education) and

by a high drop-out rate at this level of education. Another reason is a certain rigidity of the career system which does not provide enough appropriate stimuli for the career development of young staff.

Teachers at all levels may encounter difficulties related to the needs of the labour market. These may be caused by their lack of **contact with practical life** outside the school. Very few teachers have employment experiences other than those gained at school (usually the same one throughout the course of their entire professional career). The involvement of external specialists in the education process has as yet not been systematically introduced.

**Graph 1.10**  
*Public Expenditure on Education*  
*The Czech Republic*  
*1991 - 2005*



### 1.2.6. Political Visions - Can They Be Fulfilled?

In the course of the 1990s, the Czech Republic's educational policy has been strongly influenced by various international activities. As early as 1992, the Organisation for Economic Co-operation and Development formulated its recommendations concerning the development of Czech higher education. These focused primarily on the expansion of study opportunities within this sector and its diversification. These recommendations, together with the Czech Republic's participation in various projects - the OECD project: *First Years of Tertiary Education* or a project organised by the Council of Europe and the European Training Foundation, aimed at non-university education - have undoub-

tedly influenced HE institutions' activities, as has the drafting of a new law on higher education institutions and the position of post-secondary technical schools.

OECD recommendations in 1996 concerning the following areas of Czech educational policy have had significant political impact:

- A. Improving **curricula, structure and the quality of basic and secondary general education;**
- B. Strengthening the **relevance, responsiveness and quality of vocational education management;**
- C. The introduction of **more efficient mechanisms for management and the admi-**



nistration of education, including the improvement of the position of teachers, their terms of employment and training.

**An extraordinary meeting of the OECD Education Committee** held in Prague in April 1999 and co-organised by the Ministry of Education, Youth and Sports concluded that, to date, a range of activities had been launched in the Czech Republic both on the basis of the recommendations and as a result of international projects and programmes, as well as in response to Czech educational policy's own needs. Examples include the preparation of the national part of the *matuřita* examination, the establishment of what are known as designated education authorities in the newly set-up regions as a middle level of state administration and the preparation of a system for the career growth of teachers.

Past developments have shown that some OECD recommendations must be modified. For example, the educational public are not ready for a unified assessment of basic education achievement, although the Ministry envisages a framework educational programme for basic schools in which educational objectives for this level shall be set. To date, the proportion of students in general secondary education has not increased significantly, as *gymnázia* studies are not yet developing the required profile, although the general component of vocational education has been expanded. Instead of the recommended National Council for Curricula, the Ministry is instead inclined to set up a National Council for Education, which should be more broadly focused. Moreover, the relevant tax laws which would favour companies investing in vocational education have not yet been enacted.

The conclusions from the above-mentioned meeting recommend that Czech educational policy should focus on the following four key areas:

1. **Teachers** - ensuring their motivation through opportunities for professional development and remuneration;
2. **The structure of secondary education** - it is necessary to reinforce the sector providing general education by extending access to tertiary education and ensuring higher qualification levels;

3. **The development of VET with the involvement of social partners** - the creation of education programmes, the organisation and evaluation of VET and its funding;
4. **Maintaining a careful balance between the role of state administration and that of regional self-government.**

Czech educational policy is being influenced by numerous other international activities - particularly those associated with the EU harmonisation process. Since 1998, extensive conceptual work has been underway, giving Czech educational policy a new dimension. A so-called sector study of education was carried out under the Phare programme, entitled *Czech Education and Europe* (1998). This carried out a profound analysis of the development and state of Czech education in comparison with the situation in EU countries. Moreover, it outlined further necessary measures. In April 1999, the Czech government adopted *Main Objectives of Educational Policy*. Based on these objectives, the Ministry of Education, Youth and Sports put forward an *Outline of Education and Development of Education System* for public discussion. The result of the discussion, which concentrated on key topics within educational policy, is to be a *National Programme for the Development of Education in the Czech Republic in 2000* (the so-called **White Paper on Educational Policy**). In this way the consultation process which usually forms part of the preparation of similar documents in EU countries will have been applied. The Ministry of Education, Youth and Sports is also involved in drawing up strategic government papers - the most recent being the *Economic Strategy for the Czech Republic's Accession to the EU*.

These activities in the field of educational policy are associated with the government's overall policies. After the new government (which emerged from the 1998 elections) declared education to be one of its priorities, we can only hope that this position will influence Czech education and direct it towards the reality in most developed countries and towards supporting economic development in our country.

### The Main Objectives of Czech Republic's Educational Policy, as approved on 7 April 1999

#### 1. The development of educational opportunities and equality in access to education

- To **implement changes** in the education system which will **provide access to higher levels of education** for children from a less stimulating social environment;
- To make it possible for two thirds to three-quarters of young people to **obtain a "maturita" certificate** in a secondary general and vocational education;
- To **ensure** that half the relevant age group will enter some form of tertiary education by 2005;
- To **extend the average length of education** from the current 14.7 to 16.7 years by 2005 thereby coming into line with the current average in EU countries.

#### 2. Changes in the concept and content of education, as well as in the nature of the school

- To **create a diversified and "permeable"** education system, which will develop key competencies and opportunities for **life-long learning**;
- In 2000, to put forward a basic school framework educational programme (national curriculum) for public discussion and gradually, by 2002, curricula for other schools;
- To **complete**, after public discussion, the reform of **"maturita" examinations** and to introduce a mandatory national part by 2001;
- To **expand** the use of schools for **interest activities** and leisure by children and young people, to help schools offer **continuing education** to all citizens.

#### 3. Changes in the structure of the education system

- To **promote** the development of **pre-school education and the second stage of basic school**, to enrich and diversify the education on offer and to improve responsiveness to various interests and children's capacity;
- By 2002, to **remove "dead ends"** in the transfer from basic and secondary schooling and in the secondary schools system;
- To **promote** the development of diversified **tertiary education**, comparable to that in EU countries;
- To **draw up** a concept and strategy for the development of **continuing education** (adult education), including the relevant legislation and methods of funding.

#### 4. Changes in the position of teachers and in the approach to funding education

- To ensure conditions for the appropriate initial as well as continuing training of teachers and for their professional and career development, linked to their pay;
- To **make sure** that, in years to come, the **average pay** in the public education sector increases 6-8% faster than the national average. This means that in 2005 teachers' pay will have reached a level comparable to EU countries- in connection with average pay and GDP;
- To **initiate and implement development and innovation programmes** to support particularly creative school activities and the development of continuing education;
- To **increase public spending** on education, from less than 4.5% of GDP to **6% of GDP in 2002**.

It is obvious that the fulfilment of some of these objectives will primarily depend on the economic prosperity of the country, which is a pre-condition for major increases in public expenditure on education. This particularly concerns teachers' pay, innovative funding and softening the education-linked financial burden on families, but may also concern the extension of the average length of studies and the development of tertiary and continuing education. In recent years, the low level of funding in education has increased the sector's internal indebtedness and resources have not been available for the necessary development of innovative and support programmes.

Possible barriers hindering the favourable development of education include the inertia towards change which is typical of most education systems, and the lack of understanding of some necessary changes on the part of the professional as well as general public (the permeability of the education system and equal access to education).

## 1.3 Continuing Education in Modern Society

### 1.3.1 The Importance of Continuing Education in Developed Societies

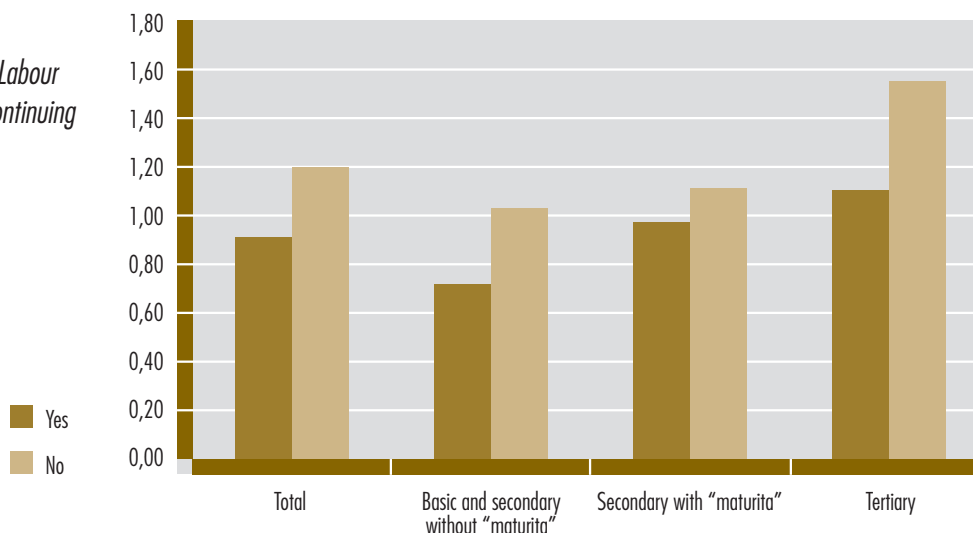
The changes which have occurred in the education systems of EU or OECD countries in the past few decades are particularly visible when we view education as a whole. This not only means the initial education of children and young people at schools but also adult education, which has various objectives, is implemented in various institutions and takes different organisational forms. It is clear that changes in this area are in no way matters of straightforward evolution. According to statistics, the rate of adult participation in education in developed countries over the past few decades has increased much faster than the proportion of children and young people entering individual levels of initial education. While the number of pupils and students in initial education only rose from 65 to 75 million between 1970 and 1995, the number of adults undergoing education more than doubled in the same period. The numbers of educated adults is still growing at present, and in the EU represents a total of 75 to 80 million per year. In the mid 1990s, more than one third of economically active adults in EU countries took part in some form of education or training over the course of one year. These trends are reflected in the continual increase in **expenditure on education**. EU countries allocate some 6% of GDP from public budgets directly to schools. Another almost 0.5% is earmarked for education and training within various labour market policies (re-training, brushing-up and deepening professional knowledge and practical skills). The corporate sector spends approximately 1% of GDP on staff development and another almost 0.25% of GDP is contributed by municipalities, trade unions, professional associations and the like. And, finally, more than 0.5% of GDP goes on education from households and from individuals' own resources. There are signs that these trends are still continuing and perhaps even intensifying. These amounts being devoted to education testify to the fact that there is great interest in a functioning adult education system. EU and OECD member countries include continuing education in their major policies, aiming at the development of life-long learning. Both organisations have developed

a host of programmes to promote continuing education. These projects are being implemented by means of *European educational programmes and Structural funds*. The **main causes** of the dynamic development of continuing education lie in the economy. Because of global economic development, there is unprecedented growth in demands for the rapid application of the latest findings, thus enhancing productivity, quality and efficiency. Such requirements can only be met by staff with a quality initial education and training and with continuously **updated knowledge, skills and competencies**. Those who do not take part in continuing education conserve its former and, increasingly, outdated standards. Moreover, there is a decline in the number of those employed in traditional fields, due to an increase in labour productivity. Unemployment is most often growing among people with low or no qualifications and outdated approaches to work. It is those who **extend or increase their qualification through continuing education** who have the best pre-conditions for doing well in a job. However, those with a higher level of education are as a rule more inclined to educate themselves in the course of their adult life. It is therefore important to distinguish between **the impact of initial education in school and the impact of continuing education on the value of a person** in the labour market. Even after the influence of initial training has subsided, continuing education on its own is a significant pre-condition for success in the labour market. It is a fact that, nowadays, continuing education may be a substitute for a missing level of initial (school) education: people who have not reached a high level of education at school, but who are willing to educate themselves, may be more valued in the labour market than those who achieved a high level of initial education but went no further. This will affect their income and employability. Western countries therefore place considerable emphasis on the relevant certification of continuing education and on the formal recognition of competencies gained through experience.

The following chapters of this publication (II. and III.) deal in greater detail with the influence of education being achieved and of functional literacy achieved later in employment and income.

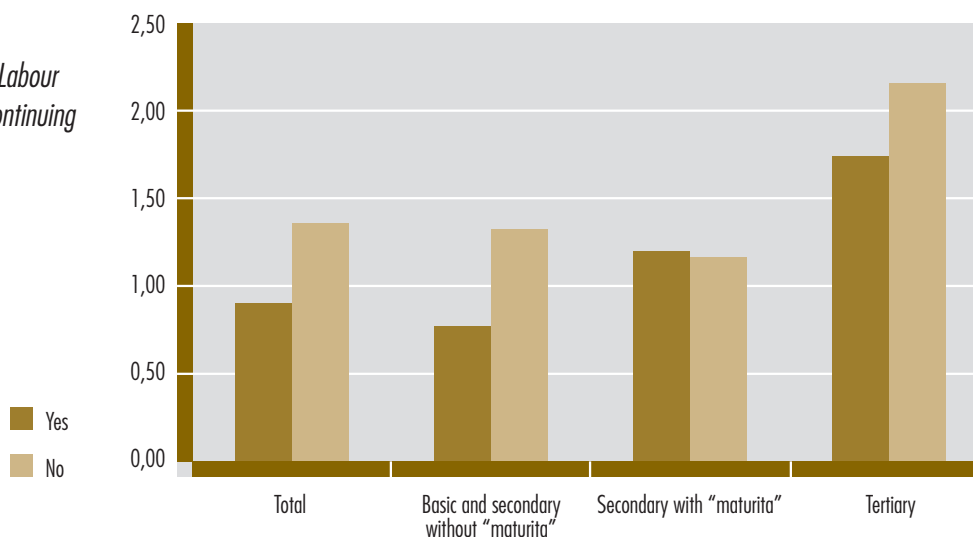
**Graph 1.11**  
Index of Success in the Labour Market in Relation to Continuing Education in the EU

Source: OECD - IALS, 1994 - 95.



**Graph 1.12**  
Index of Success in the Labour Market in Relation to Continuing Education in the CR

Source: SIALS, 1998.



Besides its importance for the economy as a whole, continuing education is also important at a **corporate level**. The most progressive companies, which are highly competitive in the global economy, are those which invest the greatest amounts in staff development and continuing education. The results of the most recent EU surveys show that the value added per employee is 50% higher in companies which invest more than 4000 EUR per employee in HRD a year than in companies that pay less than 2000 EUR (*Innovation*, 1998). Analyses of companies' behaviour have resulted in the following conclusions:

- Continuing education and related practical training - taking place both inside and outside a company - has a significant influence on a company's performance, its productivity and competitiveness. This is particularly the case when there are accompanying changes in terms of company restructuring, work organisation, the structure of job positions and technologies.
- Continuing education is more efficient when it is generally accepted and supported by the staff. Successful innovation and changes require that all staff concerned understand the reasons for the changes, the methods of their implementa-

tion and the requirements the changes impose on them. Continuing education is more successful when it involves various alternative forms and structures which are more accessible than traditionally-structured programmes (which may better suit a better educated and qualified workforce).

- Companies and their staff are inclined and willing to invest in continuing education and training when it is part of a broader context, consisting of organisational changes and the introduction of new technologies (*Lifelong Learning, 1997; Employer Provision, 1999*).

Aspects of human resource development not only involve the scope and intensity of continuing education, but also other major characteristics of the overall economic atmosphere and entrepreneurial culture and their relationship to human resources. In this sense it is important:

- to promote an efficient education system, focused on comprehensive education and the functional literacy of the population. The system should be adjusted and open to society's economic, technological and social needs;
- to support the employer's and employee's general awareness of and focus on continuing education and HRD;
- to establish a positive and co-operative relationship between social partners at national and corporate levels. This relationship should be based on capable and efficient management, on

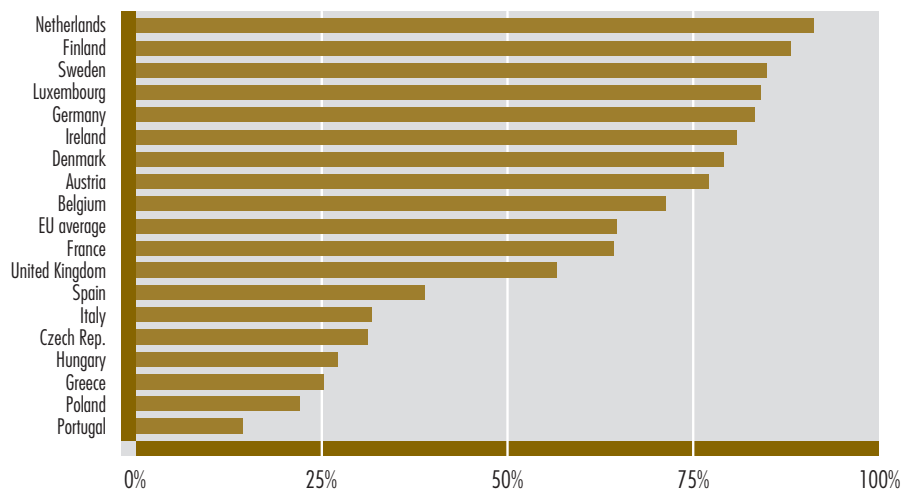
joint efforts to prevent problems and possible social tension which, should they occur, should be resolved constructively.

Countries which efficiently combine these approaches are Switzerland, all the Scandinavian countries, the Netherlands and Luxembourg. Problems in this area are experienced by Russia as well as other countries of the former Socialist Bloc - and the Czech Republic is no exception. Within the EU, weaknesses in adopting the above-stated approaches primarily exist in Southern Europe (in Portugal and Greece). Continuing education and HRD in companies are considered not only to be a pre-condition for high **competitiveness in the global economy** but also to be a component of **high quality of life and living standards**.

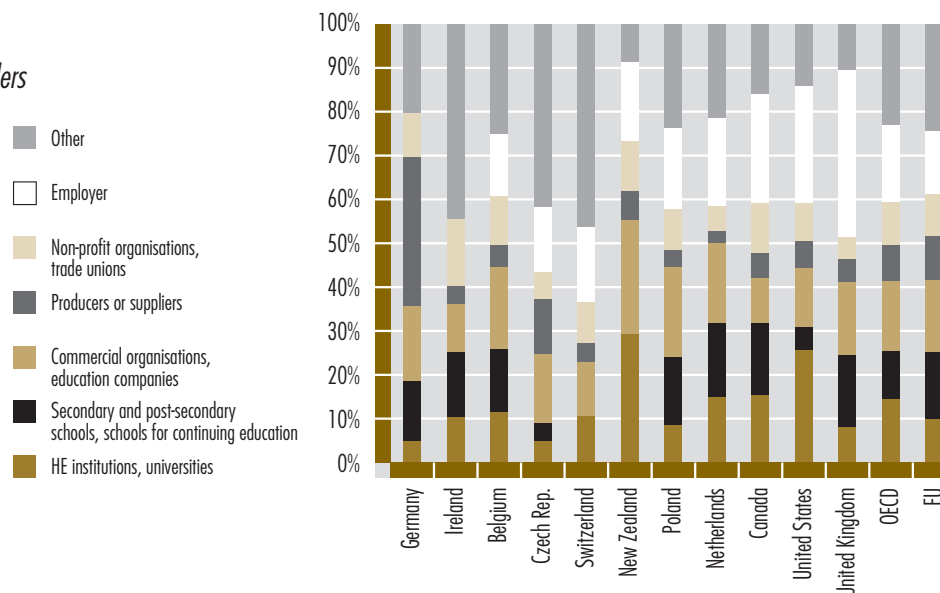
### 1.3.2 Types of Continuing Education

Continuing education normally involves all types of education which increase employability or satisfy the other economic, social and cultural needs of adults who have completed education within the school system. Through continuing education, an adult may complement a certain level of education. Compared to the so-called initial education of young people, the system of continuing education is **much more differentiated**. This concerns both the groups of those undergoing education and its providers, the objectives and content of education, the methods used, the organisation, and the management and funding, etc.

**Graph 1.13**  
*The Development and Continuing Education of the Population*  
 EU Countries, the CR, Hungary and Poland

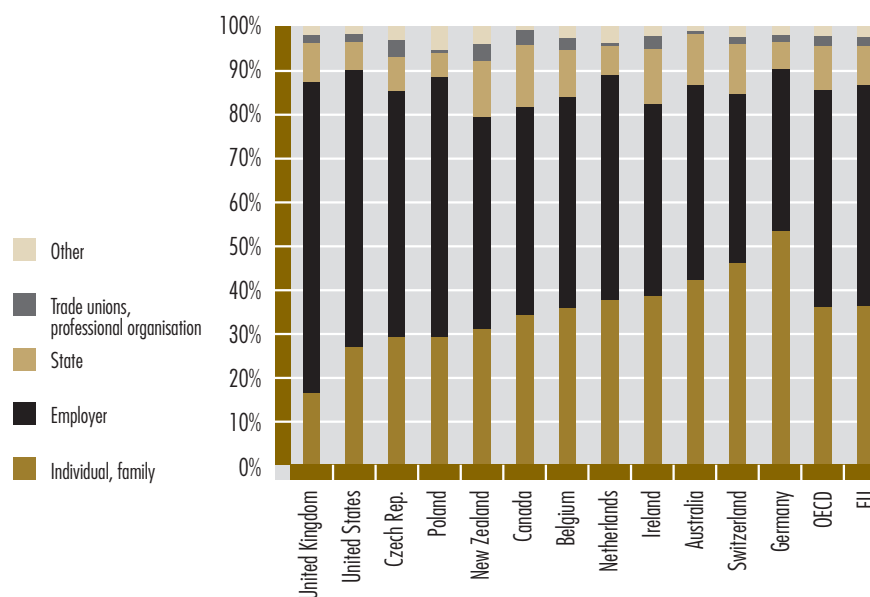


**Graph 1.14**  
Continuing Education Providers  
in Selected Countries



Source: OECD - IALS, 1994 - 95, SIALS, 1998.

**Graph 1.15**  
Sources of Funding of Continuing  
Education in Selected Countries



Source: OECD - IALS, 1994 - 95, SIALS, 1998.

### 1.3.2.1 In-Service Training in Companies

**Staff training** (employees as well as employers) **in relation to the work performed** is the most widespread type of adult education in the developed world. Over three fourths of all adults involved in education take part in this particular kind of training. In terms of time, it accounts for more than 80% of all activities within continuing education as a whole. It is mainly targeted at staff in companies and other organisations in all sectors of

the economy and in various occupations. The main purpose of the training, for those undergoing it, is to increase one's value in the labour market (one's capacity to maintain or improve one's job and income) and for companies to increase the productivity, qualifications and adaptability of their staff.

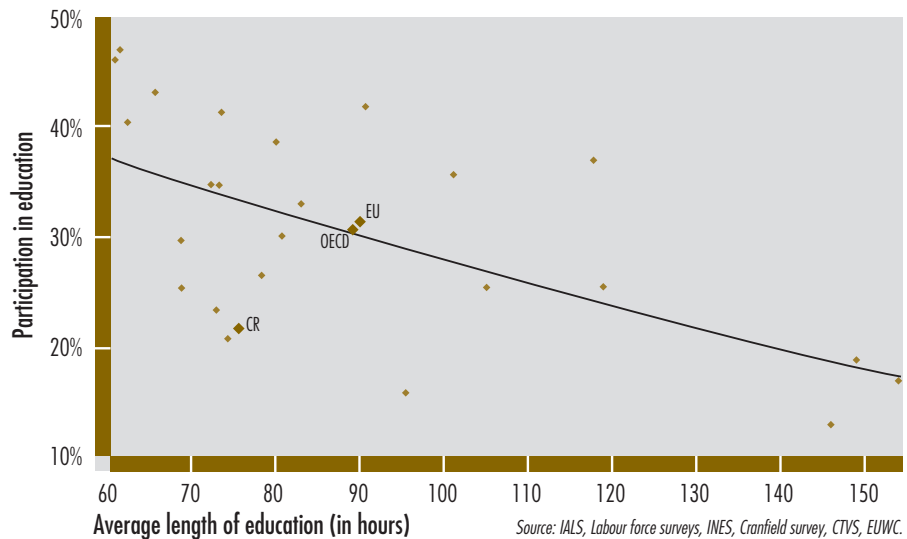
Most frequently, the main initiators of continuing education in the Czech Republic are employers. However, the initiative may come from staff themselves or from educational institutions. In larger

companies, training issues are sometimes discussed within collective bargaining between the management and trade unions. The Czech system of the continuing training of staff is devoid of the involvement of **professional associations** and trade unions although this is very common in Western European countries, where these associations usually have their own training establishments and initiate or even organise continuing education. Trade unions play a similar role. Many professional associations have been set up as well as various unions of employers or entrepreneurs.

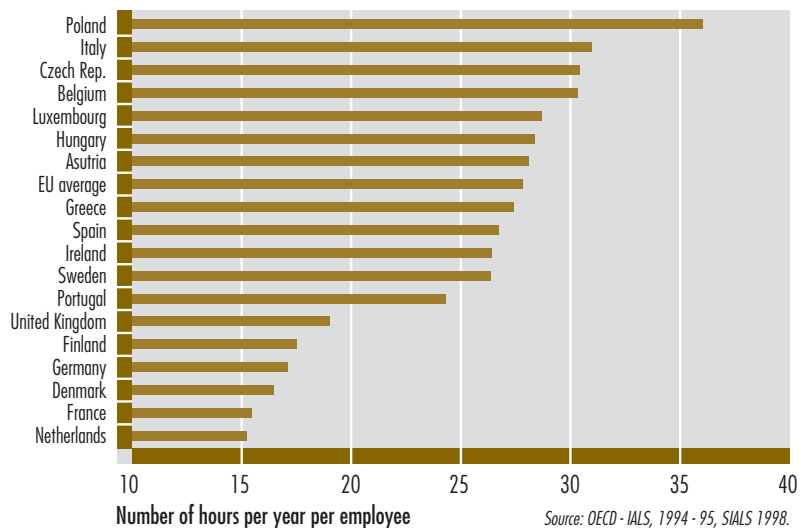
However, their influence as well as the influence of trade unions on staff development has so far only been slight.

Staff training and development also includes **obligatory professional education**. This is a type of continuing education which is necessary for the performance of certain work activities. One example may be a course preparing for examinations qualifying the employee to carry out work on electrical equipment, with pressurised tanks or on a crane. Other examples include systems for the continuing education of physicians or accoun-

**Graph 1.16**  
Participation in Continuing Education in OECD Countries (mid 1990s)



**Graph 1.17**  
Scope of Continuing Education in Hours per Year in EU Countries, the CR, Hungary and Poland (mid 1990s)



tants, etc. This type of training, as a rule, is precisely defined in ministerial decrees or in professional associations' regulations. There are no significant problems in this area in the Czech Republic. Comprehensive and internationally-comparable statistics about in-service training are hard to find. When analysing this type of training, it is therefore necessary to focus on the results of various surveys and studies carried out by different organisations and institutions. The most credible exercises in this field have been those carried out by major international organisations. In 1999, the OECD worked on the procedure of comparing several major international surveys which were conducted between 1994 and 1998 (*Employer Provision, 1999*). Thanks to close co-operation with the OECD, the database has been expanded to include existing, comparable data involving the Czech Republic. The source of the data is primarily answers from companies.

- There are, relatively, great differences between developed countries in terms of **participation in continuing education** (ranging from 13% in Hungary in the last year being monitored to 47% in Finland as an average in the period being monitored) as well as in terms of the **length of this education**.
- Countries with a high rate of participation (Finland, Sweden, the United Kingdom, Denmark) tend to have shorter continuing education courses, while the participation rate is lower in countries with longer courses (Greece, Portugal, Hungary). The differences among individual countries in the scope of continuing education are therefore somewhat reduced.
- The Czech Republic is in the group of countries (such as Italy, Belgium or Luxembourg) with a **low rate of participation in continuing education and with short courses**.

What is important is not only the comparison of the scope of in-service training within a given period of time (in our case between 1994 and 1998), but also its development. If there is information about the doubling of the rate of participation from the early 1970s to mid 1990s in some countries, there have been lines of statistics available covering the last decade (*European Labour Force Surveys, 1998*). They show that development in individual EU countries has not been entirely

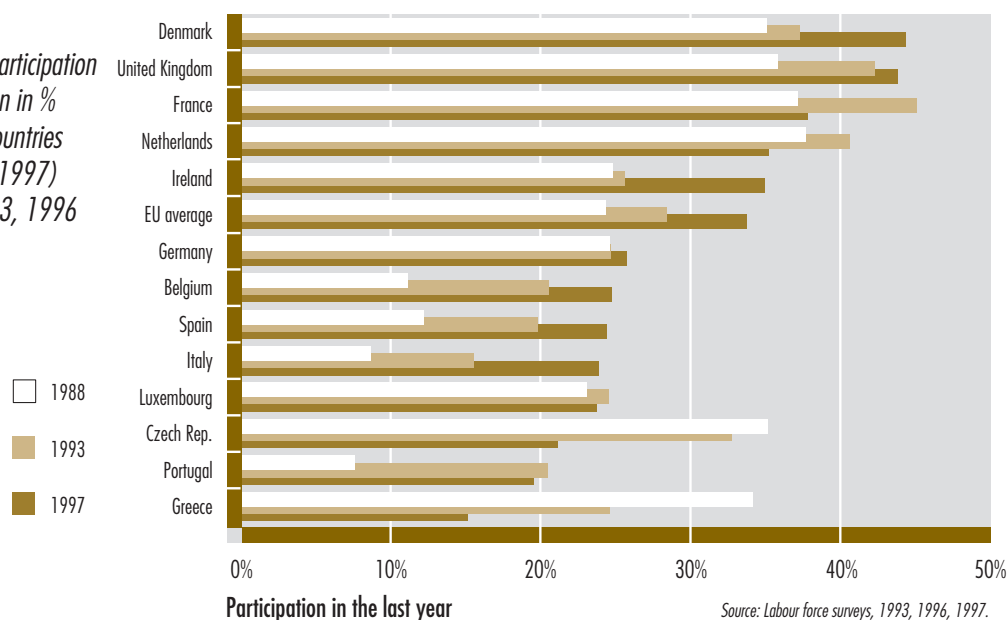
balanced. Most countries have shown growth. However, there are some countries (e.g. Greece, where there may be statistical shortcomings, but also the Netherlands) where the rate of participation in in-service training has dropped in the last decade. However, there is an apparent trend for growth, particularly in countries where in-service training was not very well developed in the 1990s. The development of **in-service training in Czech companies** has understandably been influenced by economic reform. Profound changes concerning general economic conditions, ownership, restructuring and changes in production programmes have forced companies to tackle basic economic issues of survival. Training was therefore not a priority. Moreover, investment in people has not been given the attention it deserves. On the other hand, the rapid changes in the employment structure, particularly in the first half of 1990s, resulted in a short-lived increase in interest in continuing education.

The integration of the results of two repeated surveys (*Cranfield, 1993 and 1996 and AMD, 1996 and 1998*) actually point to an **extraordinary expansion** of continuing education in the first half of 1990s. The rate of participation reached that of most developed countries. However, the overall scope of in-service training was lower as it involved shorter courses. This expansion was based primarily on people's own will and motivation and was mostly accompanied by support on the part of employers. Since the mid 1990s, however, there has been a **precipitous decline in continuing education**. In 1993, almost one fourth of Czech companies considered education to be **one of the main priorities of the human resources function**. This notion places Czech companies among those in a majority of countries monitored. However, a survey conducted in 1996 pointed to a decline in the **importance of education** in companies **within the human resources function**. Education was marked as a priority by a mere 12% of companies, while the recruitment of new staff was a priority for 40% of companies. There may be several causes of a relative fall in interest in education on the part of Czech companies.

Only 58% of Czech companies had a training policy drawn up in 1996 according to AMD data (in a survey conducted by the *National Training Fund*



**Graph 1.18**  
*The Development of Participation in Continuing Education in % of Employees in EU Countries (in 1988, 1993 and 1997) and in the CR (in 1993, 1996 and 1998)*



in 1998 this was only 21%). Although a trifle more than in other post-communist countries, it was mostly much less than in developed European countries. In these countries, two-thirds to four-fifths of companies had their training policy formulated in writing. Some 15% of Czech companies had no training policy whatsoever. While in 1993, 49% of Czech companies carried out **systematic analyses of training needs**, these methods were embraced by 56% of companies in 1996. Still, this was the lowest figure of all countries monitored- apart from Bulgaria and Hungary. In developed countries, more than three-quarters of companies analyse the training needs of their staff. In France and in Sweden, this is almost 90% of companies. As regards the **forms of educational provision**, developed countries in Europe prefer internal training to training outside the company. Preference is also given to training while performing a job as compared to training courses and the use of line managers as trainers. Czech companies favour external courses outside the workplace or courses given by external trainers. This means that there is certain traditionalism in the forms of in-service training and a tendency to stress formal educational provision. As far as the **content of in-service training** is concerned, foreign countries place considerable emphasis on training in personal skills, i.e. in the area of human resources

management and control. Other topics include production processes, data processing, management and organisation, health and safety, environmental protection and marketing. The situation is similar in the Czech Republic where in-service training, apart from personal skills, focuses on sales and marketing, quality management, computer skills, the introduction of new technologies, strategy creation, customer services, management of change and health and safety.

Another very important indicator is the level of funding companies earmarked for in-service training. **Expenditure on training** is normally ascertained as a ratio to the overall labour costs or to the annual volume of funds for wages. Companies' average expenditure on in-service training in EU countries in the mid 1990s was 1.6% of the overall labour costs. It ranged from 1% (Portugal) to 2.7% (France). However, the level differed both in individual sectors, and in various groups of companies in terms of size. The proportion of expenditure on education in terms of industrial sector (as an average in the then 12 EU member states) ranged from 0.5% in the textile and clothing industry to 2.8% in the energy, banking and insurance industries. When comparing this indicator in relation to the company size, it became apparent that that **the larger a company, the higher proportion of expenditure**

**on education** (this was also the case with the rate of participation in continuing education). While this proportion was 0.8% in companies with the number of staff between 10 and 49, it was 2.3% in companies with a thousand and more staff.

The Czech Republic ranked last on the list since, of all countries being monitored, Czech companies, as well as companies in other post-communist countries, spend **the least amount** on education. The comparison of the figures over time shows that the funds being spent on education in 1996 were relatively lower than those in 1993. The reason is that in three-quarters of companies (compared to two-thirds in the past), the proportion of funds for wages being spent on in-service training was under 2%. Since 1994, this trend has been confirmed by data obtained in regular surveys of the Czech Statistical Office (ČSÚ) concerning the cost of labour in our companies (Total Cost of Labour, 1995-1998). The costs of in-service training (including the costs of apprentice training, inception and the costs of staff training for a profession) dropped from 0.81% of total labour costs in 1994 to 0.68%

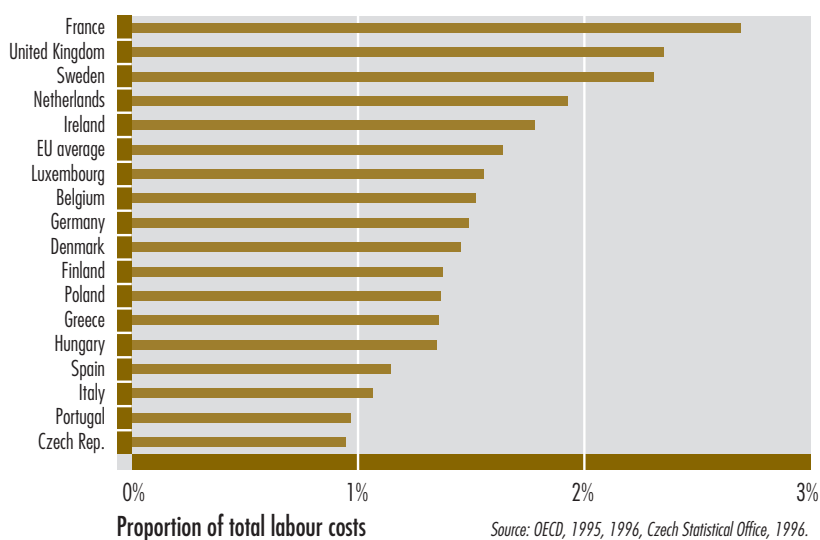
#### An Example of In-Service Training in a Czech Company - ŽDB Inc. Bohumín

ŽDB Inc. Bohumín, an engineering and metallurgy company which produces wheel sets for railways, heating technology, wires, rolled profiles and steel had 6,251 staff in the middle of 1998. Since then, the number has slightly declined. The company has

drawn up a strategy for the upgrading of staff qualifications which fits its overall strategy. The most frequent subjects for training are human resources management, sales and marketing, foreign languages, computer technology, financial management, taxes and accounting, quality management, logistics, the introduction of new technologies and industrial relations. Some 30% of the staff have a basic education, 50% have an apprenticeship certificate, 22% have a full secondary education and 8% a higher education. Between 1996 - 1997, the proportion of staff taking part in training ran at around 21 - 40%. In 1998 this increased to 41 - 60% (depending on the staff category). In 1997, the staff spent a total of 9,018 days in various training courses (an average of 1.4 days per member of staff). About one third of this time was dedicated to training management at all levels, 40% to technicians and clerical staff and some 27% to training workmen. Expenditure on training reached roughly 2% of labour costs in 1998.

This means that, taking account a relatively high rate of inflation, the costs of in-service training only rose from 612 CZK to 984 CZK per employee. These costs are the highest in the banking and insurance sectors (an average of 3,924 CZK per employee in 1997), property, corporate services and research (3,216 CZK) and, on the whole, in foreign companies (3,288 CZK). Costs were lowest in the agriculture, forestry and fisheries sectors (a mere 204 CZK per employee). In a range of other sectors, costs were very low. There is no doubt that in-service training and the development of human resources have not, as yet, become an integral part of the operations of a number of important Czech companies.

**Graph 1.19**  
*Corporate Expenditure on Continuing Education in EU Countries, the CR, Hungary and Poland (mid 1990s)*



### Continuing Education of Managers and Entrepreneurs - The National Training Fund's Activities

Since its establishment, the National Training Fund has focused on the **systematic upgrading of the level of education and the development of managers and entrepreneurs** - as they are the decisive force in economic and social development - and on support of the development of human resources in various organisations. The main activities have concentrated, on the supply side, on setting up a network of co-operating educational institutions, monitoring and assessment of and financial support for selected educational programmes. Furthermore, emphasis has been placed on the formulation of new programmes and teaching materials and on the transfer of quality foreign know-how. On the demand side, the Fund's activities have focused on improving managers and entrepreneurs' access to education, the creation of know-how in the area of educational consultancy in organisations' HRD function and, finally, on conducting studies and analyses of in-service needs in selected sectors. These activities are based on the best practical approaches applied in EU countries and verified in Czech conditions. A brief overview of the outputs to date may be summarised as follows:

#### Supply

- of supply a network of 31 co-operating institutions
- evaluation of and support for 130 educational programmes
- support for the creation of 117 sets of teaching materials, including case studies
- the development of new, comprehensive, modular programmes for:
  - general management
  - human resources management
  - marketing
- studies and analyses of:
  - quality evaluation
  - evaluation

#### Demand

- financial support for 15,000 managers and entrepreneurs - graduates from educational programmes
- a pilot project called *Development of Managers and Human Resources in Companies* - 11 large industrial companies
- a pilot project called *Development of Managers and Human Resources in Hospitals* - 4 hospitals (2 large faculty hospitals, 2 medium-sized and 1 small)
- the adoption of innovative principles by companies
- the adoption of marketing principles by companies
- co-operation between small and large companies
- sector studies for industry, construction, banking, health-care and education

In order to maintain continuity and an efficient use of achievement to date, support for training of managers and entrepreneurs will primarily be directed towards the assurance and enhancement of the quality of the educational programmes concerned. This will primarily rest on the systematic training and **up-grading of the qualifications of lecturers and management consultants** and in securing continuous **innovation and high quality in the implementation of modular programmes** for general management and management of human resources. These programmes have been developed by the National Training Fund in co-operation with renowned foreign institutions. One new dimension of the activities is the specific focus on another major target group - the **owners and administrators of companies**.

#### 1.3.2.2. Re-Training

The major, but not exclusive target group for re-training programmes is **the unemployed**. Indeed, the need for this type of training as a part of continuing education has arisen, to a great extent, as a result of the growing unemployment which has been a serious problem for countries in Western Europe since the late 1970s.

Re-training, as it is conceived today, is the youngest section of education in the Czech Republic. As early as 1991, the relevant legal framework was prepared by the Ministry of Labour and Social

Affairs, and was later amended. **The objective** of re-training is to change the existing qualifications of the person concerned by means of the acquisition of new knowledge and skills and to enable him/her to find suitable and accessible employment. Most participants in re-training programmes are registered in Czech labour offices as job-seekers. A smaller group of participants consists of people who are employed, but whom their employer intends to transfer to a different job or lay off. There are also people who undergo re-training on their own initiative (this final type of re-training has, so far, been hindered by formal regulations).

**Specific re-training** is usually focused on the acquisition of abilities to perform a specific, usually promised, job. **Non-specific re-training** aims to provide more general capabilities in order to improve one's position in the labour market, for example computer skills.

Re-training is part of **active employment policy**. It is arranged by **labour offices**, which agree with the relevant job-seeker on his/her placement in a re-training course. Programmes are provided - as agreed with labour offices or employers - by vocational schools and other educational institutions accredited by the Ministry of Education, Youth and Sports (there were some 1,600 in 1998). Re-training takes place in the form of short courses - their lengths vary from several weeks to one year. The content differs. The most frequently-attended courses for non-manual professions were those focusing on computer skills and accounting, while for manual workers it was a course for construction machinery operators.

#### Specific Re-Training Possibilities in the Hradec Králové district

The population of the district of Hradec Králové is about 182,000, which is above-average in comparison to other districts. The unemployment rate in the district was 7.1% at the end of February 1999 - a little less than 1% lower than the national average. The ratio of job-seekers to vacancies was, at that time, roughly 10:1. The labour office in Hradec Králové also, apart from other activities, provides re-training courses. In this task its staff co-operate with vocational schools and other educational institutions in the district. The most frequent re-training subject was computer skills. While the monthly average number of job-seekers in the district in 1992-97 was between 1,571 and 2,782, the number of people attending re-training courses in the successive years was as follows: 244, 50, 123, 190, 178, 82. In 1999, the Hradec Králové labour office plans to place 180 people in re-training courses. Expenditure on re-training in the period under review ran between 417 thousand to 1,120 thousand CZK per year with a more-or-less downward trend. In the last four years, expenditure on re-training per participant fluctuated between 4,100 and 6,300 thousand CZK and, on average, has been stagnant.

The most frequent attenders of re-training courses are persons with low or no qualifications and school graduates who, jointly, make up an overwhelming part of the unemployed.

Data concerning re-training provided by the Ministry of Labour and Social Affairs and the Ministry of Education, Youth and Sports provides the basis for a number of important conclusions. Although there is no doubt about significant efforts on the part of labour offices staff to arrange re-training for as many job-seekers as possible, on the other hand the numbers of participants in re-training courses has been stagnant. This is despite the fact that the number of registered job-seekers more than doubled in the period under review. In the first half of the 1990s, the proportion of participants in re-training in the overall number of registered job-seekers was at around 5 - 10% and began to decline after 1995. The increase in the number of re-training attenders in 1998 only reflected the growing unemployment curve, so that, even in this year, their proportion in the total number of the unemployed was less than 5%.

Total **expenditure on re-training** in the Czech Republic was also stagnant and only increased in 1998. Although expenditure on re-training per person increased slightly as expressed in current prices, but in reality (taking account of inflation) it has gone down.

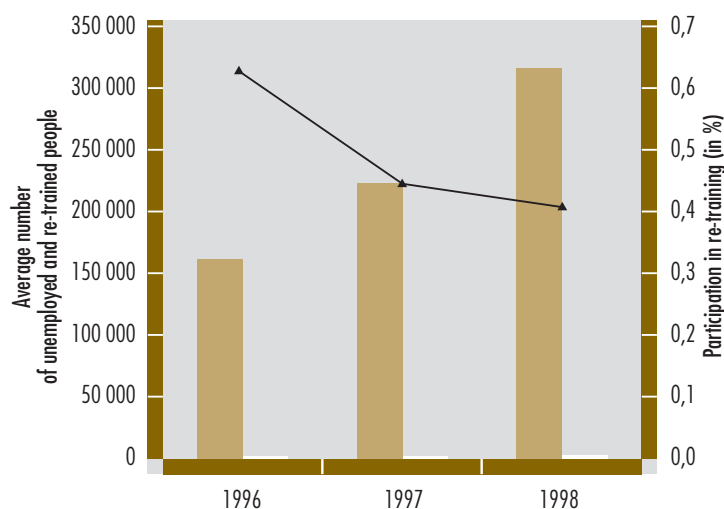
Although the average unemployment rate in EU countries is only a little higher than that in the Czech Republic, the rate of participation of the unemployed in re-training and other educational programmes is, on average, about ten times higher. These countries place considerable emphasis on the continuing education and training of the unemployed and on their **employability** (ability to be permanently usable in the labour market). Among other contributory factors in these countries there is the fact that the payment of social benefits - particularly to young people - is linked to the participation of the unemployed in education or training. The countries realise that the employability of each individual is not only important for his/her own life, but also it contributes substantially to the necessary flexibility and adaptability of the labour force. Moreover, the return of each unemployed person to work means public budget savings. In EU countries, expenditure on active labour market policies, including re-training, amounted to

more than 1% of GDP as early as the beginning of the 1990s, while in the Czech Republic it was still only 0.03% of GDP in 1997 - i.e. **33 times less**. Certain hopes have been raised as expenditure on labour market policies in the Czech Republic has been increasing since 1998, and also because the Labour Ministry's *National Employment Plan* envisages the enlargement of the scope and enhancement

of the efficiency of labour market measures of which re-training is undoubtedly a part. As concerns the assessment of the effects of re-training on the employability of participants in the Czech Republic, the data indicates that approximately four fifths of them do find employment. This is one of the reasons why this opportunity should be given to more prospective participants.

**Graph 1.20**  
The Development of Unemployed and Re-Trained People (average annual figures), Participation in Re-Training in % (1996 - 1998)

	1996	1997	1998
■ Average number of unemployed per year	162 044,5	222 941,8	316 592,3
□ Average Number of re-trained per year	1 011,1	993,1	1 290,7
▲ Participation of unemployed in re-training	0,62	0,44	0,40



Source: Ministry of Labour and Social Affairs

#### Expenditure on Re-Training in Selected Countries as a Proportion of GDP in 1998

	Total expenditure on employment policy	Out of this: Expenditure on active EP	Out of this: Expenditure on re-training and training - Total	Out of this: Expenditure on re-training of the unemployed and persons at risk
Denmark	1,89	1,89	1,07	0,73
Netherlands	1,76	1,76	0,22	0,22
Finland	1,23	1,23	0,41	0,39
Sweden	2,01	2,01	0,48	0,47
Germany	1,27	1,27	0,34	0,34
Spain	0,72	0,72	0,21	0,1
Austria	0,44	0,44	0,15	0,13
Norway	0,91	0,91	0,1	0,1
CR	0,13	0,13	0,01	0,01

Source: OECD Employment Outlook, 1999.

#### 1.3.2.3. Part-time Studies in Schools

**Part-time studies** have a relatively long tradition in the Czech Republic. This form of education developed in the early 1950s in particular, as the post-war reconstruction and restructuring of the economy required structural change in the of labour force. Another reason was the fact that many people

could not take ordinary full-time courses for political reasons or chose not to study for personal reasons. Moreover, the number of study places for full-time students was small. Part-time curricula are analogous to those for full-time courses (with a different schedule). This is why graduates from part-time studies receive the same certificates as those

awarded to full-time students. The development of part-time studies in the Czech Republic culminated in the 1980s - at that time, the proportion of part-

time students in the total number of students at secondary schools was 13 - 15%, with as many as 20-24% at higher education institutions.

#### Numbers of Part Time Students in Individual Educational Programmes at Secondary Schools

Academic year	Number of students - total	Courses providing full secondary education	Courses providing secondary education (without "maturita")	Follow-up courses	Post-secondary technical courses
1991/92	30 779	12 225	2 612	15 823	119
1992/93	26 841	8 346	2 145	15 930	420
1993/94	25 958	6 269	1 450	17 549	690
1994/95	31 965	6 173	1 894	23 292	606
1995/96	37 059	7 032	1 903	27 807	317
1996/97	41 850	9 705	1 660	30 395	90
1997/98	44 912	10 389	1 318	33 122	83
1998/99	38 154	10 098	1 134	26 802	120

Source: Institute for Information on Education.

The development in the numbers of part-time students at **secondary schools** indicates that while numbers decreased in the first half of the 1990s, there has been a trend to growth since 1995. The proportion of part-time students in the total number of students at secondary schools runs at about 5 to 10% in the period under review.

Major changes, however, have occurred in the **structure of students**. The numbers of students in traditional part-time courses, i.e. those providing a secondary and full secondary education, have stagnated or declined. On the other hand, the numbers of students in follow-up courses have rapidly increased in the past few years. The cause of the former trend may be seen in improved access to full-time studies at secondary schools - primarily courses providing a full secondary education (with a "maturita" examination), since access to courses providing a secondary education (i.e. without "maturita") has been always good. What is remarkable is the development of the numbers of students in **follow-up courses**, which represent an educational opportunity for apprenticeship certificate holders who want to achieve the "maturita" certificate. The numbers of these students have grown in the course of the 1990s and represented the largest group of part-time students at secondary schools in the second half of this period. A down-turn occurred in the 1998/99 acade-

mic year as a result of the introduction of financial instruments with the purpose of limiting this form of study. One reason was anxiety at the low quality of these courses in some schools, but this across-the-board measure nonetheless reduced the forms of continuing education in secondary schools.

At **post-secondary and tertiary levels of education**, there are also differences in the development of part-time courses between the two halves of the 1990s: first, the total number of students decreased then increased. The **structure of students** was affected by the abolition of the state funding of "post-maturita" courses in connection with the enactment and fast development of post-secondary technical education.

Within tertiary education, the highest numbers of part-time students study at **higher education institutions**. The table gives the numbers of students without distinguishing between Bachelor's and Master's programmes. Enrolment figures indicate the numbers of students and the ratio between the two types of programme. In the 1998/99 academic year, 2,849 part-time students were enrolled in Bachelor's courses (i.e. 20.9% of the total) and 2,747 part-time students enrolled in Master's courses (i.e. 8.8% of the total). This suggests the greater suitability of short, sometimes even more practical, Bachelor's programmes for the needs of continuing education.

## Numbers of Part-time Students in Post-Secondary and Tertiary Education

Academic year	Number of students - total	"Post-maturita" courses	Post-secondary technical schools	HE institutions
1989/90	20 850	–	–	20 850
1990/91	23 202	4 509	–	18 693
1991/92	18 781	4 285	–	14 496
1992/93	16 361	5 074	120	11 167
1993/94	16 784	5 540	277	10 967
1994/95	16 441	5 448	299	10 694
1995/96	18 694	5 061	207	13 426
1996/97	20 199	2 723	1 637	15 839
1997/98	20 261	899	2 097	17 265
1998/99	21 556	–	2 739	18 817

Source: Institute for Information on Education.

Part-time education in state schools is free. Schools receive a contribution from the state to cover costs. The amount is determined by so-called norms (an amount per student) set by the Ministry of Education, Youth and Sports. The amount is about one third of that for full-time courses. Employers, on condition that they agree to their employee's studies, undertake to grant him/her appropriate amounts of paid leave. Employees enrol in part-time courses both on their own initiative and at the instigation of their employer. At present, there are no serious obstacles to part-time studies on the part of educational institutions. However, the above-mentioned decline in the early 1990s was caused by insufficient confidence in the institutions and, sometimes, even reserve on the part of the state as concerned the quality of this education.

As has been the case in many, particularly Western countries, new opportunities in the area of part-time studies will undoubtedly be produced by the development of **distance education**.

In many countries, part-time studies enable a considerable number of the adult population to achieve a certain level of education (for example in the United Kingdom). Study opportunities for adults are also opening up within ordinary full-time courses, since their rigid structure is gradually being abandoned, the number of obligatory clas-

ses is being reduced and educational paths are increasingly being tailor-made.

#### 1.3.2.4. Education as "Interest"

In order to provide a full picture of continuing education, another type of studies must be mentioned which has no immediate link to job performance. This is called interest education. It is provided in the form of various courses by various institutions, and the student, as a rule, covers at least part of the costs. The distinction between interest and professional education is sometimes blurred (as it is with some courses studied part-time and some language courses, but also the applied arts etc.). A well-known provider of this type of education is the Third Age University which ensures elderly people's participation in higher education.

Interest education has profound cultural and moral significance. There is no doubt that it enriches leisure activities and may have a positive influence on the participants' employment opportunities.

#### 1.3.3. Adult Education in the Czech Republic: Problem or Positive Future Development?

The scope of in-service training in the Czech Republic lags far behind the standards of Western Europe. This is not only influenced by the overall

economic environment in the CR, which is less favourable for the development of education in general, but also by several barriers which stand in the way of the further development of continuing education.

The first barrier is the **attitude of firms' owners and managers**. Where they focus on profit maximisation, the funding or other methods of stimulating their staff's education does not seem necessary to them. Moreover, traditional positions sometimes still prevail - investment in technology is put ahead of investment in people. The second barrier lies in the **absence of a comprehensive information system** covering the supply of continuing education which could and should be used by employers as well as those interested in education. Similarly, there is no regular monitoring and statistical reviewing of in-service training.

The third barrier is the state of the **willingness of the population to invest** in continuing education. Between 1991 and 1996, when this indicator was followed, there was almost no change concerning the willingness of the adult population to invest in continuing education in order to improve careers (in both years, it was some 65%). There was a slight improvement as regards willingness to upgrade language skills (from 50.6 to 51.3%). The same period is marked by a rapid increase in requirements for individuals' new knowledge and skills caused, among other things, by a rapid development in the area of information technologies, the intensification of foreign contacts, new management trends etc.

There are severe **financial obstacles** in the way of the development of in-service training. Throughout the 1990s, no financial incentives were introduced, for employers in particular, which would have stimulated the development of in-service training in their companies. Various incentives of this kind are known from abroad (tax breaks, transfers to training funds). Experience with their implementation exists which indicates the positive influence these stimuli can exercise on continuing education which, again, causes companies to invest additional resources in this area.

The non-existence of financial incentives for in-service training development is linked to the overall national framework for this type of education. Until 1998, there was no worthwhile effort on the

part of the government to **influence, regulate, co-ordinate and, particularly, to support the development of continuing education**.

### Continuing Education in the Czech Republic in Terms of International Projects Evaluation

In 1994, a survey was conducted in the CR under the *Phare* programme entitled: *Labour Market Restructuring* which dealt with adult education programmes and policies. The results of the survey made it possible to ascertain the state of continuing education (e.g. a set of continuing education providers and their educational programmes). On the other hand, however, the conclusion was drawn that one of the weaknesses of the Czech adult education system was the non-existence of state policy in this area, hectic and uncontrolled developments, shortcomings in the quality of continuing education and the fact that it was separated from initial and non-integrated education.

OECD experts, who reviewed the Czech education system in 1995, concluded in their report that "the Czech Republic lacks an integrated system of continuing adult education which would correspond to the needs of restructuring of the industry. In the examiners' view, a country involved in so ambitious and far-reaching a process of economic and social transformation should devote more attention to the re-training and continuing education of adult employees". The shortcomings in continuing education mentioned above have considerable economic (as well as other) implications. The limited scope and low frequency of in-service training are among the factors that hinder necessary innovations, force staff to stick to increasingly obsolete processes, restrict possibilities for their development and, in this way, reduces the competitiveness of companies.

These weaknesses were confirmed by a Czech report for the OECD project called *Alternative Approaches to Funding of Lifelong Learning* (1998).

Existing legislation on education focuses on initial education and, in the area of continuing education, only on part-time studies at schools (within the jurisdiction of the Ministry of Education, Youth and Sports). Legal regulations also exist concerning re-training (the responsibility of the Ministry of Labour and Social Affairs). **No appropriate legal framework**, so far, has been established for in-ser-



vice training, the largest component of the system of continuing education. The roles of the state and social partners have not been defined either. However, growing unemployment and hopes of better jobs as well as the economic progress that companies might derive from the quality education of staff may, in the near future, rekindle in-

terest in continuing education. It may also be expected that some of the barriers on the part of the government will gradually be removed (particularly problems concerning legislation, certification, information background and, in some cases, funding). Certain official statements have already indicated this direction.

## 1.4 Recommendations Concerning the Development of Lifelong Learning

*One important issue of lifelong learning is **access to education**, in the sense that the most severe problem lies in the fact that access to higher levels of education is **determined by socio-economic factors**. With growing demands on the education various hidden problems may emerge in the future regarding the system's "**permeability**". It is therefore necessary to work on the content and organisation of education in such a way as to eliminate severe differences between educational streams. Moreover, possibilities for transfers between streams must be ensured through the common elements of educational programmes and through a modular structure of studies. The arrangement of vocational education in a progressive structure of levels must continue so that graduates may get a certificate testifying to the completion of a part or a cycle of study. Although some socio-economic determinants in access to higher education institutions may not be entirely eliminated, the institutions' growing openness towards new applicants will undoubtedly contribute to the alleviation of social inequalities. Special care must be taken of the **Romany population, the disabled and other minorities** as regards their access to as high a level of education as possible.*

In the future, it will perhaps be necessary to promote the development of **targeted programmes** (also at schools) for persons with an incomplete basic or secondary education, so that their employment prospects do not deteriorate.

As concerns the **content of education and competencies required in order to live and work in a society**, only time will show the results of developments to date. Educational achievement surveys point to certain weaknesses in this area, which are rooted in the past. It will be necessary to monitor the effects of various measures, such as the introduction of the national part of the "*maturita*" examinations, framework educational programmes, the development of evaluation methods and the involvement of interested partners in decision-making processes.

Bearing European integration in mind, a qualifications system must be established both for initial and continuing education which would be comprehensible and applicable to **European labour markets**.

The emergent **society of information** presents educational institutions with a new challenge and the need to establish a new position. This is not just a matter of the adjustment of curricula to needs for new competencies, but also of ensuring

the most extensive possible use of information technologies and educational aids. These should also be made available to students outside teaching hours as well as to the general public. HE institutions, in particular, may become an important mediator of society's information policy.

As direct a **link** as possible must be established **between the operations of educational institutions and employment**. This may be accomplished by various means: placements of students and teachers in industry, the use of external experts in teaching and co-operation with them on the

framing of educational programmes or in the management of educational institutions etc. Alternative educational activities as well as the acquisition of competencies outside the education system must be given necessary credit.

The **tertiary sector of education** is very important for the development of a society. This sector will provide for the standards of qualifications and for flexibility, which will be increasingly important in labour markets. Appropriate space for sufficient quantitative development of this sector must be established and its links to practical life must be promoted - through both educational and research functions.

As far as **the education system's administration** is concerned, changes may be expected in connection with the devolution of some powers to new regions. The new conceptual and strategic functions of the centre will have to be developed further, as well as its role in the evaluation of schools, in the collection and provision of information and in the promotion of guidance services provision. At the same time, a participatory style of management will have to be strengthened at all levels of education, with the involvement of all partners. Furthermore, the development of decentralised evaluation processes must be promoted.

Participatory management will open up schools to other activities, including public activities, and to continuing education. As regards **continuing education**, various tasks lie ahead: this type of education must be given a clear conceptual framework and the relevant legislation must be enacted, it must be linked to education provided by schools, employers' interest in this education must be strengthened by means of financial incentives, the funding of re-training must be enhanced and the relevant information systems must be developed. One important pre-condition for the development of human resources is the enhancement of quality and motivation of educators and managers of educational institutions. It is necessary to complete the building of a system which links teachers' qualifications with their remuneration. Attention must be devoted to training educators in managerial skills. The role of teacher-training institutions is to meet new needs arising within current society. This task can be addressed, among other things,

by innovative programmes. One barrier to the development of human resources might possibly be seen in inappropriate funding. The government's role is to ensure sufficient funding of education from the national budget and to secure incentives for its funding from other sources (particularly from the regions, municipalities, companies, sponsors, foundations and economic activities).

**Conceptual activities** concerning the education system which have recently been under way may represent a positive development both towards the educational policy processes common in developed countries and towards the initiation of an efficient dialogue with the public. It will still be necessary **to specify key issues** associated with the fulfilment of educational policy objectives as well as **steps that must be taken to implement objectives**. Pre-conditions for the implementation of these objectives must be contained in the **new education bill which is being drawn up as well as in legislation concerning continuing education**.



## **Chapter II**



## II. HUMAN RESOURCES IN THE LABOUR MARKET

### II.1 Developed Countries – The Objective is the Employability of the Population

*Employability is one of the most important buzzwords used in the current policies of international organisations which are concerned with the relationship between the economy and the labour market. Unemployment is a global problem and its rates are high, even in developed countries. EU countries are no exception to this. It is in these developed Western economies that the pressure created by the gradual **loss of jobs requiring lower qualification levels** is strongest. Remaining jobs of this kind are quickly filled by migrating workers from regions with weaker economies who are willing to put up with lower salaries and lower social status. Employment opportunities, mainly for those with lower qualifications, have also been disappearing as a consequence of the development of modern technologies which replace human labour, and due to the transfer of labour-intensive production to countries with a cheaper labour force. The complexity and interrelation of work tasks is increasing more than ever. Employers welcome employees who are able to adjust, rather than “narrow” specialists.*

Even in continually developing, stabilised economies, significant changes are occurring both in the nature of gradual developments and in the nature of unexpected situations which may significantly alter the short-term demands on the professional capabilities of the population. One example of gradual changes can be seen in the developments in agriculture, where pressure for the upgrading of qualifications is only slowly building up. One example of the unexpected situations is the development of a transistor and the ensuing development of integrated circuits, the development of computer technology, digital control or the replacement of a gramophone record by a tape, then a CD. The **International Labour Organisation** (ILO) states that 80% of the technologies that are used at present will change in the course of the next decade. These changes are occurring in all industries and changes in individual sectors of the economy have considerable effects on its other sectors. They are also gradually becoming interconnected at a global level.

The ILO acknowledges the relationship between the training of human resources and the labour

market, primarily in terms of employability and its importance for the economy. The organisation believes that a productive and freely-chosen job is the most efficient instrument to ensure balanced economic growth both, at national and global levels. With chronic unemployment growing, there are fears that the goal of full employment has disappeared irreversibly and that rapid globalisation and technological progress are hindering the creation of new jobs. Better quality of labour and higher rates of

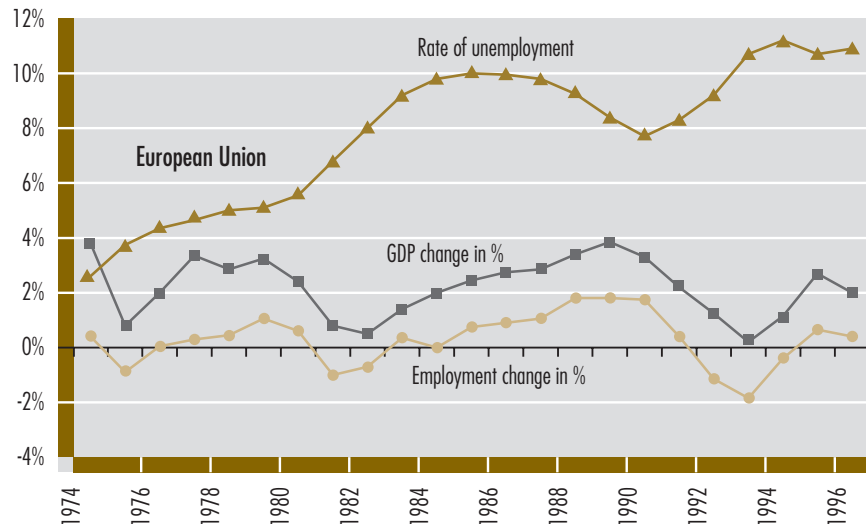
employment may be achieved in such circumstances only by a **combination of macro-economic measures, and labour market and remuneration policies**. In this process, a crucial role is played by the appropriate **development of human resources** taking place on a **permanent basis, throughout an individual's life-time**.

According to the ILO, a successful transfer from school to employment, becoming a critical point in many economies, is dependent on the following: (1) solid, quality educational background; (2) the sufficient development of analytical and cognitive competencies and capacities of appropriate behaviour; (3) the ability to share ideas and co-operate and (4) a close relationship between institutions providing vocational training and companies. However, the successful functioning of the education system, which must be based on co-operation with social partners, is not the only condition for employability. Successful programmes drawn up to tackle youth unemployment and long-term unemployment must combine training for an occupation with job-searching techniques, professional guidance, complementary training and sub-

sidised employment. Lifelong training and learning is necessary to prevent elderly people from losing a job, as these people face the threat of redundancy in companies and the threat of changes in labour organisation. These programmes must be aimed to address the employers' needs rather than the job seekers' demands (*World Employment Report, 1998*). It is, of course, arguable whether or not appropriate education and labour market programmes may actually reduce overall unemployment or whether they merely provide better opportunities for

those who want and are able to make use of them. It is therefore an integral part of international as well as national programmes to **enhance motivation to achieve education and qualifications and to remove barriers which may cause the exclusion of certain groups of the population from education and, as a result of this, from employment.** The roots of this exclusion may be in social or ethnic origin, nationality, gender, or, in the case of mothers with small children, in family situations, health, disability etc.

**Graph 2.1**  
*Cyclical Nature of Unemployment in Relation to Development of GDP in the EU (1974 - 1996)*



Source: *Employment in Europe, 1997*.

**The Organisation for Economic Co-operation and Development** carried out a survey called *Jobs Study* (1994), which included a profound analysis of unemployment in most of its member countries. A *Jobs Strategy* was formulated and its implementation in member countries was assessed in 1998. The results indicated that a combination of employment policies and macro-economic development, measured in terms of the growth of GDP, the reduction of inflation and of internal as well as foreign indebtedness, have an effect in combating the loss of jobs caused by technological developments. As with economic cycles, the employment trends are also cyclical.

The average growth of GDP in OECD member countries was 3.2% in 1997 and was accompanied by a drop in the rate of unemployment which reached the average of 7.2% (in 1994 - when the Strategy for Jobs Creation was launched, average

GDP growth in OECD countries was 2.9% and the rate of unemployment was 7.9%). In EU countries, the development in the same period was not so favourable: GDP growth dropped from 3.0% in 1994 to 1.8% in 1996. It was only in 1997 that there was a more substantial increase in GDP (2.7%). The rate of unemployment in the same period dropped only negligibly: from 11.5% to 11.2% and remained high above the OECD average. The rate of employment increased in both these international groupings.

The Organisation for Economic Co-operation and Development has found *the OECD Jobs Strategy* successful and has recommended that its implementation should be continued.

Since the formulation of the strategy, extensive activities have developed which build further on some of the suggested measures. Emphasis is placed on good training of the labour force and on

support of all measures which make access to this training easier, which facilitate the transfer from school to employment and which provide information about the labour market. The OECD also monitors the effects of various policies, such as those dealing with flexibility of work loads or subsidised jobs and on the more permanent employability of young people in particular.

The high rate of unemployment in **European Union** countries is perceived as a certain failure of Western European economies. EU policies are aimed at discovering the causes of unemployment and at measures which would alleviate it (*Economic Survey*, 1999).

Important instruments used to promote employment in the EU involve the **EU Structural Funds**, mentioned earlier, and, particularly, the **European Social Fund - ESF**, which accounts for some 30% of all Structural Funds. Between 1994 and 1999, 142 billion EUR was allocated from the ESF. The areas where these resources were allocated indicate that there is a clear perception of a link between training for an occupation and employability. These areas include:

- integration of young unemployed people by means of vocational training;
- integration of people who are in danger of being excluded from the labour market;
- support for equal opportunities for men and women in the labour market;
- integration of people threatened with long-term unemployment by means of vocational training;
- anticipation of trends in the labour market and the appropriate adaptation of labour force competencies;
- growth of employment and stability;
- support for human potential in research, science and technology;
- improvements in vocational education and training.

For more details see *The European Social Fund* (1998)

#### **The OECD Jobs Strategy**

- To implement macro-economic policies of a kind that, in combination with efficient structural policies, would lead to non-inflationary permanent growth.
- To support the development and transfer of technological know-how.
- To improve the flexibility of work loads (both

short-term and within the entire life-cycle), which could be used on a voluntary basis by both employees and employers.

- To support the business environment by means of removing obstacles to the setting-up and development of new businesses.
- To introduce flexible pay and the cost of labour by eliminating restrictions which make it impossible to take account of local conditions and the level of skills primarily of young employees.
- To modify safety measures at work, so that they do not block the development of employment, particularly in the private sector.
- To strengthen emphasis on active labour market policies and their efficiency.
- To enhance staff competencies by means of extensive changes to systems of education and training.
- To reform unemployment benefits and related social benefits - including their link to taxation - in such a way that they represent no obstacle to effective employment.
- To promote competition and to curb monopolistic tendencies and, in this way, to support an innovative and dynamic economy.

Source: *The OECD Jobs Strategy*, 1998.

#### **EU Policy in Relation to Unemployment**

**The European Union** responds to the critical situation in employment by initiating the drawing-up of annual **national employment plans** in member countries. The national plans, prepared since 1998, are targeted towards employment policy in relation to what have been agreed to be the principal pillars of employment. They also include reports on the implementation of this policy in the previous period. The formulation of employment plans involves, apart from governments, social partners who also take part in their implementation. Their contribution is regularly assessed. National plans contain deadlines for the implementation of individual measures in the light of existing or anticipated national administrative and legal regulations as well as financial resources. *The Czech Republic's National Employment Plan*, adopted by the government on 5 May 1999, is fully in line with the **four employment pillars** set by the EU (*The 1999 Employment Guidelines*, 1998).

- |                 |  |
|-----------------|--|
| <b>Pillar 1</b> | <i>Promotion of employability</i>  |
| <b>Pillar 2</b> | <i>Support for entrepreneurship</i>  |
| <b>Pillar 3</b> | <i>Promotion of the capacity of companies and employees to adjust to changes</i> |
| <b>Pillar 4</b> | <i>Promotion of equal opportunities for all</i>                                  |



The European Union also supports the development of employment policies in associated countries. In the Czech Republic since 1992 some 30 million EUR have been used under the **Phare** programme with the purpose of supporting projects targeting education and jobs creation (*PALMIF*), as well as services for disadvantaged groups of the population - and their re-integration in society and in the labour market (*SWIF*). Due to limited resources, the Phare programme has not been able substantially to influence the labour market situation, but it has helped to set up institutional structures and links between them and it has significantly contributed to the transfer of *know-how*. The existing implementation mechanism and experience gained by national and regional players while carrying out the programmes has created a good background for the CR's preparation for the use of pre-structural assistance from EU funds and, later, from the **Structural Funds**.

The intensification of competition in national

labour markets, caused by declining employment, is acquiring international characteristics along with the growing international mobility of workers. The European Union, therefore, systematically supports the acquisition, by its population, of competencies which increase the chances of finding employment in European labour markets. These have included, for example, proficiency in the languages of at least three EU member countries (*Teaching and Learning*, 1997).

It is not the objective of Chapter II. of this publication to analyse the developments in the Czech Republic in terms of all the aspects to which attention is being paid by the organisations mentioned above. Emphasis will primarily be placed on various aspects of the relationship between structural changes in the labour market and the development of employment on the one hand, and educational aspects of the population as well as new graduates, their functional competencies and the development of employment policies on the other hand.

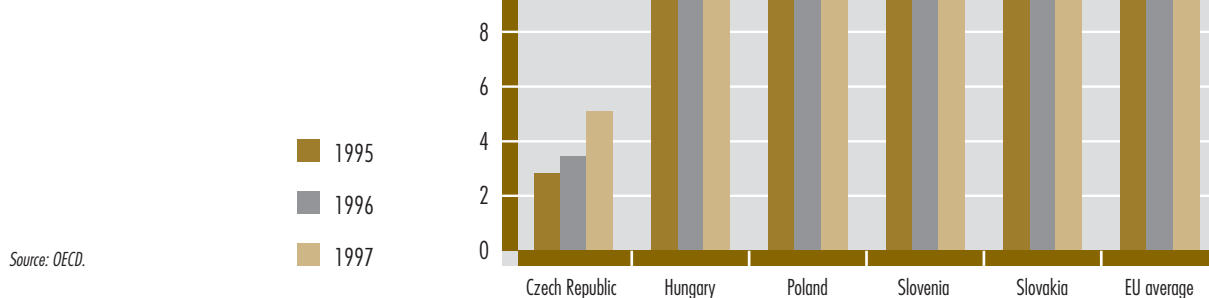
## 11.2 Growing Question Marks in the Czech Labour Market

### 11.2.1 The Development and Structures of the Labour Market

Since 1990, the development of the labour market in the Czech Republic has had several specific features. In the early 1990s, the numbers of economically active population declined rapidly, particularly due to the fact that a section of the population of post-productive age and a proportion of women left the labour market. This number dropped further as late as 1996. These developments influenced the relatively stable, low rate of unemployment of between 3 and 4% until 1996. Until the same year, the gross domestic product had been growing, although it did not reach the figures, in real prices, of before 1990. The following problems in the labour market were caused by an accumulation of macro-

economic difficulties which resulted in a steep decline in the pace of the GDP growth in 1997 and its actual decrease in 1998. Dragged-out privatisation and the related instability of ownership slowed down or almost halted the restructuring of the economy and decreased its efficiency. A reduction in the number of employees and corporate bankruptcies caused a **growth of unemployment** which exceeded 8% at the beginning of 1999. In consequence of insufficient incentives offered to foreign investors, and their own hesitations, conditions have not been established for the setting-up of new companies and the relevant jobs. In this way, the Czech Republic has rapidly fallen back into line with other emerging economies as well as the EU average in terms of the unemployment rate.

**Graph 2.2**  
Unemployment in Selected Countries  
in Transition and in the EU



Unemployment has grown primarily in regions with a history of a high proportion of mining industries (Northwest Bohemia and North Moravia) and with a dependency on outdated agriculture (South Moravia). The growth of unemployment has also been caused by the lower flexibility - in comparison with EU and OECD countries - of working hours, wages policy and housing shortcomings. The result of this, coupled with the tradition of low mobility in the labour force, has been low inter-regional work mobility.

While in the previous period short-term unemployment prevailed, there are currently groups of the population at risk of being pushed out of the labour market who could become long-term or repeatedly unemployed. These groups include the disabled, fresh graduates without practical experience, women with children, juveniles or other groups of people without qualification (*National Employment Plan, 1999*).

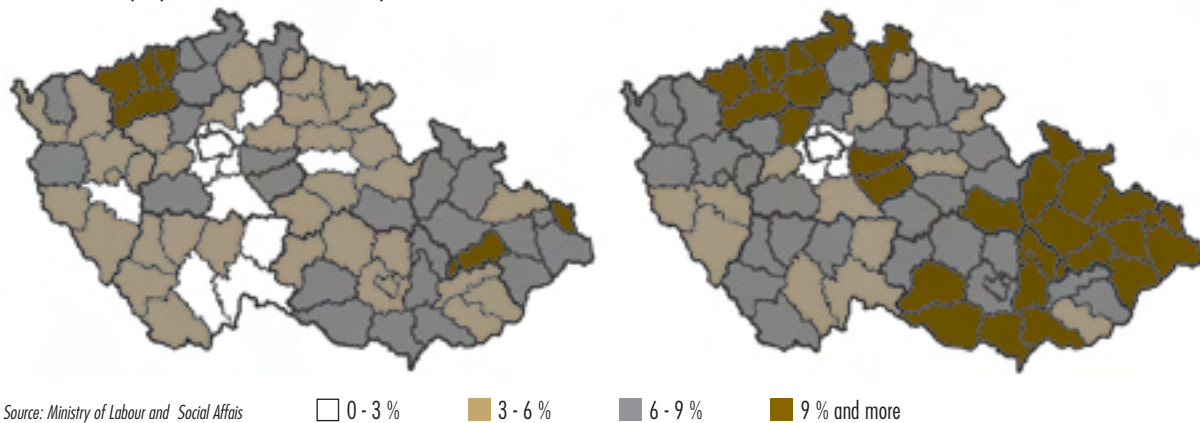
In terms of employment, it is important to ensure the **movement of staff between industries,**

**sectors and individual professions.** It is estimated that some 70% of the economically active population have changed their job in the course of the transformation period since 1990. The nature of these changes has varied. For example, there was a significant drop in employment in agriculture associated with changes in ownership structures. In industry, the changes not only included restructuring whole sectors and production capacity, but

also technological innovations. Moreover, new categories of jobs came into being (finance). These changes have not only been forced by closing down some companies and re-shuffles or reductions in the number of staff in others. To a great extent, they were initiated by citizens who established new firms or accepted jobs in these firms with the goal of achieving better positions, better pay or merely because they were unhappy in their existing jobs.

**Graph 2.3**

*Rate of Unemployment in Districts in May 1998 and 1999*

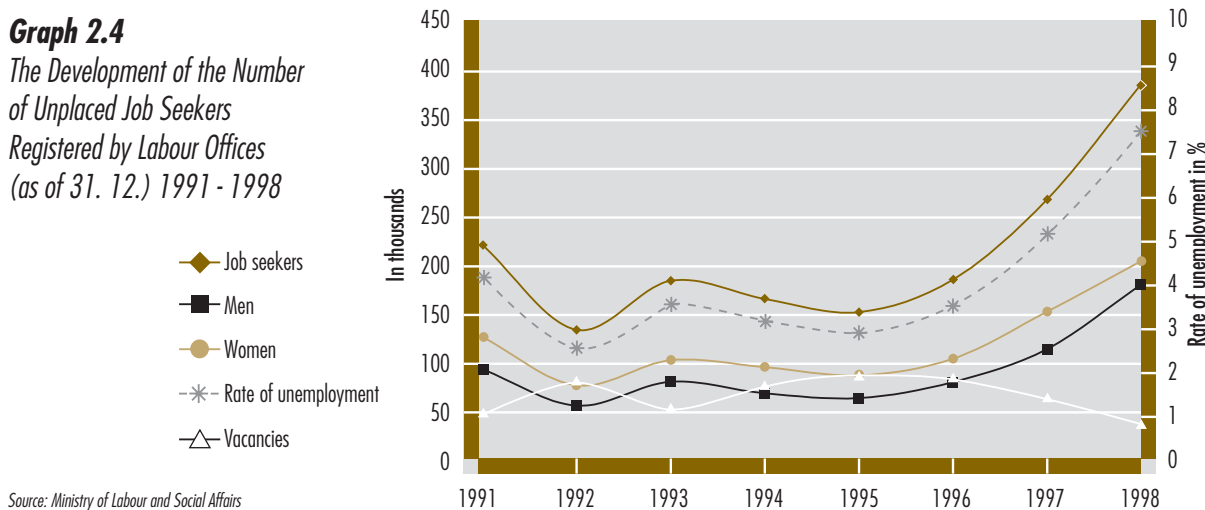


Due to structural changes in the economy, employment has dropped in the **primary** sector (agriculture, forestry, fisheries and mineral exploitation) and the **secondary** sector (processing industry, electricity, gas and water production,

construction etc.). This decline has only been partially offset by the growth of employment in the **tertiary** sector (traditional services such as transport, storage, communications, trade, repairs, catering and accommodation) and in **quaternary**

**Graph 2.4**

*The Development of the Number of Unplaced Job Seekers Registered by Labour Offices (as of 31. 12.) 1991 - 1998*



sector (science, research, education, health-care, social work, public administration and other public or market services). A forced reduction in employment occurred in education due to the decline in the population at the initial education age. In the Czech Republic, the development of which is typical of modern society has primarily taken on people in trade, catering and finance. However, the growth in this sector stopped in 1996 and this, together with the still high rate of employment in industry, may be a signal of over-industrialisation (insufficiently modernised production technologies, requiring high employment in industry, and an underdeveloped services sector).

ket in 1995 and only 2.5 million in 1998. Other data clearly indicates that Czech producers also have problems concerning exports. While in 1989 more than 55 million pairs were exported, in 1998 exports accounted for 23.5 million of the 15 million produced.

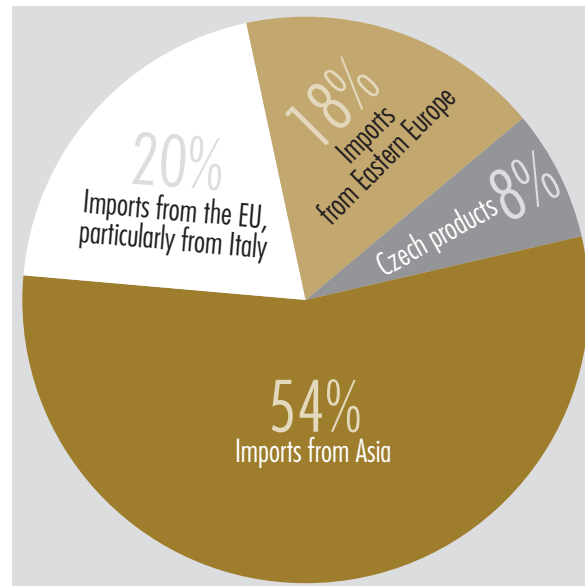
A further increase in employment in the service sector depends on the growth of the economy - the current economic recession is having a negative effect on household income and, consequently,

**Unexpected Change in Industry - the Influence of Globalisation**

In the Czech Republic, the footwear production was an important, traditional, developed and prosperous industry. As early as in the period between the wars, Bafa was a synonym for quality shoes in the Czech Republic and far beyond. The shoe-making industry continued to develop under socialism, where imports of cheap materials from Mongolia, the use of plastic materials, production on a large scale and enormous exports to the East led to the production of large amounts of average quality shoes.

Since 1989, the footwear industry has also undergone fundamental changes. Production dropped from 73 million pairs to a mere 15 million in 1998. Producers are disturbed by the large-scale imports of cheap shoes, particularly from Asia and Turkey. According to their data, some 30 million pairs are imported at present, of which 55% are from Asia. Our producers sold 11 million pairs in the Czech mar-

**Graph 2.5**  
Sales of Footwear in the CR by Country of Origin



Source: Czech Statistical Office, 1998

Development of the Sector Employment Structure (% of total population) in the CR and EU (1950 - 1997)

	The CR				The EU			
	Primary	Secondary	Tertiary	Quaternary	Primary	Secondary	Tertiary	Quaternary
1950	15,6	16,6	6,5	5,6	14,7	15,6	7,3	6,9
1960	11,6	21,1	6,7	6,8	9,9	16,6	7,8	8,0
1970	9,8	23,0	8,1	9,6	6,0	16,3	8,2	9,7
1980	8,0	22,3	8,7	10,7	4,2	14,6	9,1	11,9
1990	7,8	20,3	8,9	11,5	3,0	13,3	10,0	14,7
1995	4,2	19,8	11,6	13,8	2,3	12,1	10,2	16,1
1997	3,6	18,9	11,7	13,8	2,2	11,9	10,3	16,7

on demand for services (*Flek-Večerník, 1999*). The immediate effect of economic difficulties on the services sector was a rapid decline in employment between January and June 1998 in trade (5.8%) and the hotel and restaurant industry (by 10.1%). Overall employment dropped by 1.9% in the same period. At present, the proportion of population working in the **quaternary sector**, extraordinarily demanding in terms of education, is lower in the CR than it is in EU countries.

### II.2.1.1 The Professional Structure of the Economically Active Population

As with changes in employment in terms of sectors and industries, the professional break-down of the economically active population has also changed significantly since 1999. Most important, there is a clear overall reduction in the number of persons in **“workers” professions** with the exception of construction workers although, even in this area, reductions are expected. The gradual, slow decline in the number of workers in processing industries, which was already occurring in past decades, has speeded up significantly since

1990 and is likely to continue for some time. This decline has been caused, to a great extent, by the need to curb some inefficient production processes with a high share of simple labour and where continuation will depend primarily on the growth of labour productivity. Future changes should be directed towards work processes which are demanding in terms of skills, not in terms of numbers of workers.

On the other hand, the decline in the number of agricultural workers is a mere continuation of a longer-term development, although this has accelerated. Since 1990, there has been a reduction in the number of those in occupations related to the exploitation and treatment of raw materials.

There has been a significant growth in the number of people in **non-manual occupations**. Numbers have been growing steadily since 1960 in the category of *operators and service workers* (in transport, trade, personal services, catering etc.). These developments speeded up significantly after 1990 but have been slower in recent years. The initial need for people in trade and services has helped absorb high numbers of the labour force. At present, however, there is smaller demand for these

*Development of the Numbers of Economically Active Population in Major Occupation Categories*

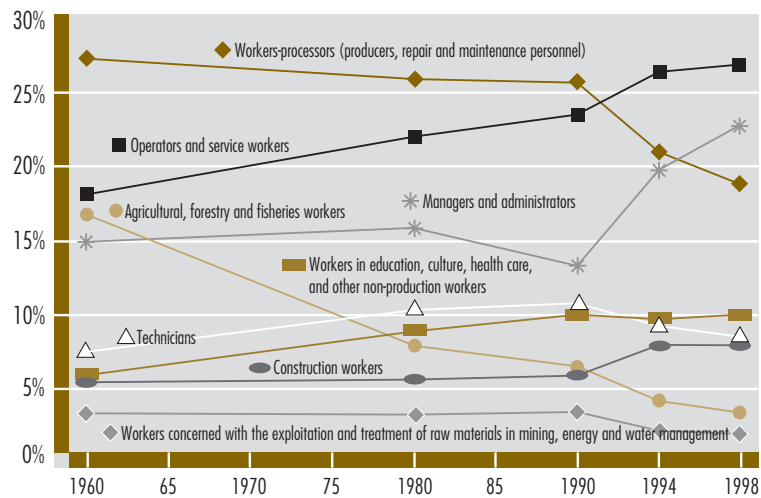
Occupation category	Economically Active Population (in thousands)							
	1980		1991		1994		1998	
<b>Economically active population - total</b>	<b>5364</b>	<b>100%</b>	<b>5421</b>	<b>100%</b>	<b>4969</b>	<b>100%</b>	<b>5026</b>	<b>100%</b>
<b>Categories N1 - N8 - total</b>	<b>5330</b>	<b>99,4%</b>	<b>5346</b>	<b>98,6%</b>	<b>4969</b>	<b>100%</b>	<b>5026</b>	<b>100%</b>
N1 Agricultural, forestry and fisheries workers	414	7,7%	343	6,3%	206	4,1%	166	3,3%
N2 Workers concerned with the exploitation and treatment of raw materials in mining, energy and water management	175	3,3%	181	3,3%	106	2,1%	93	1,8%
N3 Workers-processors (producers, repair and maintenance personnel)	1385	25,8%	1387	25,6%	1039	20,9%	942	18,7%
N4 Construction workers	299	5,6%	317	5,8%	393	7,9%	399	7,9%
N5 Operators and service workers	1184	22,1%	1273	23,5%	1312	26,4%	1355	27,0%
N6 Technicians	551	10,3%	587	10,8%	457	9,2%	424	8,4%
N7 Managers and administrators	854	15,9%	715	13,2%	979	19,7%	1140	22,7%
N8 Workers in education, culture, health care, science, research and other non-production workers	469	8,7%	543	10,0%	478	9,6%	507	10,1%

Source: Czech Statistical Office.

workers. As regards the category of *managers and administrators*, the situation was more or less stable until 1990 (a slight decline) - since then, however, there has been an enormous increase (some 165,000 new positions). Managers and administrators are the fastest-growing category, even at present. This increase has been influenced by the fact that these include not only civil servants, but also managers of organisations (also small ones) - the number of which has increased significantly. This category also comprises economic (accounting) staff at all levels and all industries, professionals in the areas of trade, tourism, accommodation, police, people working in security services, etc. In most cases, their numbers have also increased. After 1990, the number of *clerks and lower administrative staff* increased by 25,000 - at present, this number has gone down. As regards other categories, numbers have slowly been growing in the past decades - however, this

growth has recently slowed down. This growth may continue in future in the category of *education, health care, culture and other non-production staff* (i.e. research and development, social workers, occupations related to sports, church, etc.) The developments in the category of *technicians* reflect the decline in industrial production which has resulted in lower demand for these occupations. In addition to quantitative developments, there have also been qualitative changes, i.e. in the work content, technologies used, nature of production, work organisation etc. These changes have considerably affected requirements for staff qualifications and have resulted in the reduction of work for unskilled and auxiliary workers (the number has gone down by one quarter since 1990). There has also been less work for *craftsmen, skilled producers and repairmen* (decline by 350 thousand). Conversely, the number of *professionals* has grown by 40,000.

**Graph 2.6**  
Development of the Labour Force Structure in Major Occupation Categories (1960 - 1998)



Source: Czech Statistical Office

The developments described above are in line with **trends in Europe**, where the highest increase for several decades has occurred in the field of *professionals* (i.e. a group of occupations requiring the highest qualifications and education). There has been rapid growth in two other groups which are also demanding in terms of education: legislators, senior officials and managers, and technicians and associate professionals. The numbers of operators in services and trade have also been increasing. On the other hand, the numbers of people in occupa-

tions which require lower qualifications have been decreasing (auxiliary workers., agricultural and forestry workers, but also craftsmen, skilled producers, repairmen and machinery operators and assemblers). In addition to an evident **increase in the proportion of non-manual professions**, there has been a gradual **increase in the proportion of occupations with a high or the highest complexity of work and a decline in occupations where the complexity of work is the lowest.**

### Groups of Occupations with the Steepest Decline and Increase in the Number of Employees between 1991 - 1998

#### The steepest decline occurred in the following occupations:

Growers, animal keepers, farmers (including workers)  
 Agricultural machinery operators and repairmen  
 Miners - deep and surface coal and ores mining  
 Leather and fur processors  
 Storage operators  
 Mining and metallurgy engineers  
 Mechanical engineers  
 Civil servants at central and local levels, senior co-operative officials, members of parliament, diplomatic corps staff.

#### The strongest increase occurred in the following occupations:

Management of organisations and organisational units  
 Professionals at courts, state notaries, state attorneys, barristers and state arbitrators  
 Professionals in trade, tourism, accommodation, public catering, transport, posts and telecommunications  
 Employees in the area of sports and physical education  
 Social workers and professionals in social care facilities  
 Economists  
 Scientists, research and development workers  
 Computer engineers

## II.2.2 Relationship between Education and Employment

### II.2.2.1 Employment Requirements and the Level of Education

The educational and qualification potential of the Czech Republic, which has contributed to the relatively smooth redistribution of human resources during the economic transformation to date, may not continue to play this positive role in the future.

re. Until now, short training or re-training sufficed for labour transfers and changes in occupations in the conditions of often obsolete technologies, low labour productivity and traditional organisation. In the 1990s, however, Europe and the world's developed countries have developed towards an economy based on knowledge. This economy is based on information and communication, on highly developed technologies in industry and services and on the new organisation of labour, moving towards networked, co-operative arrangements.

### The Process of Economic Change: Content and Organisation of Work

#### Traditional Professional Profiles

- Narrowly defined type of work. Simple and Partial tasks. Classification of knowledge. Task-focused description of work.
- Rigid employment framework. Classification of occupations based on expertise and length of experience. Individual tasks and outcome reporting.
- Straightforward administrative, control or assembly work. Prescribed work. Much routine work of low level. Separation of design and practical execution. Little personal growth.
- Work requiring expertise. Emphasis on speed, skills and proficiency.

#### Emerging Professional Profiles

- Broader definition of a task with a more extensive time frame. Solution of multi-disciplinary tasks. Requirements aimed at a project and its outcome.
- Flexible and changing occupation. Occupation as a function of adaptability. Teamwork, co-operation with colleagues, customers or suppliers. Evaluation of group performance.
- More abstract and intellectual work. Less supervision. Routine work is disappearing, a need for anticipation, creativity, decision-making and problem solving. Integration of design/goal and performance. Importance of personal growth through individual effort.
- Emphasis on rapid understanding, response and intelligent coordination.

- Difficult (physical) work prevails, sometimes dangerous and damaging to the health. Physical contact with the product or material.
- Relationships based on strength and hierarchy. Collective bargaining and dispute-solving contracts.
- Higher wages in order to reach agreement concerning unsuitable work content. Remuneration based on results, outputs and productivity. Differences in the status of work categories.
- Shift towards work based on communication and computer skills. Intensive workload. Less use of physical strength and energy. Safety of workmen, indirect contact with the product or material. Technology permeates all aspects of work.
- Long-term compromises between management and employees (e.g. share in dividends). Participative approach.
- Support for competencies and work commitment of staff. Alternative systems of remuneration based to a greater extent on risks and attained objectives. Blurring differences in work status.

Source: *Quality of Education*, 1994

The Czech Republic's accession to the EU, although with an element of delay, will also bring these trends to our country. Accepting these trends will become a condition for achieving competitiveness and economic growth. People will even have to get used to changing jobs several times during their career and to the on-going acquisition of new knowledge and skills.

In the past, the basic characteristic of a qualification was a high level of expertise in a relatively narrow field, intensified by years of practical experience. In the future, more importance will be assigned to the capacity to adapt to rapidly changing technologies and work relationships.

The educational structure of the economically active population is the most important indicator of the population's employability in the labour market. The Czech population's educational structure is not bad compared to developed countries. This is particularly the case in relation to the proportion of people with a secondary ("upper secondary", in international terminology) qualification. What poses a problem, however, is the structure of this qualification as well as the low proportion of people with a higher education. For many decades the overwhelming majority of the population was already equipped with a professional qualification within initial education. Other, smaller groups of people would undergo a general secondary education. Before WWII, the educational standards of the adult population in the Czech Republic were among the best in Europe. The further growth of educational achievement came to a halt after WWII as a consequence of the introduction of planning mechanisms. These mechanisms, based

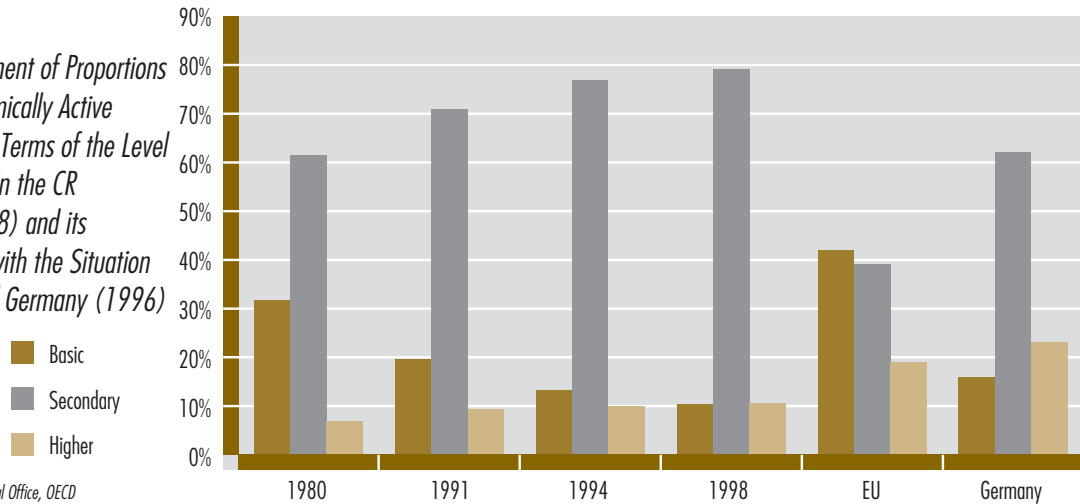
on the notion of the need for industrial development in the country, restricted general secondary and higher education and gave priority to vocational education, particularly apprenticeship. This was supported further by a system of planned placements of young people in schools. This has led to a situation where, compared to the EU average or even to Germany, the Czech Republic has a lower proportion of people with only a basic education or with no education at all (10% compared to 42% in the EU and 16% in Germany) but also a significantly lower proportion of university-educated people (10% compared to 19% in the EU and 23% in Germany).

Fundamental changes in the need for staff as well as substantial changes in the system of remuneration after 1990 have significantly increased interest in education. As access to education has been liberalised, the numbers of pupils and students have grown (also at higher levels of education) and their proportions in various branches of study have altered in a substantial way. Changes in the educational structure of the economically active population as a whole, however, will be a long-term development, since only some 3% change every year. An important alteration in educational structure and proportions of the population occurred in 1991 - 1994. At that time, a relatively large proportion of the population retired (in most cases people with a low level of education) and left the labour market.

Analyses of educational structure developments indicate that the proportion of people with only a basic education dropped significantly between 1980 and 1998 (from 30% to 10%). The proportion



**Graph 2.7**  
*The Development of Proportions of the Economically Active Population in Terms of the Level of Education in the CR (1980 - 1998) and its Comparison with the Situation in the EU and Germany (1996)*

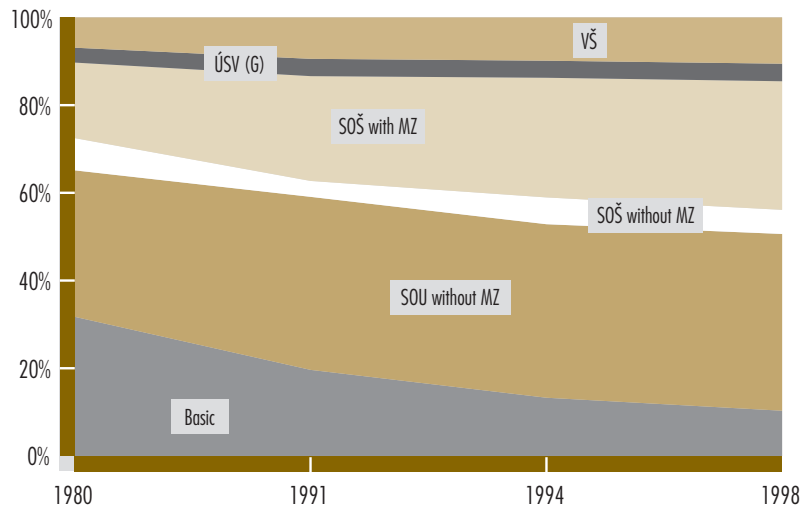


Source: Czech Statistical Office, OECD

of vocational school graduates without “*maturita*” examination rose by 7%, the proportion of people with a “*maturita*” certificate increased by 12% and the proportion of university-educated people rose from 7% to 11%. However, the increase in the proportion of people with a higher education is the effect of the overall decline in the numbers of the economically active population - the actual number of HE institution graduates increased only slightly. Moreover, while in the past the proportion of people with a university degree declined due to politically motivated emigration - today people are still leaving, legally, and for better working, career or just living conditions.

Although a planning system was implemented in the past decades, it was impossible to keep people in planned positions. They often found jobs other than those for which they were trained. Women, in particular, would leave technically focused manual occupations. But the proportion of men to change their occupation was enormous. Their motivation was interest in a different job, as well as financial or working conditions. More than one third of those with an apprenticeship certificate were employed in jobs which did not fit their qualification. This could be seen as a sign of the adaptability of people, and a quality that under the new conditions was used to facilitate transfers in the labour market (Kalinová, 1993).

**Graph 2.8**  
*The Development of the Structure of the Economically Active Population by Type of Education (1980 - 1998)*

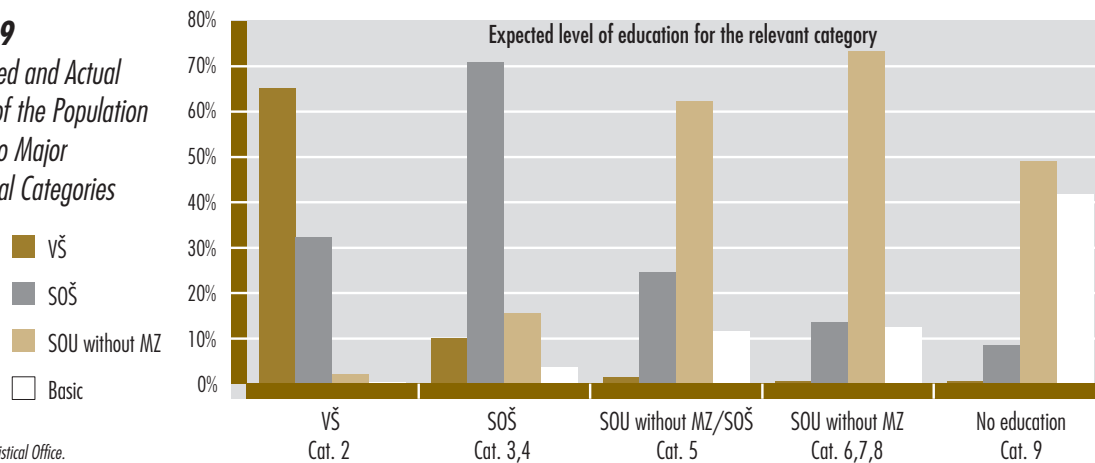


Source: Czech Statistical Office.

In addition to the low percentage of university-educated people, there is a large percentage (55%) of people with a lower education (without a "maturita") - this may be seen as a problem in terms of the future mobility of the labour force. It has been proved that the higher the level of an individual's education, the higher his/her competencies, qualification, flexibility and openness towards mobility. While a profession within the relevant band of education may be changed quite easily through re-training, it is more difficult to increase the level of education of a person who is already employed. This primarily concerns people who only have an apprenticeship certificate or basic education, since people with lower levels of education are less willing and able to study. Shortages in the numbers of the labour force with higher levels of education are also confirmed by the system of classification of occupations (KZAM). In the 2nd category (Scientists and

Professionals) which covers almost 0.5% of economically active population, 32% of people have a secondary education, even though occupations in this category require a university degree because of the complexity and demanding nature of the work. In the 3rd and 4th categories over 15% are vocational school graduates without "maturita", although a full secondary education would be appropriate. It is clear that there is already a perceptible lack of university-educated labour force, and the modern information society will need more and more of these people. The envisaged modernisation and automation of production connected with the introduction of new technologies should lead to growth in labour productivity, primarily in industrial sectors. There, the need for vocational school graduates without "maturita" will grow significantly smaller and, in many cases, even a full secondary education will not suffice.

**Graph 2.9**  
*The Expected and Actual Education of the Population according to Major Occupational Categories*



Source: Czech Statistical Office.

### II.2.2.2 How Education and Field Affect Employability

When analysing the rate of unemployment among the economically active population between 1994 and 1998, certain substantial differences stand out: while the rate of unemployment among university-educated people is low (approximately 2% in both years), it rose from 3% to 40% among the labour force with a full secondary vocational education and from 4% to 6% among apprenticeship certificate holders. The highest rate of unemployment is permanently among people with the

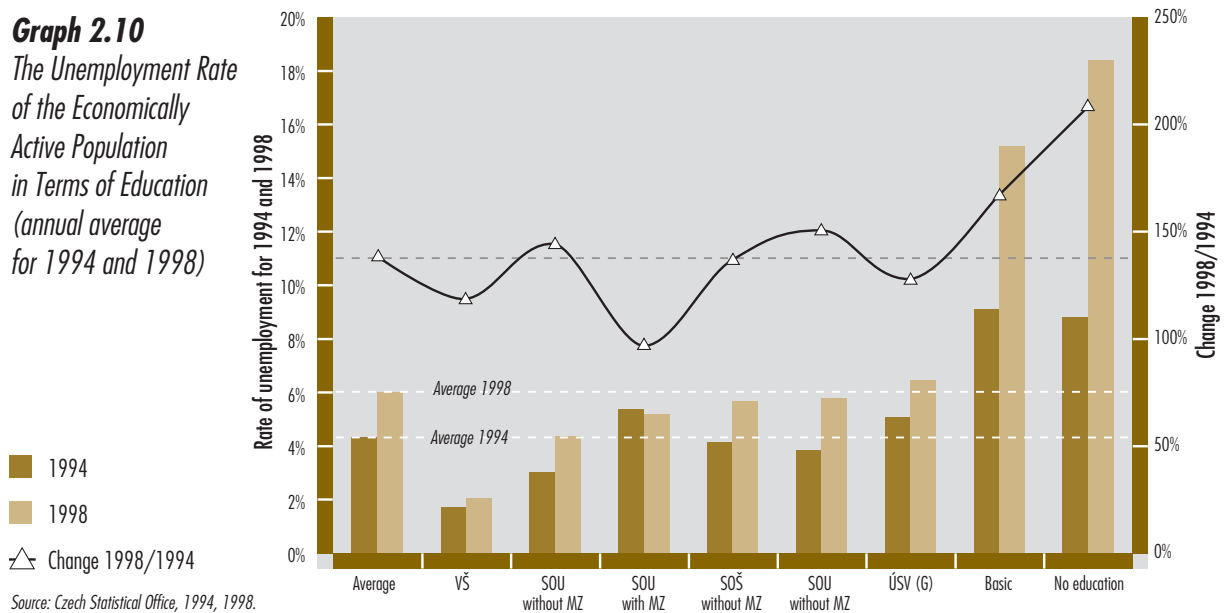
lowest levels of education. The rate of unemployment among people with basic education rose from 9% to 15% and up to 19% among people without education. These developments clearly indicate that, in the Czech Republic, the level of education achieved is having an increasingly strong influence on opportunities in the labour market as is common in other countries.

Moreover, education has had an impact on the length of unemployment. The distribution of long-term unemployment (6 months in surveys of the Ministry of Labour and Social Affairs and

12 months according to the Czech Statistical Office) according to highest level of education attained is similar to the distribution of unemployment as a whole according to the same criterion. The difference is that figures concerning long-term unemployment among university degree holders are not significantly lower than

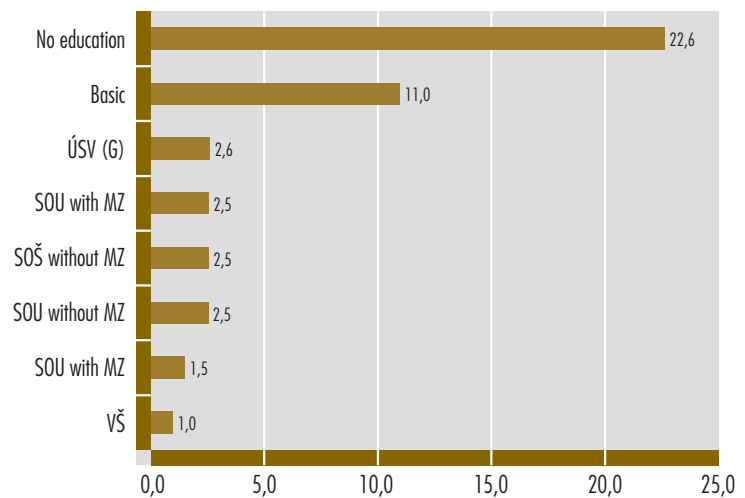
levels of this indicator among people with a secondary education. This may be linked to the fact that many unemployed people with a higher education live in regions with a high rate of unemployment where there are no job opportunities, even for those with the highest qualifications.

**Graph 2.10**  
The Unemployment Rate of the Economically Active Population in Terms of Education (annual average for 1994 and 1998)



Source: Czech Statistical Office, 1994, 1998.

**Graph 2.11**  
Long Term Unemployment in terms of Education (1998)



Source: Czech Statistical Office.

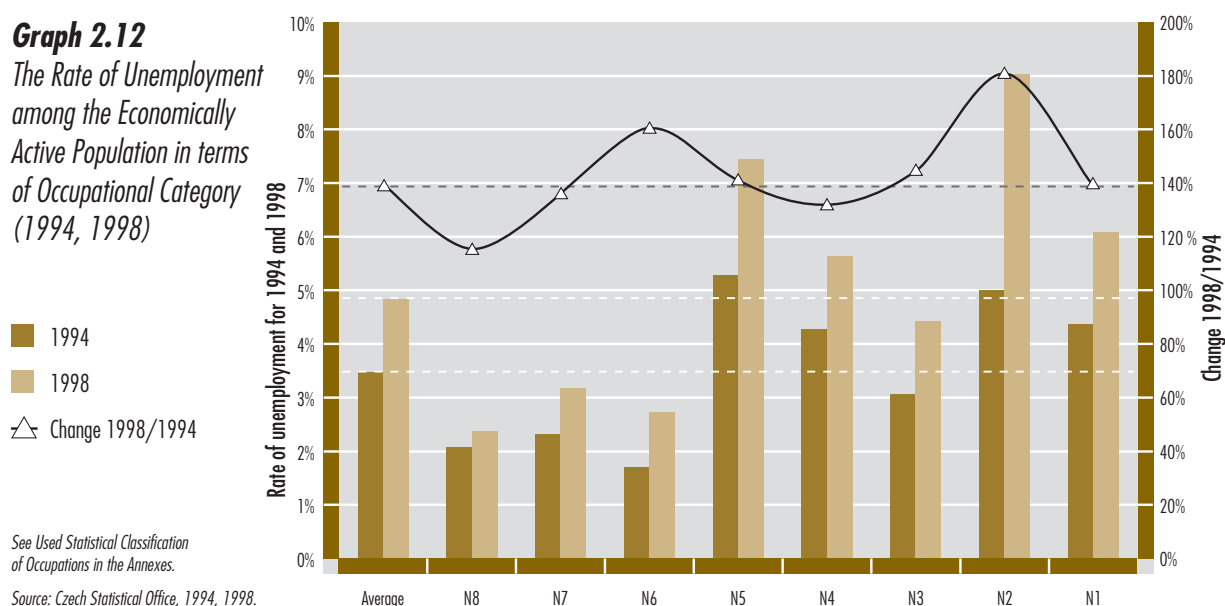
The rate of unemployment among economically active people who were previously employed may be analysed according to their former occupations. The highest rates of unemployment may

be seen in categories covering manual occupations, operators and servicemen. In 1998, these were the following categories: *Workmen in the exploitation and treatment of raw materials in metallurgy, energy*

and water management sectors (9%), operators and servicemen (7.5%), agricultural, forestry and fisheries workers (6.1%), construction workers (5.6%) and workers - processors (producers, repairmen and maintenance staff - 4.4%). Rates of unemployment are lower in categories which require a higher level of education: *Managers and admini-*

*nistrators* (3.2%), *technicians* (2.7%), *education, health care, culture and other non-production staff* (2.4%). Using KZAM classification data, the highest rates of unemployment are in categories of *Semi- and unskilled personnel, Service workers and market and sales workers, Craft and related trades workers and Plant and machine operators and assemblers.*

**Graph 2.12**  
The Rate of Unemployment among the Economically Active Population in terms of Occupational Category (1994, 1998)



See Used Statistical Classification of Occupations in the Annexes.  
Source: Czech Statistical Office, 1994, 1998.

Occupation Categories with the Highest Rate of Unemployment in 1998

Group of occupations	Annual average
Other operators and servicemen	11,90 %
Other construction workers	11,40 %
Other workers in the area of the exploitation and treatment of raw materials, energy and water management	11,30 %
Other agricultural and forestry workers	10,80 %
Storage operators	9,80 %
Miners - deep and surface mining of coal and ores	9,30 %
Personal and household services - operators	8,70 %
Retail operators	8,60 %
Processors (producers) of food stuffs	8,10 %
Leather and fur processors	7,90 %
Staff in catering, hotels and accommodation	7,40 %
Processors of silicate products (glass, ceramics, porcelain, construction materials)	6,80 %

Group of occupations	Annual average
Producers of textile and clothing	6,30 %
Administrative staff	6,00 %
Producers of electrical products, assemblers of electrical machinery, electrical mechanics (excluding repair and maintenance)	6,00 %
Main construction workers	5,60 %
Manual workers in metallurgy	5,60 %

Source: Czech Statistical Office

## II.2.3 From the Education System to the World of Labour

### II.2.3.1 The Position of School Graduates

The position of school graduates in the labour market is very specific. This group only has a gradual influence on the overall situation in the labour market - some 3% of the economically active population is renewed annually in this way. Nevertheless, this group is very important. In the Czech Republic as yet, initial education before entering the labour market represents overwhelmingly the most important opportunity for the individual's acquisition of a level of education.

On the one hand school graduates have very little or no work experience and often lack the necessary information and contacts to get their bearings in the labour market. On the other hand, they are young and therefore very adaptable. These ambivalent characteristics are clearly projected in the graduates' position in the labour market. Employers often decide not to take them on and refer to the fact that they lack appropriate professional competence (they either have a narrow specialisation - which may even be outdated - or none) and necessary working habits. Admittedly, the rating of graduates by employers improves depending on the level of education achieved, but in four fifths of cases, even progressive companies prefer an older and more experienced person to a school graduate (*Labour Market*, 1999).

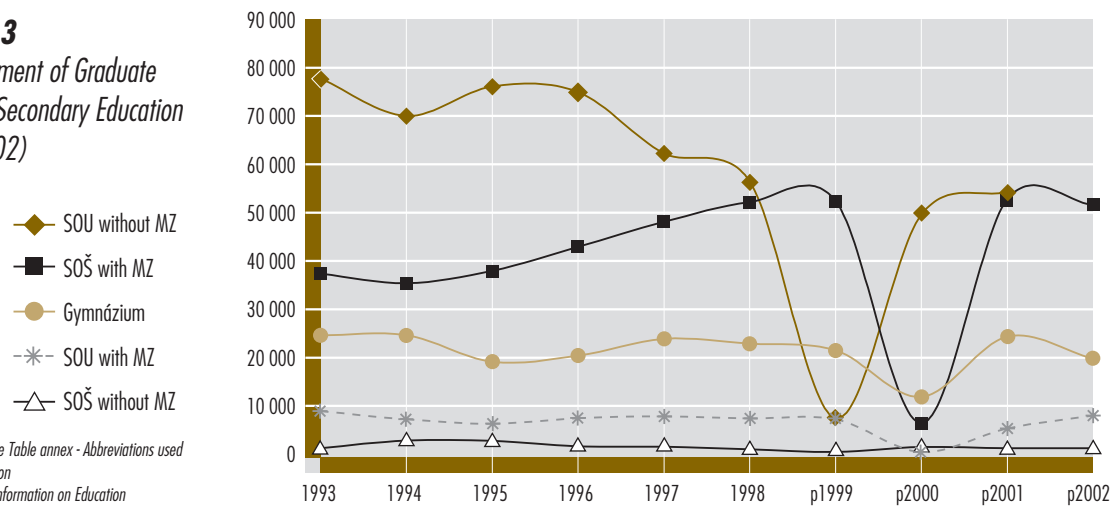
Difficulties in finding appropriate employment may also be caused by the graduates' own attitudes. On the one hand, it has turned out that in deregulated conditions, secondary schools as well as higher education institutions are able, though with a certain delay, to respond to changing needs in the labour market - at least in terms of the struc-

ture of programmes offered, if not in terms of duly modernised curricula. On the other hand, graduates often choose a job regardless of their specialisation and, sometimes even below their level of qualification.

A time-lag in the development of the structure of graduates, corresponding to the length of studies, is clearly to be seen in the development of secondary school graduates. Until 1993, this structure corresponded to the situation before 1989. It was only in the following years that the development reflected changes in interest in individual levels and fields of study. What is typical is a rapid decline in the proportion and number of secondary vocational school graduates. This is caused by two factors: first, the position of this type of education after 1990 - the creation of a category of state apprentices with no link to a specific company -, and secondly, the increase of labour market requirements for qualifications above this level of education. While the proportion of *gymnázia* graduates has fluctuated between 16% and 18% throughout the entire period, the situation of secondary technical and secondary vocational school graduates has changed. Compared to the past, where vocational school graduates significantly predominated, at present there is a balance between the two categories (each has about 40% graduates). In consequence of the one-off introduction of the ninth grade in basic school, only some 15% of the usual number of secondary vocational school graduates will enter the labour market. A similar situation will occur in 2000 as regards "maturita" courses and technical education.

Once the number of graduates of three-year follow-up courses in vocational fields leading to "maturita", reaches its peak in 1998, this number will decline due to administrative regulatory mea-

**Graph 2.13**  
The Development of Graduate Numbers in Secondary Education (1993 - 2002)



Explanatory notes: see Table annex - Abbreviations used in the area of education  
Source: Institute for Information on Education

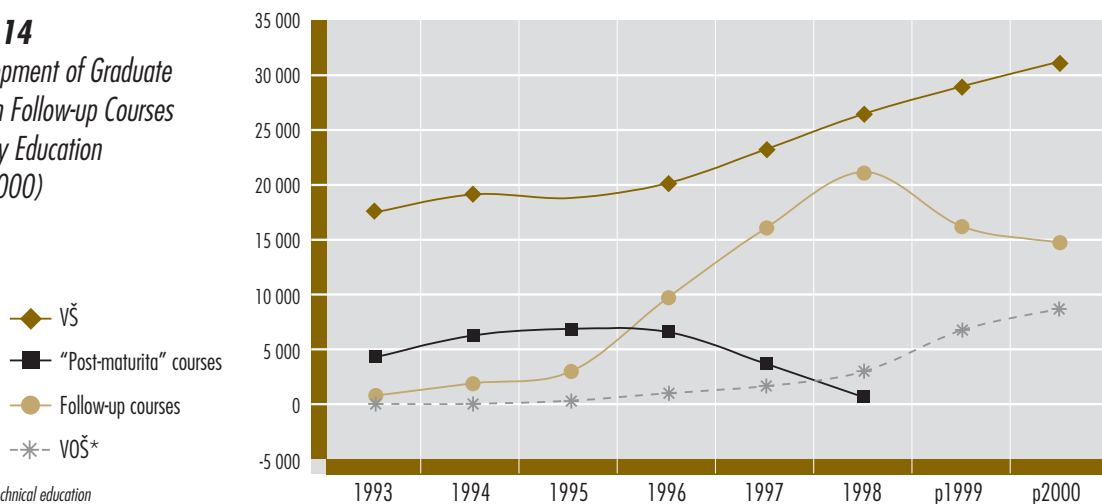
tures. These graduates may find employment in manual professions and as operators, but they are better trained and therefore more adaptable. Many students choose a follow-up course in a field which provides them primarily with the knowledge and skills they need to run their own business. The number of graduates from tertiary education has also gradually reflected a significant increase in the number of enrolled students. By 2000, the number of higher education graduates will be almost double that of 1989. The number of post-secondary technical school graduates has also been growing steadily.

**The number of graduates coming onto the labour market** is in fact lower than their overall

numbers, since many - secondary school-leavers in particular - continue their studies. Almost 80% of *gymnázia* graduates, 33% of secondary technical school graduates and 9% of secondary vocational school graduates (with the "maturita") enrol in a HE institution or in post-secondary technical schools. An average of some 30% of vocational school graduates (without the "maturita") continued in follow-up courses until 1998.

Since 1990, the numbers of people with only a basic education have significantly declined. This, together with growing numbers of people with higher levels of education, has positively influenced the overall **educational structure of the economically active population**.

**Graph 2.14**  
The Development of Graduate Numbers in Follow-up Courses and Tertiary Education (1993 - 2000)



\*Post-secondary technical education  
Source: Institute for Information on Education

Number of Graduates at Different Levels of Education Entering the Labour Market

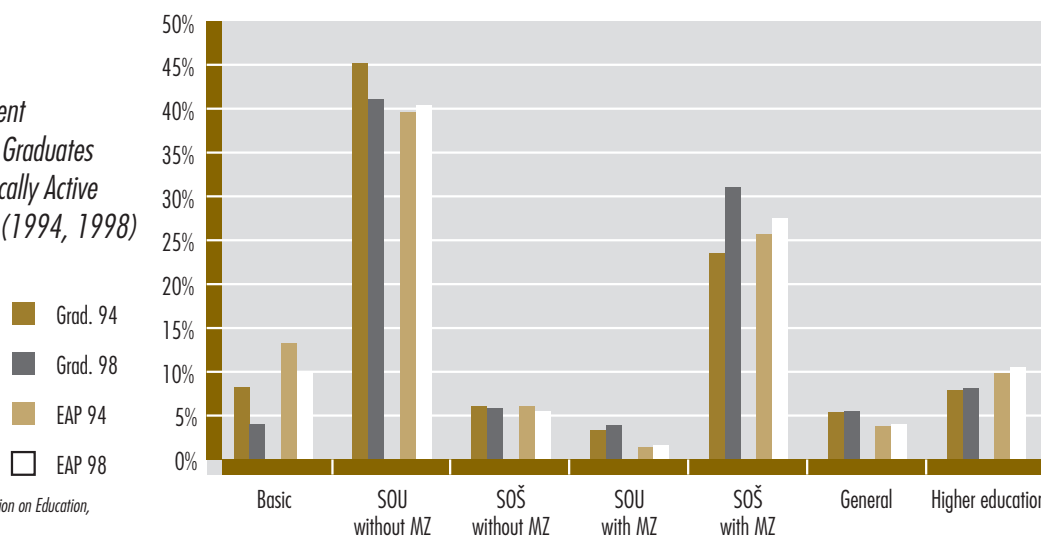
	1993	1994	1995	1996	1997	1998	1999	2000
Graduates with a secondary education	115000	101000	100000	101500	115000	112000	63000	61000
Graduates with a higher education (also post-graduate)	19000	23000	24000	26000	26000	28500	34500	37500
<b>Total</b>	<b>134000</b>	<b>124000</b>	<b>124000</b>	<b>127500</b>	<b>141000</b>	<b>140500</b>	<b>97500</b>	<b>98500</b>

Source: Institute for Information on Education.

The number of secondary vocational school graduates with a "maturita" is higher in relation to the total number of graduates than it is in relation to the economically active population as a whole, since this type of training was not represented in the older

generation. Compared to the past, there is a higher number of *gymnázia* graduates who do not continue their studies but enter the labour market directly. This has been caused by enduring problems in terms of the availability of study places in HE institutions.

**Graph 2.15**  
A Comparison  
of the Development  
of Proportions of Graduates  
and the Economically Active  
Population - EAP (1994, 1998)



Source: Institute for Information on Education, Czech Statistical Office.

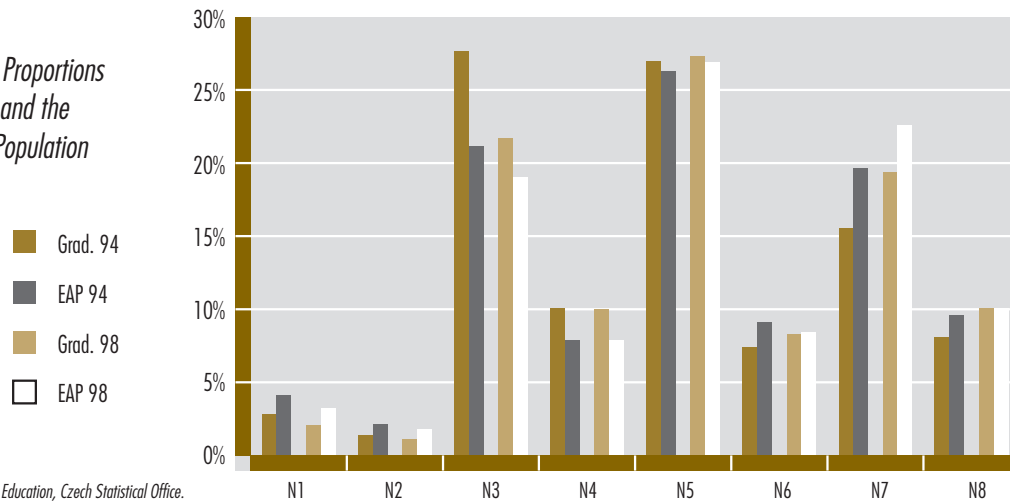
One serious persistent shortcoming is the fact that the proportion of higher education graduates in the total number of graduates is lower than their proportion in the economically active population. This is the result of a low number of students in the past and, temporarily, the prolongation of studies after 1990. Most Master's courses have been prolonged from four to five years and, at the same time, many students study longer than the standard length of studies - they combine their studies at their home institutions with studies abroad, fit work experience in between courses and, finally, just try to extend their youth. The hypothesis that **the development of proportions in the education sector** is not in great

contradiction to the development of the economy is also supported by changes in the representation of graduates in major occupation categories. With the exception of the category of *Technicians*, these changes correspond to the development of the structure of the economically active population. In the category of *Agricultural, forestry and fisheries workers*, the lower proportion of graduates is in line with the gradual reduction of the labour force in this sector. By contrast, in jobs of a technical and economic nature where graduates with the "maturita" or a higher level of education are anticipated, the number of employed graduates is lower than the proportion of all staff. In many engineering fields and, in particu-

lar, in mechanical engineering, it is not appropriate to speak about a lack of graduates as employers often do. These graduates sometimes do not even

find a job. In more than 70% of cases, the increase and decrease in the number of graduates reflects the development in the structure of employment.

**Graph 2.16**  
A Comparison of the Proportions of School Graduates and the Economically-Active Population (1994 and 1998)



See Used Statistical Classification of Occupations in the Annexes.

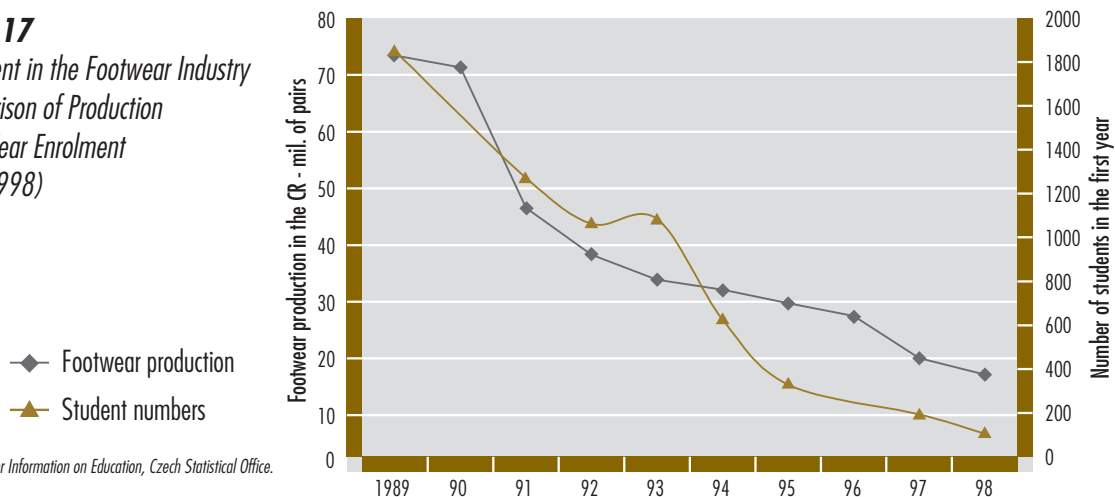
Source: Institute for Information on Education, Czech Statistical Office.

As with the economically active population as a whole, there is also **disproportion among graduates between their level of education and qualification and the jobs which they take.** This long-term phenomenon is known in other countries as well. Even in Germany, where the link between education, occupation and employment has been tightened to the maximum extent, surveys in 1992 brought interesting results: 39% of qualified workers in the metal industry and 34% of electricians left the job for which they trained three years after

graduation and worked in other occupations (Munch, 1992). This clearly indicates that in order to achieve harmony between education and the labour market it is impossible to rely on planning mechanisms. What is more, such mechanisms are even less reliable in economies in transformation. Furthermore, the narrower the training in terms of specifications, the larger the losses of such training should the qualification not be used.

In the Czech Republic, an average of 20% of vocational school graduates, 25% of "maturita" certifi-

**Graph 2.17**  
Development in the Footwear Industry - A Comparison of Production and First Year Enrolment (1989 - 1998)



Source: Institute for Information on Education, Czech Statistical Office.



cate holders and some 20% of university graduates change their specification (from the field they studied) three years after graduation. This proportion is higher in engineering fields.

The answer to the question of why graduates do not work in the field for which they trained does not depend either on the profession or on the level of education.

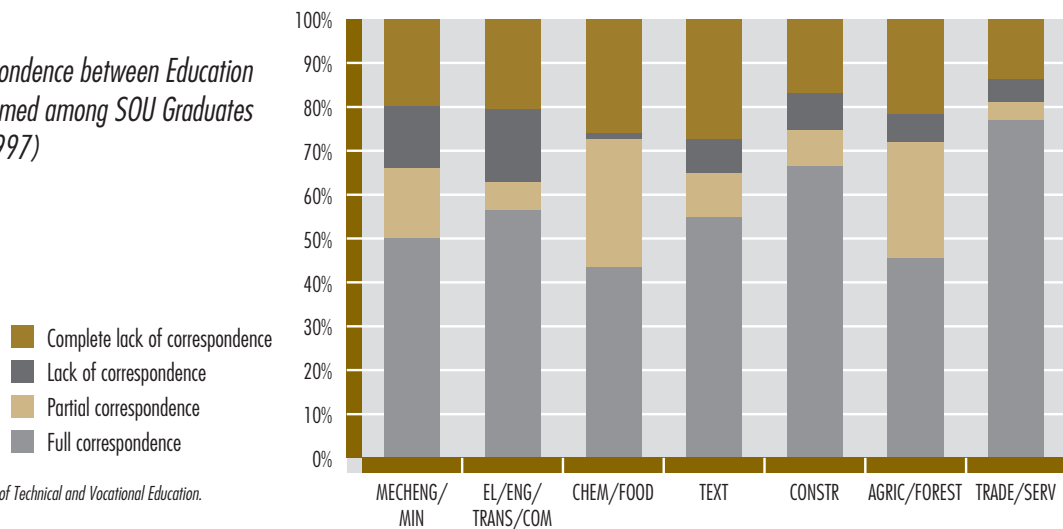
**Is it Possible to Plan and Regulate Numbers of Students?**

The difficulties experienced by the shoe-making industry have not been given too much publicity in the media and no one has focused attention on the current problems. Data concerning rates of unemployment, however, indicate that some of the highest rates of unemployment are to be found in this sector. The government has not, meanwhile, in any way regulated the educational programmes offered by the relevant secondary technical and vocational schools which fall within its purview - particularly not in the first half of the 1990s.

Developments, however, have been unambiguous. Declining interest on the part of parents and their children coupled with other influences - those of edu-

cational guidance specialists at schools, basic school teachers and, possibly, labour offices - have prompted the correct response and the numbers of students have dropped significantly. It is remarkable how sensitive this response has been. The decline in numbers stopped in 1992 - the reason for this was probably the slowing-down of the reduction in production, but in 1994 this reduction gained momentum again and this, obviously accompanied by higher unemployment, caused a further downturn in interest in training courses in the field. It may be confidently stated, and with full responsibility, that no civil servant in charge of planning student numbers would dare to plan the kind of reduction which occurred - without regulation and planning mechanisms - not to mention the fact that such planning would not withstand the pressures of the relevant lobbies.

**Graph 2.18**  
Rate of Correspondence between Education and Jobs Performed among SOU Graduates without MZ (1997)



Source: Research Institute of Technical and Vocational Education.

Almost half of those who do not work in their field of training ceased to be interested in the occupation. Some 30% state low pay as the reason and 10% say that they would have to move to find a job in their field. Only 16% stated lack of work in the field as a reason (Kuchař, 1998). The reason why many graduates are happy having a job which requires a lower qualification may also be, of course, that the declared qualificational level is now higher. The consequence is the typical phenome-

non of the replacement of lower qualifications with higher ones and growth in unemployment among graduates with lower qualifications. A typical example would be several demanding mechanical or electrical engineering manual occupations.

When taking a closer look at achieved professional competencies, we find out that vocational school graduates mainly find manual occupations and work as operators. What is alarming, however, is the large proportion of those trained in agricultu-

re, chemistry and construction who hold jobs as semi- and unskilled workers. Among graduates with a full secondary education (with the "maturita"), what is evident is the low proportion of those who trained in mechanical engineering, construction and electrical engineering work as middle-level professionals who are employed at the appropriate

level, and the large numbers employed in manual trades. Among university-educated people, a high proportion of specialists in health care, lawyers and teachers are employed in the corresponding professions, but a low proportion of specialists in agriculture. The highest proportion of university graduates in lower positions is evident in engineering fields.

*Distribution of Graduates at Different Levels of Education by Occupational Category (1998)*

Education	Basic	SOU without MZ	SOU with MZ	SOŠ with MZ	General secondary with MZ	Higher education
Proportion of the relevant type of education	4,10 %	41,00 %	4,00 %	31,20 %	5,60 %	8,10 %
Legislators, senior officials, managers	–	0,7 %	1,5 %	2,6 %	2,9 %	10,3 %
Scientists and professionals	0,7 %	0,5 %	3,3 %	7,5 %	11,3 %	60,5 %
Associate professionals	4,9 %	5,9 %	31,5 %	57,6 %	62,3 %	26,5 %
Trade and services operators	29,3 %	24,0 %	17,6 %	13,3 %	13,9 %	0,9 %
Skilled workers and producers	39,2 %	61,2 %	42,1 %	16,5 %	6,5 %	1,6 %
Semi- and unskilled workers	25,8 %	7,7 %	4,0 %	2,5 %	3,1 %	0,2 %
	100 %	100 %	100 %	100 %	100 %	100 %

Source: Labour force survey, Czech Statistical Office, 1998.

Rather than planning and regulating the number of graduates, the future need, which is constantly reiterated, is **to bring together and ensure communication of the most effective kind between the world of education and the labour market**. This may either be done directly or by means of various different types of differently targetted information. In addition to the administrative methods used to ensure accord between curricula and employers' requirements (these methods include efforts to unify qualifications provided by the education system and requirements

contained in employment catalogues), it is essential to develop communication between schools and employers of a kind that will facilitate the mutual understanding of roles and ways in which they may be influenced. This will provide graduates, either during their studies or immediately after their completion, with enough opportunities to get a handle on employment conditions as well as with access to fall-back measures, not only in the form of social networks but also in the form of a pro-active relationship between employers and a specific category of graduates.

*Rates of Unemployment among Graduates and the Economically Active Population by Education in 1994 and 1998*

	Total	Higher education	SOU with MZ	General secondary with MZ	SOŠ with MZ	SOU without MZ	SOŠ without MZ	Basic
Unemployed graduates 94	8,4 %	2,3 %	10,1 %	10,8 %	6,6 %	7,4 %	7,4 %	21,4 %
Unemployed graduates 98	10,3 %	2,8 %	8,8 %	12,5 %	9,3 %	9,9 %	11,8 %	29,0 %
Economically active population 94	4,3 %	1,7 %	5,4 %	5,1 %	3,0 %	4,1 %	3,9 %	9,1 %
Economically active population 98	6,0 %	2,1 %	5,2 %	6,5 %	4,4 %	5,7 %	5,8 %	15,2 %

Unemployed graduates - those who had already been employed once within 6 - 7 years of graduation.

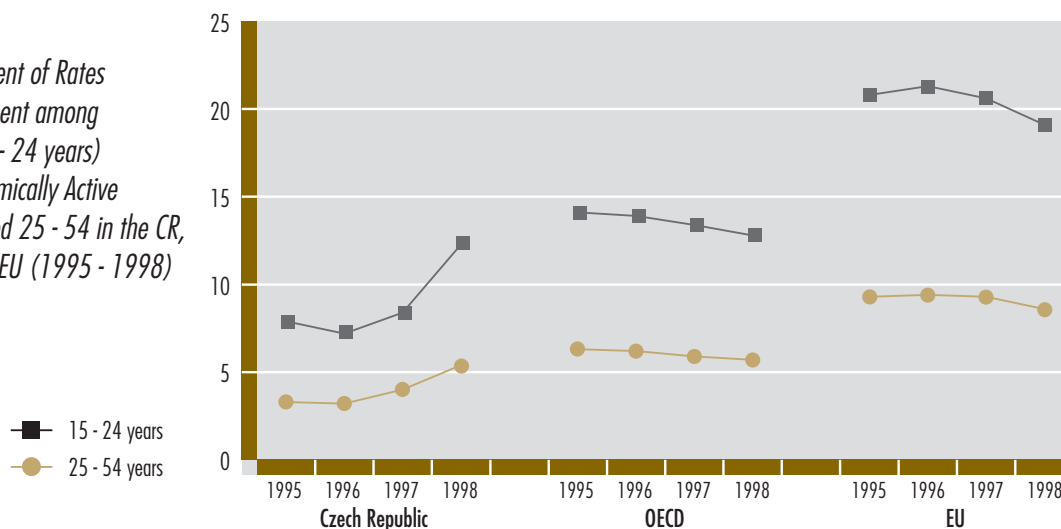
Source: Labour force survey, Czech Statistical Office, 1994, 1998.

### II.2.3.2 Unemployed Graduates

School graduates are rightfully considered to be a **risk group** in the labour market. Their unemployment rate, not only in the Czech Republic, but also in all western countries, is higher than that of population as a whole (in the CR, similarly to EU countries, it is 2.5 times greater). At the same time,

there is the inverse correlation between the rate of unemployment and level of **education achieved** - those graduates with the highest levels of education are most successful in the labour market and vice versa. In some occupation groups, the rate of unemployment of graduates is lower than that in the group as a whole.

**Graph 2.20**  
The Development of Rates of Unemployment among Graduates (15- 24 years) and the Economically Active Population aged 25 - 54 in the CR, OECD and the EU (1995 - 1998)



Source: OECD.

This is primarily related to the way in which schools respond to a drop in employment in the relevant occupation as well as to the low levels of interest on the part of graduates in finding jobs within this occupation (e.g. *Agricultural, forestry and fisheries workers*). In the case of a large difference between graduate unemployment and that of the economically active population as a whole in the group *Construction workers*, employers probably tend not to employ graduates with few practical skills and replace them with a cheaper labour force from foreign countries. On the whole, one can say that there is a stronger willingness to employ graduates in the fields where overall unemployment rates are lower.

When examining groups of occupations, broken down into smaller components, we can see that the highest rates of unemployment among graduates are found in categories similar to highest rates of unemployment among the economically active population, although in a different sequence. A new group appears here: social workers and cate-

ring and hotel staff. The group of mining and metallurgy workers is not represented here, since there is a minimum number of new trainees in these fields due to public awareness of the difficulties these fields are experiencing.

Interpretation of data concerning unemployment is sometimes distorted as conclusions are drawn based on optically large numbers of unemployed graduates (e.g. in economic fields, but also in mechanical engineering and construction). Account is not taken of the fact that these high figures do not represent a proper measure and need not imply a high rate of unemployment. The actual rate of unemployment is expressed as a ratio of the number of unemployed graduates to their total number (in other words, out of 100 graduates, how many of them are unemployed). The highest rates of unemployment are found in the following fields: chemical engineering, leather processing and footwear production, transportation, posts and construction. At the level of "maturita" courses at secondary technical schools, these fields inclu-

*Rates of Unemployment among Graduates and the Economically Active Population by Occupational Category in 1994 and 1998*

	Unemployed graduates 94	Unemployed graduates 98	Economically active population 94	Economically active population 98
<b>Total</b>	4,9 %	5,7 %	3,5 %	4,9 %
Agriculture, forestry	5,5 %	3,5 %	4,3 %	4,1 %
Mining	5,4 %	8,0 %	5,0 %	8,5 %
Processing	4,2 %	4,7 %	3,2 %	4,4 %
Construction	5,5 %	8,2 %	4,3 %	5,9 %
Operators	7,2 %	7,6 %	5,3 %	6,7 %
Engineers	2,2 %	4,8 %	1,7 %	5,5 %
Management, administration	3,1 %	4,4 %	2,3 %	3,2 %
Education, health care	4,3 %	3,8 %	2,1 %	2,9 %

The rate of unemployment only covers those who had already been employed in the given occupation category. The total figures are therefore lower than the normally presented total data. The category of graduates covers graduates within 6 to 7 years of graduation.

Source: Labour force surveys, Czech Statistical Office, 1994, 1998.

*Groups of Occupations with the Highest Rate of Unemployment among Graduates (1998)*

Group of occupations	Annual average
Other construction workers	18,20 %
Other agricultural and forestry workers	13,50 %
Social workers and staff in social care facilities	13,30 %
Other operators and servicemen including firemen	11,90 %
Personal and household services - operators	11,00 %
Staff in catering, hotels and accommodation	9,70 %
Processors of food products	9,40 %
Storage operators	9,10 %
Main construction workers	8,30 %
Retail operators	8,00 %
Producers of textile and clothing	6,90 %
Processors of silicate products (glass, ceramics, porcelain, construction materials)	6,70 %
Administrative staff	6,40 %
Professionals in trade, tourism, catering, transport and posts	6,10 %
Workers in associated construction activities	5,80 %
Processors of wood, paper, film, bookmakers, polygraphy workers	5,50 %
Metal processors, mechanics and assemblers including machine tool controllers	5,10 %

Source: Labour force survey, Czech Statistical Office, 1998.

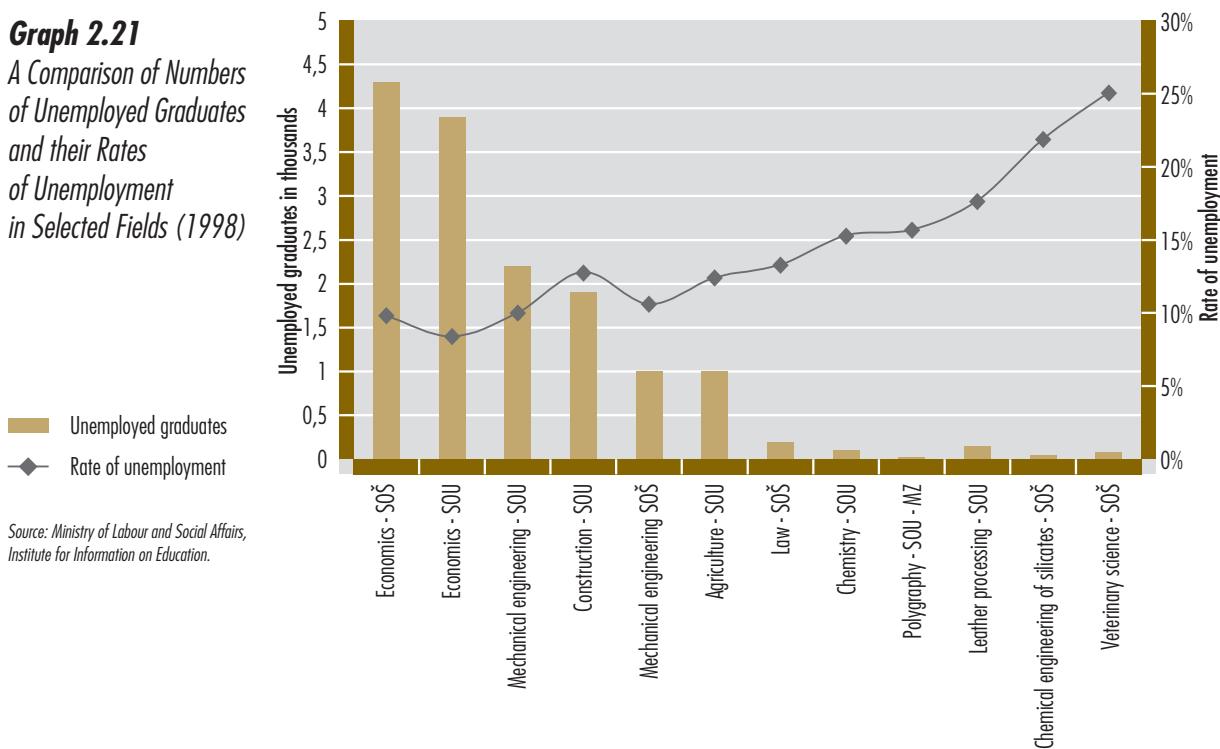
Source: Labour force survey 1998, personal calculation.

de veterinary science, wood processing, mining and metallurgy and chemical silicates engineering. This criterion must also be taken into account when considering the numbers of graduates needed. Graduate unemployment is often **short-term** and sometimes even voluntary. Most graduates take several months to find a job, and, in this respect, there are clear differences between fields of training. It takes longer to find a job in fields where there is a higher rate of unemployment. Unemployment among secondary school leavers, primarily *gymnázia* graduates, is sometimes associated with the fact that they were not admitted to

a HE institution and want to re-take entry examinations. Various other factors may be at play here, such as efforts to put off the beginning of working life, work in the grey economy, girls staying at home etc.

These factors undoubtedly influence the results of surveys carried out by labour offices on **new graduates** (in April and in September). Immediately after the holidays the rates of unemployment are considerably higher than those in April surveys. One alarming finding of the latest April survey (in 1999) is that the number of unemployed graduates is about double that in April 1998.

**Graph 2.21**  
A Comparison of Numbers of Unemployed Graduates and their Rates of Unemployment in Selected Fields (1998)



Source: Ministry of Labour and Social Affairs, Institute for Information on Education.

Moreover, the rate of unemployment among graduates failed to decline considerably even compared to September 1998 - when it was over 20%. The highest rate continues to be among vocational school graduates and the lowest among university graduates, and their proportions in groups of occupations remain unchanged - the most severe deterioration concerns the position of vocational school graduates without the "maturita". The rate of unemployment among university graduates is still

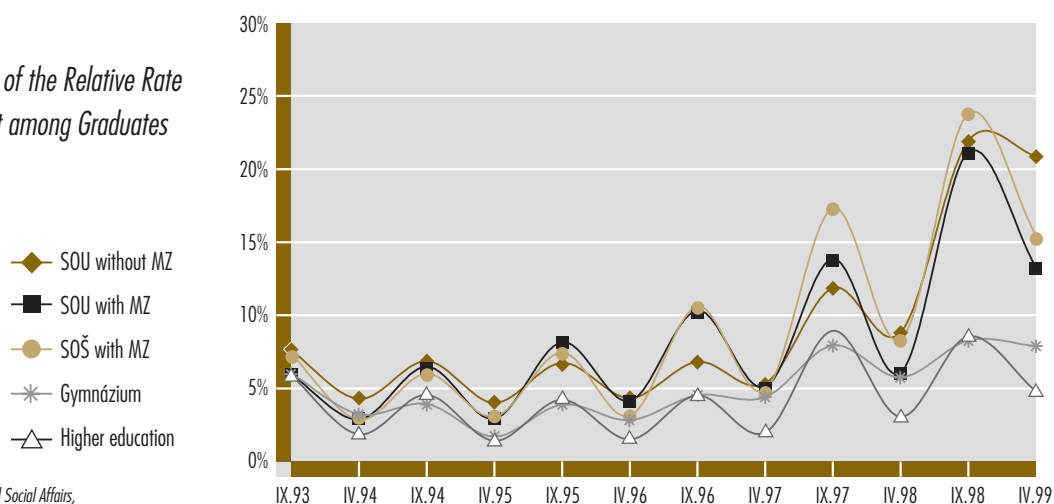
low - 4.8% for the whole group. A significantly higher rate is to be found among graduates of history (11.1%), mining and metallurgy (14%) and veterinary science (8.7%).

The rate of unemployment in the often discussed fields of healthcare is only 2.8% and in legal fields it is 3.2% (one of the lowest figures).

What is dangerous to society, however, is **long-term graduate unemployment**. This is mostly associated with insufficient or inappropriate quali-

**Graph 2.22**

The Development of the Relative Rate of Unemployment among Graduates (1993 - 1999)



Source: Ministry of Labour and Social Affairs, Institute for Information on Education.

Data on Unemployment of School Graduates - April 1999

Group of occupations	SOU without MZ		SOU with MZ		SOŠ		HE	
	Number	Rate of unemployment	Number	Rate of unemployment	Number	Rate of unemployment	Number	Rate of unemployment
Total (excluding gymnáz. grad.)	23142	20,9 %	6967	13,3 %	16141	15,4 %	2114	4,8 %
Natural Sciences	–	–	–	–	–	–	150	5,4 %
Engineering	13580	20,1 %	3661	10,8 %	5489	16,5 %	591	5,7 %
Agriculture and forestry	1612	21,9 %	332	12,4 %	1220	18,4 %	160	6,2 %
Health cares	–	–	–	–	396	3,9 %	100	3,0 %
Social disciplines and services	7646	17,7 %	2929	15,6 %	8646	16,5 %	1015	4,3 %
Fine arts, applied arts	104	19,6 %	39	9,5 %	277	14,7 %	71	6,0 %
<b>Gymnázia</b>					3669	7,9 %		
23, 24 Mechanical engineering	4094	21,7 %	1134	13,2 %	2102	18,8 %	160	7,5 %
26 Electrical engineering	1535	18,9 %	1148	14,2 %	1111	14,2 %	123	4,5 %
36 Construction	3657	24,3 %	387	14,6 %	779	16,6 %	141	7,0 %
42, 45 Agriculture, forestry	1612	21,9 %	332	12,4 %	1220	18,4 %	160	6,2 %
51, 55 Health care	–	–	–	–	396	3,9 %	100	3,0 %
63, 64 Economics, trade	7646	17,7 %	2907	15,5 %	7315	14,9 %	420	3,9 %

Source: Ministry of Labour and Social Affairs, Institute for Information on Education.

fications, but may also be linked to a lack of jobs in a particular region. The seriousness of the problem lies in the fact that young people do not acquire working habits and may lose interest in employment for the rest of their life. This may be a trigger for the development of asocial behaviour

(drug abuse, crime - which mostly affects people with a low level of education - a category to which most of the unemployed belong). Long-term unemployment (longer than half a year) most severely afflicts graduates of courses in mining, metallurgy, agriculture and transport, as well as

chemistry and electrical engineering. Graduates from courses in mechanical engineering and business also remain on labour offices' files longer.

There are, of course, fields in which the need for a very **defined professional profile** is stronger, and the narrow specialist basis of courses makes it difficult to find a job in other professions. This is true, for example, of the whole healthcare area. It will be necessary to find ways to ensure that numbers of students in these courses are optimal with regard to labour market needs. This may be accomplished by means of the activities of both the Ministry of Health (for secondary and post-secondary schools) and the Physicians' Chamber (HE institutions).

With regard to the growing problems of graduates in the labour market, various **job search techniques** will gain in importance. While in the past traditional methods predominated (connections, advertising in the press, contacting the potential employer directly), there is no doubt that in future graduates will use various consultancy and information services more than before, including those offered by labour offices.

### II.2.3.3 What Can Facilitate Transfer from School to Employment

In relation to the growing gap between unemployment as a whole and the unemployment of young people, attention is being devoted in developed countries to **policies aimed at facilitating the transfer of young people from school to employment**. According to the OECD (Thematic Review, 1998), these include:

- a clearly-defined, well-organised, open and coherent system of educational paths and qualifications, created with the prospect of lifelong learning;
- access for young people to extensive opportunities for learning while in employment;
- acquisition - by young people who do not continue in studies after secondary school - of broad professional skills together with a general education and competencies in inter-personal relations;
- friendliness - openness of the labour market towards young people;
- safety nets for young people who are in the greatest danger of social and economic exclusion - their re-integration into the world of education and labour;

- good monitoring instruments - such as statistics, indicators and long-term surveys which reflect the development of interaction between systems of education and employment;
- attractive and available information, guidance and monitoring for all young people in the form of combination of educational and social guidance on the one hand, and career guidance on the other hand;
- institutional frameworks for organised and continuous co-operation between all relevant partners and national, sector and local levels in with the purpose of ensuring coherent policies and their effective implementation.

**Risk factors**, on the other hand, include:

- young people's low qualifications and their performance of unskilled labour, linked neither to continuing education nor to vocational training;
- the limited scope of the general component of vocational education;
- few opportunities to combine educational experience at school with learning outside school (organised by the employer or municipality), lack of applied knowledge;
- inappropriately developed links between initial vocational education, continuing or tertiary education, due to separate systems of admission requirements, qualifications and funding;
- inadequate opportunities for a return to education for those who did not complete it, lack of support for young people who have problems in the labour market.

### Specific Youth Employment Support Policies

In different countries there are various possibilities to improve the position of young people immediately after they graduate and enter the labour market. The first involves **support for vocational training taking place in companies** (basically, support for a dual system of apprenticeship or for similar systems within vocational education). In this way, various forms of state support provide for training, based on an employment contract between the student and the employer. He/she receives relatively low pay which, in some cases, is increased by state subsidies. Another way of improving the position of graduates is a **temporary or part-time employment contract**, or a combination of the two. The idea is to provide graduates, as soon as possible, with something to hold on to in the labour market and to ena-

ble them to get some experience and achieve a permanent employment contract. These contracts may be combined with vocational training on the employer's premises. In some countries (e.g. in Italy and France), a high proportion of these contracts are changed into permanent ones (over 50%). However, it must be taken into account that the number of contracts far from covers all unemployed graduates. Another form of supporting graduates in their search for jobs is the **direct creation of jobs**. One example can be seen in France, with its specific subsidised contracts. Scandinavian countries make use of special programmes within which work is provided in the private or public sector. The Netherlands offers jobs created by municipalities which combine training and work experience.

In 1997, **the European Union** agreed on employment guidelines. The most important of these consists of offering every young unemployed person either training, work experience or other measures in the first six months of unemployment. Governments should reduce the number of those who leave education system too early and ensure that young people are adaptable to technological and economic changes.

According to the OECD, policies which promote employers' interest in young people also include the reduction of the labour costs of young people undergoing vocational training in the employer's business (by lowering wages or taxes). Another possibility is to remove barriers in the systems of social benefits - their integration with active train-

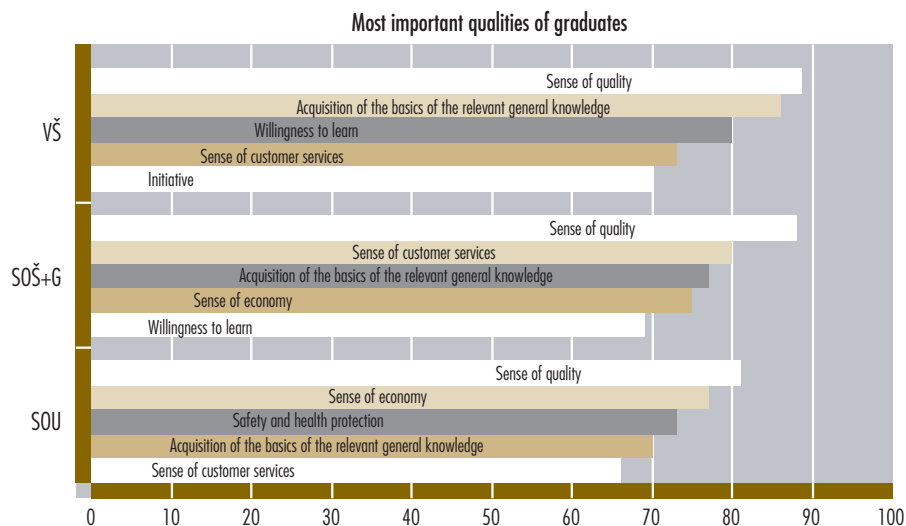
ing for employment and search for jobs. One of the alternative policies is to eliminate protective measures concerning work loads (making it possible to conclude term contracts, direct support for job creation and promotion of self-employment - *Employment Outlook*, 1998).

Since the assessment of conditions in the Czech Republic in relation to a range of these factors was subject of Chapter I. and employment policy measures will be discussed in the following sub-chapter II.2.4., we are only presenting some of them:

**Co-operation with employers and what employers expect?**

Although many educational institutions in the Czech Republic do have some, at least occasional contact with the world of labour, the current problem is the lack of systematic co-operation. For example, vocational training in the employer's business, i.e. not in school workshops and vocational training centres (where trainers from the industry also participate), is given to only 15 - 20% of apprenticeship students. The negative consequences of this emerge in inappropriate preparedness for specific occupations combined with lower flexibility. This separation from the world of labour also relates, to a certain degree, to other types of secondary education as well as part of post-secondary and higher education where this co-operation could be richer: there might, for example, be projects implemented by the student in co-operation with the employer. There is a certain paradox here:

**Graph 2.23**  
*The Importance of Graduates' Qualities and Skills for Employers by Type of Education (1998)*



Source: Institute for Information on Education, 1998.



employers are not motivated to organise vocational training which is demanding in terms of funding (e.g. by the incentive of tax relief) or to support it by means of transferring money to purpose-related funds, as is the case in many western European countries or, for example, in Hungary, and the result is that they lose interest in this training. On the other hand, they expect schools to provide well-trained graduates and a good structure of output qualifications - something that can hardly be achieved without their active input. The vicious circle closes tighter in periods of economic stagnation where the employers have a lower need for new quality staff and do not realise the future benefits of good training.

The results of an employers' survey, which was carried out for the Institute for Information on Education in the first half of 1998 in 820 businesses, indicate that employers are able to give important signals to the world of education (AMD, 1998). These signals say that they are not interested in specialities that are too narrow.

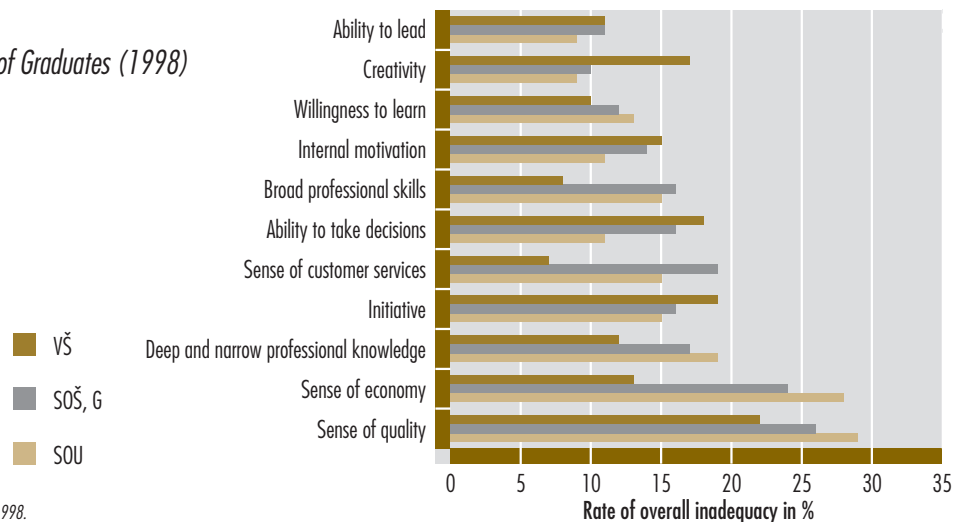
This survey also indicates an undesirable situation in the labour market in terms of its requirements as related to the actual state of the economy (lit-

le weight is assigned to computer and language competencies). The survey has also confirmed an alarming decline in employers' interest in co-operation with schools.

The involvement of the world of labour in schools' operations, as we have already mentioned, also relates to the formulation of educational programmes, final examinations etc., where the participation of experts from the industry is more intense. In the area of vocational education, representatives of the industry take part in the development of curricula in individual fields of study together with educators (there are 23 groups of fields). Another objective of this co-operation, which is the responsibility of the Research Institute of Technical and Vocational Education, is to chart anticipated developments in the qualification requirements of the professions. Suggestions for co-operation often come from schools which, when drawing up their educational programmes, contact employers or labour offices.

Education authorities in the new regional centres have a clearly defined responsibility for co-ordination of the network of schools in co-operation with employers, labour offices and other administrative bodies.

**Graph 2.24**  
*Rate of Overall Inadequacy of Graduates (1998)*



Source: Institute for Information on Education, 1998.

### Major Employer Organisations in the CR

#### Confederation of Employers' and Entrepreneurs' Associations

- associates six employers' associations: the Association of Entrepreneurs in Construction, Union of Employers' Associations of the CR, Association of Co-operatives of the CR, Association of Agricultural Co-operatives and Companies, Association of Investment Companies, Trade Association of the CR.

#### Confederation of Industry and Transport

- associates employers and entrepreneurs primarily in the area of industry and transport. It has 29 collective members and 160 individual members. Collective members are grouped by industry, field, region or interest.

#### Economic Chamber of the Czech Republic

- represents the interests of Czech entrepreneurs, particularly small and medium-sized businesses. It associates businessmen organised in district chambers or entrepreneurs' communities. One example of co-operation between education and the Economic Chamber (with larger involvement on the part of the Chamber) is the draft version of a master craftsman examination which will be organised by the Academy of Crafts and Services which will guarantee its standards.

#### Agrarian Chamber of the Czech Republic

- associates entrepreneurs in agriculture, food industry and forestry by means of district chambers and member communities.

### Major Employee Organisations

#### Czech-Moravian Chamber of Trade Unions (ČMKOS)

- the largest trade union headquarters which associates 34 trade unions from individual sectors.

This means that, despite certain difficulties, there is increasingly thorough understanding of the link between the world of education and the world of labour which is necessary for the development of new dimensions of this relationship. Employers' organisations have gradually come into being which are able to overcome the narrow perspective on the need for qualified staff that has been characteristic especially of small companies. These organisations represent employers in negotiations with central government bodies (tripartite) as well as at professional meetings (for example, annual three-day conferences about vocational education organised by the Ministry of Education, Youth and Sports in co-operation with the Ministry of Labour and Social Affairs).

The involvement of trade unions is also important. In many countries, they significantly influence the framing of legislative conditions for vocational training in employer's businesses. Moreover, they influence broader employment conditions and organise their own provision of education.

Within the project, a system for training educators was set up (the so-called "TRÉNINK"), and teachers in selected basic schools were trained to teach a subject called Selection (i.e. the selection of

### The Main Idea and Conditions for Success of the "Most" Project

The starting point for this project was a Czech-British pilot project called *Assistance to Young People Disadvantaged in the Labour Market in the Czech Republic*. The objective was to test and adjust a multi-year British experience at a selected labour office (in the town of Most) and later on to expand it. The project was also tested at other labour offices (in Liberec, Louny, Mělník, Frýdek-Místek and Česká Lípa). It has become the basis for the long-term approach towards the integration of poorly adapted adolescents into society and the world of labour. This approach is based on several principles:

- the necessity of enhancing the qualifications of young people as a prerequisite for their finding jobs. This means, apart from higher chances of finding employment, the possibility of returning to the education system, acquiring a qualification certificate and further upgrading a qualification;
- the interrelation and co-operation of the maximum number of interested institutions - employment services, social sector, educational establishments, employers, local administration and self-government, foundations, non-profit organisations;

- the intensification of preventive measures, primarily by means of strengthening the role of guidance services for both individuals and groups with the slogan "No-one is lost, it is never too late";
- non-traditional approaches and teaching methods - teaching is based on equality and the partnership of participants and programme implementers, on understanding and mutual assistance, on the art of learning and mutual understanding. This new concept brings not only the satisfaction of all involved parties, but also the desire to continue.

an occupation in the final two years). The objective was to identify these young people at risk who could take part in the specialised training. The module-structured training lasts approximately 14 weeks. Individual modules may be adjusted both in terms of fields and in terms of the specific needs of participants. The training consists of the following: (1) the selection of participants; (2) a starting week devoted to ascertaining their motivation; (3) the specification of participants' ideas and modification of the course content; (4) a motivational course aimed at allocating the participants to professions; (5) professional training in the employer's business or while carrying out community services (80% practice, 20% theory) and (6) training for further education or placement in a job - all this is done in close co-operation with career guidance, re-socialisation activities and personality development.

#### **Specific labour market programmes directed towards young people**

In the Czech Republic, as well as in other countries, there are also specific programmes - besides the standard mechanisms - aimed at facilitating the integration of young people in the labour market (primarily those with the lowest learning aptitudes).

#### **Non-standard monitoring and projecting instruments**

Apart from the usual statistical surveys, understanding of the labour market can be deepened by the use of various studies and more complex analyses aimed at identifying the needs of new graduates. These surveys deal with the opinions of employers and, sometimes, with jobs on offer (for example by reviewing job advertisements). They are also focused on the education and career of gra-

duates. In combination with statistical data analyses and their projections, these surveys can provide a relatively comprehensive picture of the situation and needs in the labour market. In some countries (such as France, Ireland and the Netherlands), studies are undertaken which project development in terms of qualifications in individual industries, regions and the labour market as a whole. The results of these studies are compared to developments abroad. Although these instruments, with the exception of some specific professions (such as health care personnel, physicians and teachers), may not be used for the precise planning of educational supply, they ensure the availability of important information both for schools and regions, prospective students and employees and central bodies. It is important to share all available information as much as possible, to make it public and to direct it towards individual groups involved.

#### **II.2.4 From Employment Policy to Labour Market Policy**

Employment policy is a natural response to growing problems in the labour market. The activities of the Ministry of Labour and Social Affairs (MLSA) and of labour offices, which were established in districts under the administration of the MLSA practically simultaneously with the emergence of unemployment in the first half of the 1990s, more or less met the developing needs of the time. Purpose-made measures have gradually been taken to lower the rate of unemployment. These include the following activities, financed by targeted subsidies through labour offices:

- **socially purposeful jobs** established on the basis of an agreement between a labour office and a particular employer for the minimum length of two years. This primarily concerns those districts with a high rate of unemployment and, at the same time, a low number of vacant positions, especially for job seekers who are hard to place. Such a position can also be established on the basis of an agreement with the job seeker in cases where he/she decides to **set up his/her own business**.

- **publicly useful work** directed temporarily towards job seekers hard to place in the labour mar-

ket (those with no qualifications or with a low-level qualification, people from micro-regions with commuting difficulties, the long-term unemployed etc.) - the objective is to preserve people's work habits and motivation until permanent employment is found for them (the employers are usually municipalities);

- **placements of school graduates and the acquisition of a qualification** through the employer (this concerns young people who have not completed their basic education or who only have a basic education);

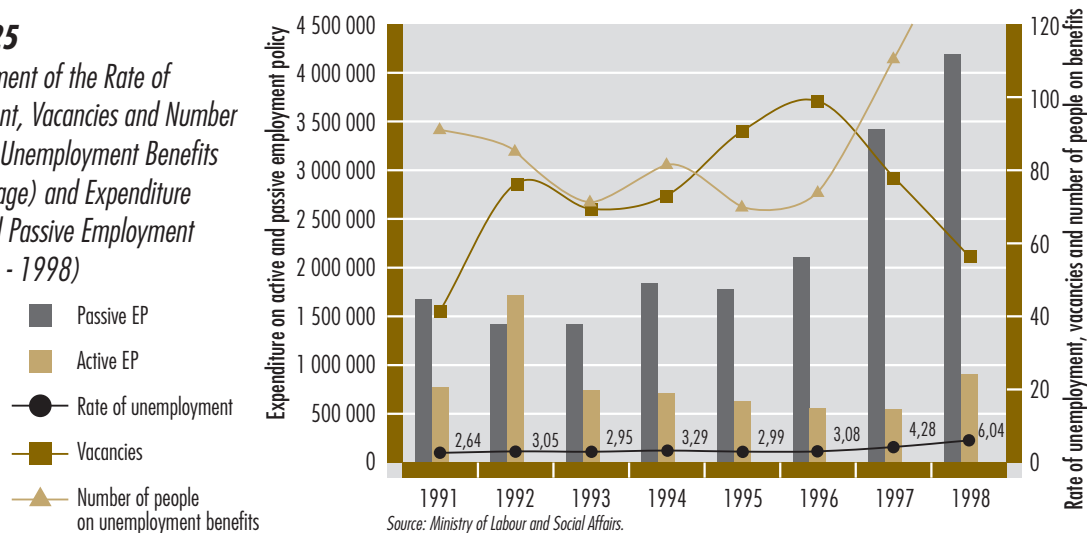
- finding jobs for **the disabled** (the unfavourable factors resulting from their disability are often

combined with a low level of qualification, lower mobility etc.) by means of creating new jobs in sheltered workshops and workplaces for the disabled, or by means of subsidising these protected facilities.

- **re-training** (for details see Chapter I.)

Labour offices also organise guidance services for all those interested, including schools, students and new graduates. In addition to this, they organise **Job-Clubs** (guidance provided to groups) whose objective is to ensure that the participating job-seekers acquire information about the labour market, job-seeking skills, the capacity to communicate within a group and better knowledge of themselves.

**Graph 2.25**  
The Development of the Rate of Unemployment, Vacancies and Number of People on Unemployment Benefits (annual average) and Expenditure on Active and Passive Employment Policy (1991 - 1998)

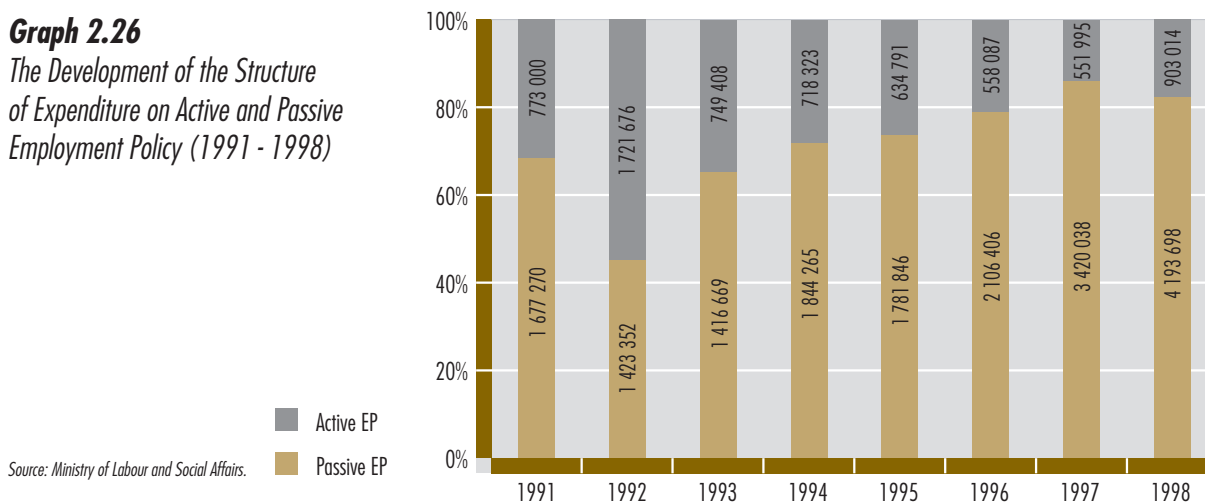


At the beginning of 1998, the MLSA, faced with a rapid reduction in the number of vacancies and a growth in the number of job seekers, drew up an *Employment Policy Programme until 2000*. This programme contained suggestions for solutions to unemployment in the form of an inter-linked government programme policy. Measures of an economic nature have begun to be implemented in employment policy, such as specific government approaches to underdeveloped regions (related to the anticipated introduction of European regional policy in the territory of the Czech Republic). A system of investment incentives has been introduced in order to stimulate economic growth and, consequently, to increase employment. Industrial zones have begun to be set up as a pre-condition

for the creation of new job opportunities (the towns of Karviná, Bystřice pod Perštejnem ...). Interdepartmental co-operation has developed in a substantial manner on labour market measures (co-operation with the Ministry of Industry and Trade, Ministry of Education, Youth and Sports etc.).

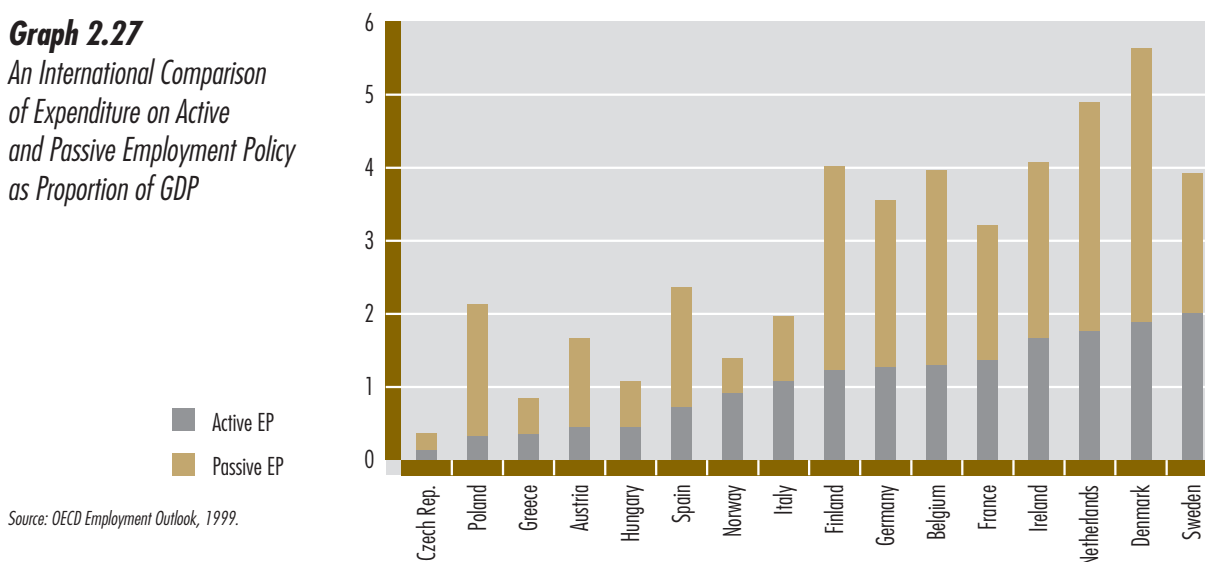
However, it has to be stated that **employment policy is not appropriately linked to the overall economic, social and educational policy of the government** and to principles in place in EU member countries. In other words, there is no real labour market policy. Over the course of the years, there has been an irrational growth in the costs of passive employment policy (social benefits) as compared to its active aspects.

**Graph 2.26**  
The Development of the Structure of Expenditure on Active and Passive Employment Policy (1991 - 1998)



Source: Ministry of Labour and Social Affairs.

**Graph 2.27**  
An International Comparison of Expenditure on Active and Passive Employment Policy as Proportion of GDP



Source: OECD Employment Outlook, 1999.

A still decreasing proportion of the unemployed has been involved in active labour market programmes (in 1998, 16,000 out of 387,000 job-seekers were selected for re-training, and 8,500 persons were selected for practical experience aimed at graduates and young people). The fact that unemployment benefits are higher than minimum wages has led, in some cases, to people preferring to take this form of support rather than finding a job (these issues are described in greater detail in chapter IV).

The adoption in 1999 of a *National Employment Plan*, prepared by the Ministry of Labour and

Social Affairs in close co-operation with other ministries, has been an expression of a new focus of employment policy.

In view of the seriousness of the situation, the *National Employment Plan* has set relatively short-term deadlines for the implementation of its objectives (mostly one to two years). One frequently cited problem is that the plan does not focus on motivational measures which would link social support with the continuing education of the employed. Another objection is that it does not respond to the issue of continuing education in a comprehensive manner, although it deals with

the problem of lack of support for employers in this area. The outcome of a number of measures will very much depend on the degree to which they are effectively implemented (*Programme for Tackling Economic Situation in Some Industrial Companies*). Nevertheless, the adoption of the *National Employment Plan* may be regarded as a very positive step towards the formulation of a systematic **labour market policy**.

### **National Employment Plan, approved by the Czech government on 5 May 1999**

#### **Pillar 1. Promotion of Employability**

- Some of the measures concern the area of **education**. Motivation mechanisms will be introduced, which would focus on striking a balance between graduates' qualification structures and the needs of the labour market. A subject called "Occupation Selection" will be introduced in the curricula of schools which provide compulsory education. Teaching at basic, secondary and post-secondary technical schools will contain information about existing and prospective opportunities in the labour market.
- As far as **income** is concerned, income from employment will increase compared to social income.
- Depending on the development of unemployment, there will be an **increase in expenditure on active employment policy**.
- **The foreign labour force** will be prevented from illegally **entering** the labour market.
- Systematic solutions will be introduced for **issues concerning jobs for the disabled**. These measures will include their comprehensive rehabilitation as a pre-condition for their placement in employment, increased protection and the setting up of a system of economic motivation for these citizens and their employers.
- A bill for a future **Employment Act** will be submitted to the government - expected to come into force on 1 July 2002.

#### **Pillar 2. Promotion of Enterprise**

- The measures concerned should lead to an **increase in the employment** of long-term unemployed job-seekers, with attention paid to members of the Romany community.
- A system of **investment incentives** will be introduced and the development of industrial zones will be promoted - this is considered to be a pre-

condition for the possible location of entrepreneurial activities and creation of new jobs. **Small and middle-sized companies will also be promoted** by means of direct financial support and lower taxation, as well as by development of **guidance services** for SMEs and **vocational education linked to these services**.

- Public commissions will be focused primarily on ensuring the employment of job seekers, particularly those whose placement in jobs may pose certain problems.
- A **Programme for Tackling the Economic Situation of Some Industrial Companies** should be launched.

#### **Pillar 3. Support for the Adaptability of Companies and Employees**

- The measures concerned are directed towards establishing conditions for the application of **flexible forms of work organisation and working hours**, reducing over-time work and **enhancing the motivation of employers to upgrade the qualifications of their own employees**.
- **Pillar 4. Support for Equal Opportunities for All** This pillar concerns the strengthening of legal and institutional instruments and mechanisms which have been set up **to eliminate discrimination in the labour market**, to support those groups of citizens who have serious difficulties in accessing the labour market and to eliminate unjustified differences in the remuneration of men and women.

Moreover, the current policy of the Ministry of Labour and Social Affairs is appropriately focused on groups of the population who are most at risk: **graduates entering the labour market for the first time and the disabled**.

When assessing labour market policies, it is necessary to bear in mind the way in which these policies, by means of targeted measures, help to reduce unemployment and use stimuli for the development of the economy, a prerequisite for the increase of the supply of jobs. These functions are partially reflected in the *National Employment Plan*. The task for the future will be to fulfil these functions. One of the conditions for fulfilment is, of course, the allocation of sufficient resources on employment policy by the government.

### II.3 Recommendations to Improve the Position of Human Resources in the Labour Market

*It is clear that measures to improve the situation in the labour market or, at least to prevent it from worsening, must not be one-sided. For example, they cannot be focused only on **unemployment and social benefits** and the social protection of employees. The level of this support must be considered in relation to income from employment, to real social need, to the activities of the unemployed aimed at improving their qualification and their efforts to find a job. The measures must be complemented by **flexible employment conditions and income** in such a way that, for example, a high minimum legal wage does not deter employers from creating new jobs. The enormous volume of social income in this area is not justifiable unless its **stimulating function** is emphasised. Some steps in this direction have already been taken. However, the Czech Republic still faces many others (for example, creating a link between the level of social benefits and an active approach to finding a job).*

As unemployment rises, it is important to place a stronger emphasis on **active employment policy** and its growing share of the total public funds spent on employment policy as a whole. Current expenditure on active employment policy is low with regard to the real need. Individual programmes have therefore only limited influence. It will be necessary to increase expenditure on active policy measures and to seek an optimal **balance between active and passive measures**. It is also necessary to monitor and assess **the outcome** of active as well as passive employment policy and to move towards a comprehensive **labour market policy** including **preventive measures** which in addition to direct support for employment **also support macro-economic development and entry on the labour market in the field of education**.

**Re-training courses**, part of active employment policy, must be made available not only to those people who have already been excluded from the labour market or those who are at risk of losing a job, but also to other people who express their interest (which is not the current practice).

Special attention must still be devoted to **groups at risk** in the labour market which include fresh graduates, the disabled and all the long-term unemployed. Besides standard policies, **targeted programmes** must be developed with the purpose of overcoming the difficult position of these

groups (their re-training and boosting their qualifications, their socialisation, return to the education system, subsidised jobs etc.).

A **career guidance system** is an integral part of employment policy. This system must not only be developed by labour offices but also by various other government and non-governmental initiatives including those provided by schools themselves. This system must be backed up by the appropriate

information background on the state and prospects of the labour market as provided by regular statistical surveys, more complex analyses (projections) and specialised surveys.

In the near future, Czech society is likely to have to come to terms with what is for Czechs an unusually **high rate of unemployment** which will not differ much from those in most European countries. What are desirable are **pro-growth economic measures** which would support investment activities, and efficient production, speed up the restructuring of the economy, including setting up SMEs, and reduce the tax burden on companies as well as social insurance. These measures are inevitable as a framework for all other policies. They may limit or stop the growth of unemployment, but it is obvious that a drop in unemployment is not to be expected soon. The outcome of certain measures may, on the other hand, be counter-productive - the inflow of modern technologies may contribute to reduction in need for employees.

The issue of the position of human resources in the labour market does not, of course, end with entry into employment. The success of human resources during their **professional careers** depends on education before entering the labour market and on in-service training as well as various types of experience gained through work and other activities. In most cases, the labour market

does not require narrow specialisation. What it requires is **a broad profile of knowledge** based on the appropriate general education and a high level of qualification. Stronger emphasis will gradually be placed on **key competencies** which may be used in modern labour markets. These competencies primarily relate to the ability actively to use information and to communicate both in the domestic and international environment. What is already obvious at present is the need for contact with work experience in all types and levels of education.

Education and vocational training must also focus on the growing need, on the part of privatised businesses, for **entrepreneurial capabilities**.

In view of the importance of appropriate qualifications and competencies, it is necessary to make

sure that incentives for the **organisation and purpose-linked funding of training by employers are increased**. Moreover, there must be a permanent effort to **facilitate direct communication between employers and other social partners and education institutions**.

Various tax advantages should also be attached to other employer activities which may substitute for active employment policy measures (particularly the creation of new jobs).

Implementation of measures contained in the *National Employment Plan* - which represents a step ahead from traditional policies which target the unemployed towards comprehensive economic strategies and a real labour market policy - must be continuously **assessed and modified**.







# Chapter III



### III. HUMAN CAPITAL AND FUNCTIONAL LITERACY

#### III.1 Functional Literacy - Human Capital Indicator

*Human capital is a term which is being used with increasing frequency both in economics - where it became domesticated as early as the early 1960s thanks to the now famous theory of human capital most often connected with the names of Gary S. Becker (1964) and Jacob Mincer (1958) - and in sociology where it appears in the work of Pierre Bourdieu. According to Bourdieu, capital may be perceived as **any capacity able to produce profit and re-produce itself in the same or expanded form and able not only to accumulate, but also to be exchanged, converted and re-produced in an expanded manner** (1986). It is not without interest that it is the socio-economic transformation in Central and Eastern Europe which, more and more often, forces theorists, economists and politicians to face the issue of the creation and re-valuation of human capital. It was in the former communist countries where, in contradiction to ideological proclamations, human capital was an entirely marginal factor in economic and social developments.*

As the importance of human capital studies for the understanding of economic and social changes grows, the issue which is more and more often raised is how to measure this quantity. The most frequently used indicator of human capital is achieved level of education, the number of years spent studying or, possibly, participation in continuing education (these factors in the context of usability of human resources have, so far, been paid the most attention in this publication). The assumption is that **education systems** fulfil two functions in a society: selective and productive. As regards **the selective function**, it may be stated that the education system (particularly in its higher stages) selects and sorts out individuals based on their inborn capabilities (or those gained through the family), talents and, primarily, based on their motivation for education. The school is, at the same time, expected to **add further value** to this initial capital - such as knowledge, information, skills, the capacity to learn further and gain further information. Provided that this ideal model functions, a certificate of achievement at a certain level of education represents a reliable human capital indicator for the employer.

Although formally achieved education may be considered a basically reliable kind of human capital, it is not its ideal indicator. First of all, the use of formal education as a human capital indicator implicitly assumes that education systems are uniform in efficiency, both in terms of the selective and productive function. This assumption is not, of course, entirely correct. Education systems differ in degree of selectivity as well as in the way in which their functioning deve-

lops pupils and students' abilities and qualities which are important for success in the labour market and in ordinary life. Moreover, an objection may be raised that **further skills and competencies** are added during an individual's life-time to the knowledge, skills and competencies gained in schools. This is directly dependent on the environment in which an individual operates as a result of his/her occupation, on the economic situation, social classification and on the way he/she uses leisure time. Finally, there is the objection that skills and knowledge acquired in schools may gradually disappear if they are not actively used and developed in employment.

For the reasons stated above, there have been efforts to find more direct indicators of human capital. One of the ways of direct measuring human capital is measuring what is known as **functional literacy**. This is based on the fact that in developed countries, literacy means not only the basic knowledge of reading, writing and counting, but also the ability to get one's bearings in the expanding world of information and, of course, ability to use this information in a way that allows full integration of an individual in

a society. What applies to a human being as an individual also applies to a society as a whole. However exaggerated this may sound, it may be said that functional literacy, which is defined as the capacity to participate in the world of information, has gradually become a pre-condition for the economic and social development of nations that is even more important than their wealth in the form of natural resources.

This means that there is no doubt that human capital is increasingly being determined by people's capacity to **deal with information and use it efficiently** for their own benefit, or that of a company, firm or school. Not many people nowadays question the fact that it is this capacity, which experts call functional literacy, that is becoming the most important aspect of labour's preparedness for changes in requirements concerning job performance. The Czech Republic cannot avoid these changes if it is once again to become a developed country.

It is obvious that the testing of functional literacy cannot cover the whole range of skills and capacities making for the success of an individual in a modern society. However, with regard to the fact that the capacity to work with information is increasingly becoming an important part of human capital, this limitation may be accepted - although we must be aware of it when interpreting the results of surveys of functional literacy as an indicator of human capital. The possibility of measuring human capital (defined in this way) in such a way as to allow comparison with other countries has raised various interesting questions: first, we may ask whether Czech people has enough or too little of this capital compared to countries with which the CR wants to compete in economic terms in future. It is no less important to know what will be the fate of those whose capital will be below a certain critical limit. We may also learn how large this possibly endangered group may be. Do people who belong to this risk group realize that they are facing this danger? What is the relationship between functional literacy and one's fulfillment in life? What is the relationship in the Czech Republic between formal education and functional literacy? In what stages of education is the Czech Republic close to the developed world and where is it diverging from it?

### Basic Data Concerning Functional Literacy Survey in the Czech Republic

Initiation of the project	January 1997
Preparation and testing of the Czech version of the instruments	January 1997 - October 1997
Selection and preparation of the main survey	November 1997 - December 1997
Main survey	December 1997 - April 1998
Scoring, preparation of the set of data for domestic analyses	May 1998 - August 1998
Preparation of the set of data for the international research team	May 1998 - October 1998
Selected for the main survey:	5000 addresses
Total number of respondents:	3132

The SIALS project was supported by major international organisations (the OECD, UNESCO, EUROSTAT). Throughout the entire period of its implementation it was led by an outstanding team of experts from the *Statistical Office of Canada* (this is, by the way, where the current chairman of the Czech Statistical Office came from) and from the renowned *Institute for Testing in Education in Princeton - ETS*. At present, there are already over 20 countries involved in the project. In the first wave they included France, the Netherlands, Canada, Germany, Poland, Sweden, the United Kingdom, Ireland, Switzerland, and the United States. In the second wave, the following countries took part: Australia, New Zealand, Belgium, the Czech Republic, Chile, Denmark, Finland, Hungary, Italy, Norway and Slovenia. In the Czech Republic, it was possible to implement the project primarily thanks to the National Training Fund which took up funding it, and thanks to the Ministry of Education, Youth and Sports which added its funding in the second year of implementation (1998). The very demanding work, consisting of the actual collection of data and testing of over 3,000 respondents, was carried out by the SC&C research agency.

At the time this chapter was being prepared, the so-called calibrated data was not still available (its preparation for the SIALS project is the responsibility of ETS Princeton). With regard to the topical nature of the subject and to the work schedule for this publication, functional literacy scales were used here which had been calculated by means of a substitute algorithm. It is assumed that the divergence from the calibrated data will be very small.

### III.1.1 Is it Possible to Measure Functional Literacy?

In the autumn of 1994, an extensive international comparative project was launched - *International Adult Literacy Survey - IALS*). The Czech Republic participated in its second wave (SIALS) in the spring of 1998. The purpose of the project was to promote an understanding of functional literacy and to indicate that the capacity of people actively to handle information affects the life opportunities of people in modern societies and that it is an important source of economic success of individuals as well as countries.

The major objectives of the project were ambitious at first glance. First of all, it was necessary to prove that functional literacy, which is defined as the ability to actively participate in the world of information, really is an important part of human capital. Moreover, it had to prove that information about achieved levels education does provide a certain idea about an individual's functional literacy, but definitely not to the extent that education and functional literacy could be considered identical. In this sense, one could expect to find interesting differences between individual countries: in some countries, schools provide an education which is a passport to the world of information and which ensures that people are able to deal with information in an active manner. In other countries, the situation may be less promising: people learn passively to accept a certain volume of, as a rule, outdated findings and acquire skills which, in a few year's time, no employer will require.

#### What is Functional Literacy?

In the preface to the report *International Adult Literacy Survey* which was published in 1995 (*Literacy, Economy and Society*, 1995), the term "functional literacy" was defined in the following way:

*"The term 'literacy' is used to denote a certain way of behaviour, namely the ability of an individual to understand printed information and use it in day-to-day activities, in personal life, in employment and community in order to achieve his/her objectives, develop knowledge and potential (capabilities). The term is used to characterise a broad set of capacities to process information. The concept points to various skills which make up literacy in developed industrial countries" (page 3).*

For the purpose of testing, functional literacy was divided into three components: literary, documentary and numerical. **Literary literacy** is, simply said, the ability to find and understand information in texts which are not designed directly to convey a simple piece of information (editorials, review, essays etc.). **Documentary literacy** is the necessary ability to search for and use a precisely defined piece of information which is contained in a document (job application form, request to make copies, transport schedule etc.). In this case, the tested person is often asked to respond to the given information in an appropriate manner (to fill data in a questionnaire, to fill out a form etc.). Finally, numerical literacy is the capacity to work with numbers, which means to apply arithmetic operations to data contained in materials of various complexity, such as in graphs, tables or reports. Overall functional literacy is the result of all the three components.

### III.1.2 How High is Functional Literacy in the CR in Comparison with the World?

Preliminary results of the project which are currently available indicate that, in comparison with other countries, the CR did not do as well as would be desirable before its expected accession to the European Union. When considering the results of the Czech Republic among the countries surveyed in the first wave of the study, it may be stated that although the CR scored better than Poland, it came behind all other countries for which results are available. Ireland, the United States and United Kingdom are only slightly „ahead- - figuratively speaking, the CR might still catch up with them. The other countries, however, are playing in an entirely different league.

#### What capacities may be regarded as corresponding to different levels of functional literacy?

The functional literacy levels achieved were classified to form four levels (the fourth and fifth level are combined in one, due to a small number of people who achieved the fifth level - the level is denoted as 4/5). The following capacities roughly correspond to the individual levels of functional literacy:

**Level 1:** An individual who has achieved this level is able to find a precisely defined piece of information

in a coherent and short text (for example, to find out from instructions to a medicine how often the drug should be used) and to carry out a simple and precisely assigned numerical task (usually adding and subtracting).

**Level 2:** An individual at this level of functional literacy is able to find the required information based on a simple comparison, usually using one criterion, in a simple and coherently structured text or document. He/she is able to pick out figures in a text or document which are necessary to carry out simple numerical operations (usually adding and subtracting). He/she is able to point to an outright contradiction in information.

**Level 3:** The achievement of this level means that an individual is able to arrive at the required information based on assessing the validity of certain conditions or based on combining more pieces of information which are placed in different parts of the text or document. He/she is able to sort out relevant and irrelevant information and to recognise a misleading piece of information. He/she is able to carry out more complex arithmetic operations using data which must be searched for, or select such data from a larger quantity of data which is appropriate for the assignment. It is only at this level that the capacity to work with information begins.

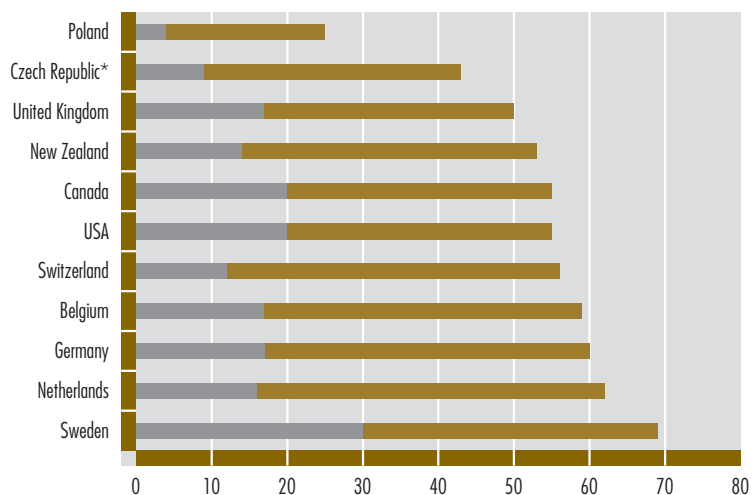
**Level 4/5:** An individual who has achieved the highest level, which is the result of combining two original levels (4 and 5), is able to recognise a correct piece of information of a more general nature in a document with complex structure by assessing a range of conditions. He/she is able to sort out relevant and irrelevant information and to generalise from it. He/she is able to choose the required arith-

metic operations for which the relevant figures must be searched. A person who has achieved this level may be said to have really acquired an active approach to work with information.

If we realise how insufficient, now and even more with regard to future, the ability to deal with information at **the lowest level of functional literacy** (level 1) is, we cannot be content with the fact that almost one third of adult population (31%) in the Czech Republic fell within this category. In developed countries it was less than one fifth of the population (18%). There are also countries, where this group, which is certainly under threat in economic terms, accounts for a mere one tenth of the adult population (Germany, the Netherlands, Sweden). The worst scores among developed countries were achieved by Ireland where this group accounts for 23% of adults. No less alarming is a glance **at the highest places in the functional literacy scale**. Less than one tenth of adults fall within the highest category (4 and 5) in the CR. In Sweden it is 30%, in the United States 20%, in the Netherlands, Germany, the United Kingdom and Belgium it is 17%.

In comparison with the world, the CR has the worst scores in literary literacy, while in documentary and numerical literacy it has come much closer to the rest of the world. This testifies to the fact that the CR's most severe handicap lies in the absence of an **active** approach to information - success in literary literacy was the most sensitive to the ability to **sort out, generalise, compare and**

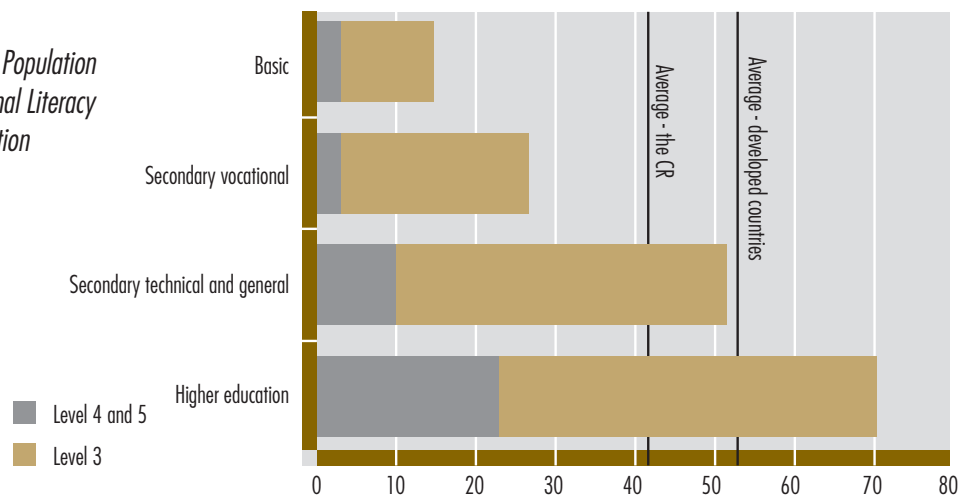
**Graph 3.1**  
The Proportion of the Adult Population with Higher Levels of Functional Literacy



\*) Preliminary data  
Source: SIALS, 1998, IALS, 1994-95.

**Graph 3.2**  
*The Proportion of the Adult Population at Higher Levels of Functional Literacy in terms of Achieved Education*

Source: SIALS, 1998, IALS, 1994-95.



**combine** information according to certain criteria - rather than to find and **reproduce** the information. It is certainly true that people with a higher level of education score better in functional literacy tests than people with lower education. It is no wonder that countries with higher rates of educational achievement have better average results in functional literacy testing. As regards the Czech education system, the results clearly indicate that it is only the "maturita" examination at secondary school which is the key to active approaches to the world of information. People who only have a vocational education (without the "maturita") do not score much higher than those who only have a basic education. One of the very important findings obtained

through functional literacy surveys is that the higher the education, the worse the Czech results as compared to the world. In other words, when comparing individuals with an upper secondary vocational or technical education, the Czech Republic achieves better results in an international comparison than when individuals with a university education are compared. This results signals that basic and secondary schools in the Czech Republic, when compared to developed countries, are of better quality than HE institutions in terms of promoting functional literacy. However, this does not change the fact that education without a "maturita" is a clear barrier to those levels of functional literacy which bring the Czech Republic closer to developed countries.

**Graph 3.3**  
*The Proportion of the Adult Population in the Two Highest Functional Literacy Categories by Education*

Source: SIALS, 1998, IALS, 1994 - 95.





### III.2 Is Functional Literacy a Source of Success and Social Promotion?

*It has turned out that a high level of functional literacy is one of the sources of success in life. For now, however, this is more true of developed countries where the labour market is more demanding and sensitive to what job-seekers actually know and how flexible and inventive they are in their capabilities and skills. However, the Czech labour market is beginning, slowly but surely, to function according to similar principles. People who have achieved considerably better results in functional literacy tests usually assess their career after 1989 as one of advance. Those who got the lowest scores see the development of their social position as downward. For example, almost 30% of the whole population believe that their mobility, since 1989, has been upward, and almost 40% of these "successful" individuals are among those with the highest scores in functional literacy.*

However, this is not only a question of subjective feelings. Functional literacy is beginning to influence professional careers in the Czech Republic as well. For instance, research has confirmed that **upward mobility** (i.e. change of employment which has led to improvement of socio-economic position) was most related to functional literacy in those individuals who achieved only vocational education without "maturita". The people in this group who achieved the highest levels of functional literacy, moved "further up" considerably more often than apprenticeship certificate holders with very poor functional literacy. This is evidence of the growing importance of functional literacy and, consequently, of the general component in vocational training in manual professions.

In developed countries, low functional literacy presents a great risk of **downward mobility**, low income or even loss of employment. At the time the survey was conducted (spring 1998), in the Czech Republic this risk was lower in comparison with developed countries. It was only later that the situation in the labour market deteriorated. But already, at that time, people who scored very poorly in functional literacy tests, particularly the youngest ones, were in considerable danger. Nearly one half of young people (up to 35 years of age) who attained the best results in the tests have experienced upward mobility in their employment since 1989 and only 4% of them have gone down. Only one quarter of young people with the lowest level of functional literacy have experienced

upward mobility and almost 38% of them have experienced downward mobility.

As regards **unemployment**, it is also true that people with low functional literacy are at higher risk. In the CR, the labour market has, so far, been more tolerant towards them, although this risk has become apparent even here. In the course of one year (1997), 7% of economically active people with

higher levels of functional literacy (3, 4 and 5) were hit by unemployment, while in those with the lowest levels (1 and 2) it was already 9%. This

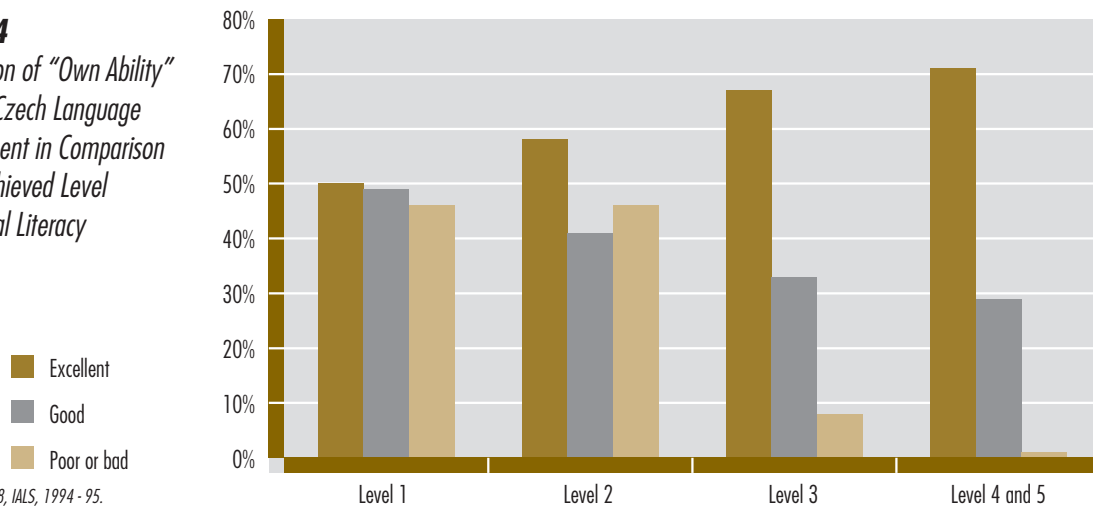
*Incidence of Unemployment by Levels of Documentary Functional Literacy among Individuals Aged 16 - 65 Years*

	Level 1/2	Level 3, 4/5
Australia	11,3	4,6
Belgium (Flemish)	17,7	8,0
Canada	17,0	7,2
Germany	16,5	7,2
Ireland	23,4	9,9
Netherlands	9,8	5,2
New Zealand	15,2	3,8
Poland	17,0	11,5
Sweden	12,8	7,0
Switzerland (French part)	5,3*	5,2*
Switzerland (German part)	3,6*	3,2*
United Kingdom	17,5	7,7
United States	7,1	3,4
Czech Republic	9,2	7,2

\* Unreliable estimate

Source: IALS, 1994 - 1995 and SIALS 1998.

**Graph 3.4**  
*An Evaluation of "Own Ability" to Use the Czech Language in Employment in Comparison with the Achieved Level of Functional Literacy*



Source: SIALS, 1998, IALS, 1994 - 95.

means a ratio of 1:1.3. In developed countries, this ratio (which is to the detriment of people with low functional literacy) is much clear-cut: for example, in Belgium, Germany and Canada it was 1:2.3 (almost 18% unemployment among people in the lowest categories and 8% with the highest levels of functional literacy). It may therefore be anticipated that a steep growth of unemployment will primarily pose a threat for people with very low functional literacy, as it will be these people who will show poor flexibility. Moreover, they will have more difficulties finding jobs than those who are able to get their bearings more quickly and learn new things. It is alarming to see how few people in the Czech Republic realise that they have a deficit in their capacity to work actively with information (in terms of the current definition of literacy, they are actually illiterate). One half of those people with the lowest level of functional literacy (level 1) believe that their ability to work with a text written in the Czech language is excellent. The other half assess this ability as being "good". In this respect, the difference between these people, who are really threatened, and those with the highest levels of functional literacy (4 and 5) is very small. The conclusion is that the problem of the Czech Republic is not only the relatively large functional literacy deficit compared to developed countries, but also the fact that people who are most at risk as a result do not admit to any problems. In a way, this is evidence of how, so far, our labour market and most of our institutions have been functioning.

*Working Activity Characteristics in the EU and the Czech Republic (% of positive answers)*

Country	1	2	3	4
Czech Republic	43	60	67	61
EU Countries	57	45	82	74
Belgium	50	36	82	68
Denmark	58	39	90	84
Finland	69	47	87	90
France	53	48	84	74
Ireland	50	54	72	69
Italy	47	41	78	75
Netherlands	61	32	91	81
Germany (East)	69	22	82	81
Germany (West)	57	34	76	73
Portugal	38	43	78	66
Austria	74	29	77	73
Greece	49	59	71	49
Spain	38	61	86	62
Sweden	72	27	93	86
United Kingdom	71	67	82	84

Note: 1 Complex activities  
 2 Monotonous activities  
 3 Solving of unexpected work problems  
 4 Learning new things

Source: *Working Conditions in the European Union, 1996*, Institute for Information on Education 1998.

### III.2.1 Complexity of Work in International Comparison

The differences in terms of work complexity, as well as information about how demanding the relevant work is, are indicated in the data from an international survey called *Working Conditions in the European Union*. Data concerning the Czech Republic has been added by the AMD agency. In comparison with western countries, monotonous activities clearly prevail over complex ones in the Czech Republic, which places it not far from Greece or Spain. There is also a low frequency of solving unexpected work problems, which, again, points to the relatively routine nature of work. As concerns the intensity of learning new things, the CR could compare, in an ideal situation, with southern European countries.

The functional literacy survey was also focused on **respondents' answers** to a question concerning the complexity of work they perform. These answers may be influenced both by the context (even less demanding work may seem more difficult in an environment with generally low demands), and by the degree to which respondents were critical.

Three sets of questions were asked in the survey which concerned the following: 1. frequency of use (reading) of various types of information in the respondent's work; 2. active work with documents writing, filling out) and 3. use of various skills. The answers, of course, reflect the economic structure of work (sectors, industries, professions) as well as the content of work within individual professions.

As regards the passive use of various types of information, its frequency in the CR is much higher than in Poland, but as a rule lower than in western countries. What is interesting is the data concerning the use of foreign languages at work. It is obvious that their use (and therefore their need) is so far lower in the Czech Republic than in western countries. In United Kingdom and the United States, this data is influenced by the fact that the English language has become an international language and the need to use other languages is not strong in these countries.

The higher average frequency of information activities is also evidence that these activities are more equally represented in economically active population, which means that working activities are per-

#### *Use of Information and Work with Written Documents in Employment (frequency index)*

Type of information or document	Czech Republic	Poland	Germany	Netherlands	Sweden	United Kingdom	United States
<b>Type of information:</b>							
Letters or notes	48	33	77	64	71	71	68
Reports, articles	49	27	59	57	65	51	54
Manuals, catalogues	41	26	51	48	50	49	56
Graphs, charts	26	21	44	37	47	35	34
Accounts, tables	40	27	54	42	41	43	44
Foreign language materials	15	5	19	27	28	6	4
Instructions	20	24	28	24	.	27	31
<b>Filling out documents:</b>							
Letters of notes	41	30	67	50	63	52	55
Forms, accounts	44	29	52	25	33	46	49
Reports	32	19	42	34	37	34	40
Technical data	25	9	24	29	19	20	27

Note: The index is calculated so that every day = 100, and rarely or never = 0.

Source: IALS 1994 - 95 and SIALS 1998.

vaded by these elements in developed western countries. This is also indirectly indicated by data indicating the degree of work with information according to the level of education. While in Poland these differences are large, they are considerably smaller in the Czech Republic and the smallest in Western Europe. Larger differences in the United States may point to the greater vertical differentiation of the labour market in this country.

### III.2.2 “The more languages you know, the more you are a human being” (Czech saying)

The functional literacy survey has revealed another major deficiency in the Czech population: inability to make oneself understood in anything other than the native language. In a world which is becoming increasingly globalised, this ability is becoming an important part of human capital. Countries which do not have enough people capable of actively participating in the world of information in the international context will lose out on globalisation and their comparative disadvantages

will accumulate. In Europe, the Czech Republic is not the only country where the native language is not one of the major world languages.

A tell-tale picture of the situation may be obtained from information on people's self-assessment of their ability to speak **English**. In the Czech Republic, 15% of people 16 to 65 years old say that they are able to have a conversation in English. Setting aside the subjective character of this evidence, it is possible to say that Czechs are much better than Poles, of whom only 5% say the same. Unfortunately, the Dutch (70%) and Belgians (51%) are far from the Czechs.

If we expand the question to include other world languages (German, French and Spanish), it must be said that 73% of Czech do not speak any of these. Poles are much worse (90% of them do not speak any of these world languages), but the Dutch (23%) and Belgians (32%) are, again, unsurpassable. These brief characteristics suggest that language competencies of the Czech population do not signal a high state of readiness for joining European structures.

#### Knowledge of Foreign Languages in Different Countries - Percentage of Respondents in Individual Categories

	Czech Republic	Poland	Netherlands	Belgium
<b>English</b>				
Speak English	15,10 %	4,80 %	69,50 %	51,30 %
<b>World languages <sup>1)</sup></b>				
Cannot speak any	73,10 %	90,50 %	23,20 %	32,30 %
Can speak at least one	26,90 %	9,50 %	76,80 %	67,70 %
<b>Foreign languages - total</b>				
Can only speak native language	44,70 %	80,10 %	20,90 %	2,10 %

<sup>1)</sup> The term world languages is understood to mean German, English, French and Spanish.

Source: IALS 1994 - 1995 and SIALS 1998.

#### Knowledge of English in Age Groups in Different Countries – Percentage of Respondents who Stated that They Were Able to Have a Conversation in English

Age group	Czech Republic	Poland	Netherlands	Belgium
16 – 35 years	28,10 %	7,70 %	83,80 %	67,10 %
36 – 50 years	9,30 %	2,80 %	70,30 %	45,80 %
51 – 65 years	3,40 %	2,10 %	47,50 %	26,60 %

Source: IALS 1994 - 1995, SIALS 1998.

For many years, it was Russian that was the obligatory second language in countries of the former Soviet bloc. It is therefore appropriate to look at knowledge of any other languages. Czechs speak only Czech in 45% of cases. 80% of Poles know only Polish. The Dutch know only their native language in 21% of cases and Belgians in 2%. This means that the language handicap on the part of Czechs may, to a considerable extent be explained by the past. On the other hand, the language skills of the population of more developed European countries should definitely inspire serious thinking about this problem.

It may be objected that the situation is changing as many young people could freely begin to study foreign languages only after 1989. This means that results could be more favourable among **younger age groups**. The younger generation is, of course, much better equipped in terms of the knowledge of foreign languages compared to the older generation. However, it is also true that the gap between the Czech Republic and comparable countries is still huge.

It is important to see what language competencies

are enjoyed by some particular **groups of professions**. The highest level of language competencies is to be found in scientists, creative experts and educators. 33% of them are able to have a conversation in English. Although this figure is double the national average for the CR, it is still very little in international comparison (almost all scientists and experts speak English in the Netherlands). In the context of European integration, it is appropriate to look at the category of members of parliament, legislators and senior managers. The language competencies of these people are above average in the Czech Republic but compared to the world, they are very bad. Only 15% of members of professions whose work content, according to ISCO (International Standard Classification of Occupations), is to define and formulate government policies, to draw up and pass legislation and monitor its implementation as well as to represent government at various levels, can speak English. It is interesting that in this group, which includes legislators and senior managers, Poland scores better in the sense that these people are more likely to speak English than the average

*Knowledge of English in Occupation Category (according to ISCO1) in Individual Countries<sup>2</sup> – Percentage of Respondents who Stated that They Were Able to Have a Conversation in English (in %)*

Occupation category	Czech Republic	Poland	Netherlands
Legislators, senior officials, managers	14,5	10,8	78,6
Scientists, professionals	33,2	19,5	94,3
Technicians, medical personnel, associate professionals	17,9	8	85,8
Lower administrative staff (clerks)	11,7	1,7	82,4
Service workers and shop and market sales workers	9,9	6,1	83,9
Skilled agricultural and forestry workers	3,8	0,8	71,8
Craft and related trades workers	3,6	1	55,1
Plant and machine operators and assemblers	3,4	0	61,2
Semi- and unskilled workers	9,5	0,6	72,2
<b>Total</b>	<b>15,1</b>	<b>4,8</b>	<b>69,5</b>

Notes: 1) ISCO - International Standard Classification of Occupations

2) Data for Belgium is not available for this table.

Source: IALS 1994 - 95 and SIALS 1998.

population (in 11% of cases). In the Netherlands, this category does not stand out significantly (79% of them can speak English). In Belgium, the percentage of those who speak English in this category is significantly higher than that for the whole population (79%). The competencies of various groups of occupations are indicated in greater detail in Table 5.2.4. When analysing the language skills of **groups of people by educational attainment**, we arrive at a not too surprising finding that people with a higher level of education are more language-competent than the population on average. Individuals who only hold apprenticeship certificate score worse than the population as a whole - as in the results of functional literacy testing.

In the countries which are compared, the relationship

between education achieved and language skills is similar - the difference is, however, that the overall level of knowledge varies.

There is a lower percentage of people with a university degree in the Czech Republic who speak English (33%) than of English speakers among those who have not completed secondary education in the Netherlands (50%). In Belgium, 29% of those without a secondary education can speak English. In Poland, only 19% university degree holders can speak English. When monitoring the knowledge of languages other than English, it may be stated that the situation is a little better for Czech university graduates (54% of them speak some major foreign language). But even in this respect, the Czech Republic rates worse in the final assessment than western European countries.

*Knowledge of English in terms of Education in Individual Countries – Percentage of Respondents who Stated that They Were Able to Have a Conversation in English*

Education	Czech Republic	Poland	Netherlands	Belgium
Without secondary education	8,6 %	2,1 %	49,5 %	28,6 %
Secondary education	22,0 %	3,7 %	83,0 %	61,0 %
Higher education	32,6 %	18,6 %	93,4 %	78,6 %

Source: IALS 1994 - 95 and SIALS 1998.

*Knowledge of World Languages<sup>1)</sup> in terms of Education in Individual Countries - Percentage of Respondents who Stated that They Were Able to Speak in Some World Language*

Education	Czech Republic	Polsko	Nizozemsko	Belgie
Without secondary education	18,6 %	4,1 %	60,0 %	47,3 %
Secondary education	34,7 %	11,8 %	88,8 %	78,1 %
Higher education	53,5 %	29,9 %	95,3 %	89,5 %

Note: <sup>1)</sup> The term 'world languages' is understood to mean German, English, French and Spanish.

Source: IALS 1994 - 95 and SIALS 1998.

### III.2.3 Causes in Social Inequality and Educational Content

The reasons why the CR did not, and could not, score better in functional literacy may be deduced from the fact that the CR was rated only a little better than Poland and from figures which indicate the levels of education where the CR comes close to

developed countries. The social system before 1990 curtailed not only political and civic liberties, but also, despite all proclamations about the development of an individual and his/her abilities, the development of human capital and free thinking. This socialist school methodically taught people not to use information activity; the whole of society was insulated from the world of information for decades.

An important role in these developments was also played by the dynamics of the **development of educational opportunities**. The SIALS confirmed that the slow expansion of educational opportunities leads, in the longer term, to growing inequalities in **access to higher levels of education**. It has turned out that, compared to OECD countries, the CR unfortunately heads

the list in terms of the long-term growing social closure of the education system. It was found that higher levels of education (particularly HE institutions) are, to much larger extent than in developed countries open to the children of educated parents, while children of less educated parents fail in this competition. This trend is rooted in the communist system. Despite ideological

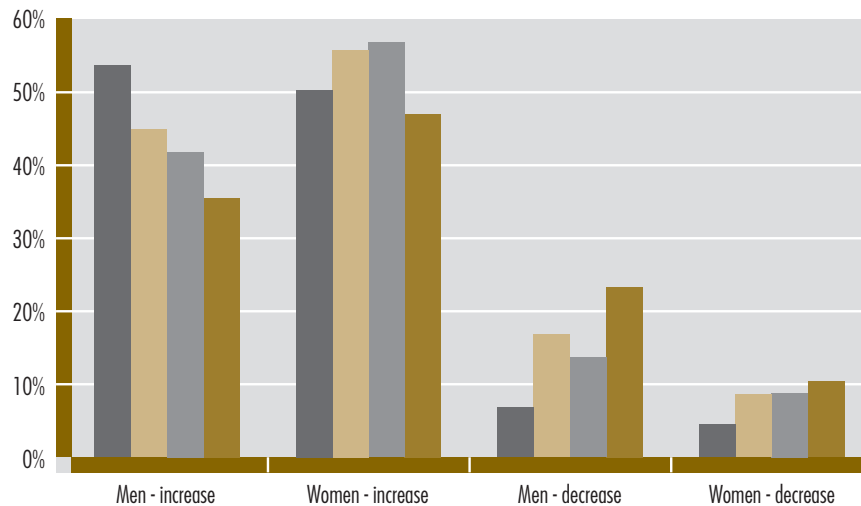
**Graph 3.5**  
The Development of Upward and Downward Educational Mobility in the Czech Republic

Men: comparison of sons with fathers  
Women: comparison of daughters with mothers

The respondents were 18 years old

- 1950 - 1959
- 1960 - 1969
- 1970 - 1979
- 1980 - 1993

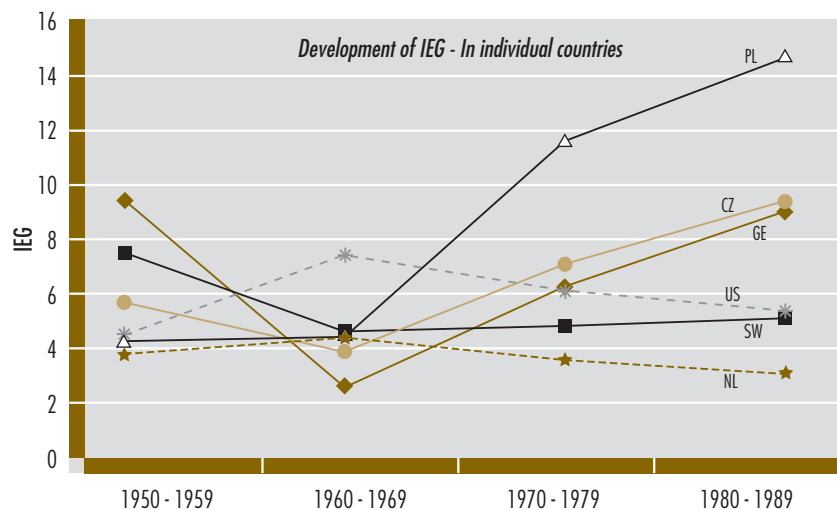
Source: SIALS, 1998, SC&C.



**Graph 3.6**  
The Development of Inequality in Access to Higher Education. The Czech Republic in International Comparison.

- ◆ Germany
- Sweden
- Czech Republic
- \* USA
- △ Poland
- ★ Netherlands

Source: SIALS, 1998, IALS, 1994 - 95.



proclamations about ensuring equal opportunities, the almost frozen level of student numbers actually did not allow for the educational progress of children from lower social groups. The Czech

Republic is the only country in Europe where, so far, upward mobility has been dropping and, at the same time, downward mobility has been increasing.

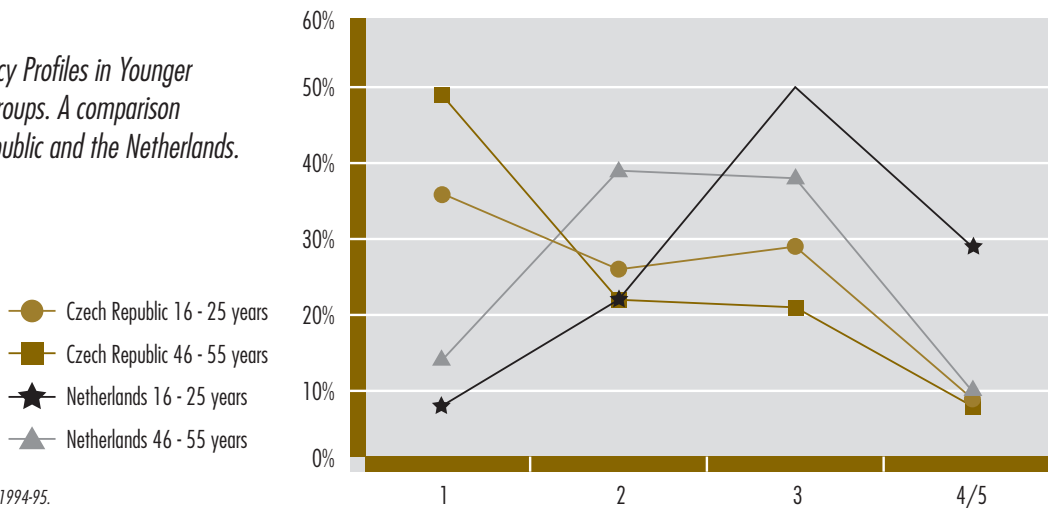
To put it simply, a decreasing number of Czech children received higher levels of education than their parents. At the same time, the proportion of children who did not even achieve the level of education attained by their parents increased.

Although the proportion of young people admitted to HE institutions has been growing since 1990, the demand for HE education is still much higher than the supply of study places. All data indicate that access to higher education in the Czech Republic is still very restricted. This is why there has not, as yet, been any turn-around in the development of educational inequalities and the system still remains very selective socially.

A comparison of the profile of functional literacy in the younger (16 - 25) and older (46 - 55) generation in the Netherlands and in the Czech Republic indicates how successful the transition to such

education, which revolves around the goal of producing a **flexible labour force**, has been. The profiles of the two generations in the Czech Republic are very similar, which testifies to the continuing functioning of the school system. In the Netherlands, which is known for the reform of the school system from the inside linked to the change in perception of education (an emphasis on flexibility) - the profile of the younger generation has changed considerably (there has been an important increase in the proportion of individuals who achieve the highest levels of functional literacy). We can only say that if a similar turn-around does not occur in the CR in the perception of education and workings of the education system, success in competition with the labour force in developed countries will remain a pipe dream.

**Graph 3.7**  
*Functional Literacy Profiles in Younger and Older Age Groups. A comparison of the Czech Republic and the Netherlands.*



Source: SIALS, 1998, IALS, 1994-95.



### III.3 What Measures Can Be Recommended to Raise Functional Literacy Levels?

*It is a rather tell-tale fact that the deficit in functional literacy observable among the Czech population as compared to advanced western societies has not as yet showed up strongly in the "soft" economic conditions of the Czech republic. This is clearly a factor in the Czech population's low level of awareness of problems in this area. Nonetheless, some characteristic features of success in employment are already indicating the importance of functional literacy, which will undoubtedly acquire increasing significance with the growth in unemployment and the raising of requirements for employment.*

The answer to the question of what is to be done to increase functional literacy is in general an easy one: above all we must **raise the overall standard of education in the population**, in terms of both the levels achieved and length of education, thus providing opportunities for the achievement of higher levels of functional literacy in society as a whole. At the same time, however, we must not lose sight of goals relating to the **content of education**, which should be ever more orientated to generally usable competencies, including the ability to search out and identify information, evaluate it and draw conclusions from it, and make decisions in a flexible way, instead of the mere mechanical memorising of facts that inhibits free thought and action. As has already been discussed in Chapter 1, the achievement of these goals require a whole complex of measures, relating to various opportunities for learning and their

provision on a larger scale, the opening up of different learning paths, the establishment and appraisal of educational contents and output parameters, the involvement of interested partners (above all employers) and suchlike.

**Ability to communicate in foreign languages**, which as

has been shown in Chapter 2 is insufficient in the Czech Republic but is still not regarded as a serious issue by many employers, should be considered an integral part of functional literacy. If they persist, deficiencies in language abilities may well become a serious obstacle to the gradual opening up of European labour markets to the countries of Central and Eastern Europe. In this area it is essential to aim at a situation of **compulsory education in at least one world language** from as early as basic school, the achievement of knowledge of world languages by the whole population graduating from secondary schools and all forms of higher education, and additional language training for the already economically active population. It would not be inappropriate to recommend the introduction of English as a compulsory subject, and compulsory choice of a chosen second world language from the basic school level and upwards.



## **Chapter IV**



## IV. HUMAN RESOURCES MOTIVATIONAL MECHANISMS

*It is clear from the previous chapters that it is not enough simply to move towards Western Europe, and the developed world in general, in the area of employment structure and level of education. What is also important is the content and functional aspect of the quality of human resources. That means not only the use of knowledge and performance at work but also the question of aspiration and the related motivational potential. The feed-back relationships involved in this area provide the dynamics for the whole development of human resources. One of the specific features of the countries undergoing economic reform includes problems with implementing the motivational mechanisms for the development and application of human resources, both in the financial area and in terms of values. The first period of transformation has shown that to rely on "market forces" and natural human motivation alone is not sufficient. Neither an efficient system of remuneration nor an "environment of values" suitable for economical and social development can recover just by themselves.*

This chapter therefore covers four problem areas: (1) the dynamics of salary differentiation; (2) changes in the image of what makes a successful life; (3) the application of abilities and qualifications at work; and (4) the flow of finance between employers and employees on one side and the government on the other side.

The situation in the Czech Republic is compared to that of other countries undergoing transformation and with the developed Western countries. The subject of this analysis has only been partially

addressed by economic research and studies carried out by international organisations. This applies particularly to the first part, where it is possible to rely on available statistics regarding salary spread and research into human capital salary return (see, for example, *OECD Jobs Studies*). However, there is sometimes a problem with the comparability of the data and a complete absence of a more comprehensive view of salary differentiation, with all its relationships and contexts. This means that the second and third parts can be based purely on social science research. On the other hand, international institutions pay great attention to the institutional employment environment the OECD, in particular, take it as a subject for research, on which they have published international comparative statistics, and analyse it in national reports (see, for example, *OECD Economic Survey, Czech Republic, 1998*). The reason for this is the close link between the issue, the economic performance of society and the level of unemployment.

## IV.1 The Dynamics of Differences in Salaries and Their Determination

*Before 1990, the social and economic system had abolished the driving force of a free economy – individual performance aimed at income or profit. Financial incentives remained, but gained a false dimension – achieving advantages by using “back doors”. This was supported by peculiar and, in principle, soft criteria for remuneration: qualification was stressed formally but, in fact, could be replaced by “experience” or courses that were not, in fact, up to standard. The creative character of work played less of a role than physical effort; responsibility had a political than a professional dimension.*

The change in the economic environment after 1989 was expected to start a process of activation and selection which would differentiate between people with an entrepreneurial spirit, who preferred independence even if it was risky, and passive, unenterprising people who preferred social security. Employee appraisals were supposed to stress performance based on professional qualifications and management skills. By contrast, demographic characteristics were supposed to become far less important for the appraisal.

It is obvious that one can only produce a better or worse approximation to such an ideal model. Even the economic reform did not establish any transparent models but only opened the way to the gradual implementation of functional mechanisms of appraisal and remuneration and the integration of individual and public benefits. Moreover, the transformation process has not, in fact, achieved clear results in this area – as is obvious from the ambivalent structure of success factors.

### IV.1.1 The Implementation of a Functional Remuneration Mechanism

Socialist Czechoslovakia was known for its exceptionally equal level of salaries. In the late fifties, a debate about increasing salary differentiation started, with the aim of demonstrating the communist regime’s will to increase the efficiency of the state-planned economy. At that time, however, the distribution system had been already built, unfortunately based on the principle of only meeting basic requirements. Egalitarianism, although forming part of a widely-accepted socialist

and populist dogma, was a direct result of this method of remuneration.

The transformation which started in the early nineties aims to restore the severed links and to implement the general principal of each individual’s responsibility for his or her own fate. Demographic and reproductive characteris-

tics are being replaced as income differentiation factors, although slowly and with difficulty, by economic and market characteristics. Individual characteristics such as qualification, performance at work, managerial responsibility and willingness to undertake risk are becoming more important. Instead of bureaucracy controlling the whole process of remuneration from the top, numerous individual actors are appearing on the stage – firms, households and individual workers.

It is therefore necessary to bear this broader picture in mind in order to understand the specific differences in income to which the market and government contribute. The economy must create sufficient work motivation by giving higher rewards to more effective, innovative and venturesome people. The government looks after the public sector and, at the same time, must not allow the destruction of the social web which links individual people’s activities. Such cracks in social integration could be caused by unbearable or immoral differences, based on an abuse of the power of a monopoly or on corruption. It is not easy to tread the fine line leading to inequality which is both effective from the economic, and legitimate from the social point of view, and not to succumb to dysfunctional deviations in one direction or another.

### IV.1.2 Changes in Salary Differentiation After 1989

The start of economic reform and related steps in the social area had both a balancing and a differential effect. On the one hand, all income minima

### Statistic Survey on Salaries and Level of Inequality

Information about salaries and other income is basically collected based on reports from companies and organisations, or based on surveys among individuals or their employers. As an example of the first method, selective salary surveys rely on the automated personnel software applications used by organisations. Companies and organisations with 10 or more employees are included, either on a selective basis (in units under 1,000 employees), or as a whole (over 1,000 employees). One example of the second method is the microcensus survey, but these mainly focus on the living standard of households.

**Quantile values.** If the population is listed in increasing order of income, it is possible to identify the values (quantiles) related to each nth recipient. If deciles are selected, it is possible to obtain nine values separating each 10 per cent of recipients; as regards quintiles, it is possible to obtain four values separating each 20 per cent of recipients, etc. Then, speaking about quantile (decile, quintile, etc.) values, the level of inequality is calculated as the ratio of quantile values (e.g. the decile ratio as the spread of Deciles 1 and 9).

**Quantile ratios.** Based on calculations of average income from zero to Decile 1, from Decile 1 to Decile 2, etc., it is possible to obtain ten decile ratios or groups. The values identified can be read as the relationship between the average income in the group

and the total average income (after multiplying it by 100), or as a share of the respective 10 per cent of the total distributed income.

were increased (a minimum salary was established and later increased, a life minimum was codified, regular valuation of pensions was introduced) and salary dynamics remained regulated for quite a long time. On the other hand, the dynamics of income were released by opening the door to private enterprise, foreign business and various complementary sources of income. Nor should income from the grey economy, expanding due to faults in legislation and the inefficiency of institutions, be forgotten.

Statistical data on **salary development** is not unambiguous. On the one hand, employment statistics dealing with development over time show that inequality in income significantly increased in 1993–1995. This is confirmed by a comparison of incomes quoted in the 1992 and 1996 microcensuses. On the other hand, however, the 1996 and 1997 statistical salary surveys (where it is possible clearly to identify those who had worked full-time) showed that **salary differentiation** had only increased in the top ranges, while the bottom ranges kept their relative position. According to these data, the

#### Gross Salary Differentiation (Decile Groups Shares)

Decile Group	Microcensus			Salary Survey			
	1988	1992	1996	1989	1993	1995	1997
1	5,3	5,0	3,9	4,7	4,4	3,6	4,6
2	6,6	6,1	5,5	6,5	5,6	4,9	5,9
3	7,4	6,9	6,6	7,3	6,6	6,1	6,9
4	8,3	7,7	7,5	8,2	7,4	7,2	7,7
5	9,2	8,5	8,4	9,1	8,4	8,3	8,5
6	10,0	9,4	9,4	10,1	9,4	9,4	9,3
7	10,9	10,4	10,4	11,0	10,7	10,7	10,2
8	12,0	11,7	11,8	12,2	12,2	12,4	11,0
9	13,3	13,8	14,1	13,7	14,6	14,9	13,1
10	17,0	20,5	22,4	17,2	20,7	22,5	22,8
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

Sources: *Mikrocensus (Microcensus)*, 1989, 1992 and 1996, *Mzdová šetření (Salary Survey)* 1989–1997.

Czech Republic *Mzdová šetření ČSÚ (Salary Survey of the Czech Statistical Office)* figures in brackets are based on construed estimates, therefore their reliability is limited.

decile spread increased from 2.45 in 1989 to 2.8 in 1997, i.e. by approximately one half. The total level of salary differentiation brings the Czech Republic closer to its western neighbours. Unlike these countries, however, the differences in the middle of the salary distribution remain small, and sometimes a certain reduction can even be observed.

The development of salary differentiation in the Czech Republic can be shown in comparison to other OECD countries by using a single index of the decile ratio (that is, the ratio of salary values separating the bottom and the top 10 per cent of those receiving a salary). This is one of the many inequality indices. Its advantage is that it is very

good for illustration and its main disadvantage is that it leaves aside average salaries in the lowest and highest categories (while the greatest increase in the Czech Republic was in salaries of the category above Decile 9). The table collects data from various sources, some of which are not totally consistent. Comparison is therefore not always completely reliable. This is demonstrated by the fact that even the OECD, in its publications, has made retrospective changes to published data.

For example, the enormous spread in Hungary gives the impression that the data gathered during the salary survey contains some part-time jobs as well. Conversely, Polish data (which have been gat-

*The Development of Gross Salary Differentiation in OECD Countries (Decile Ratio) (1980–1997)*

Country	1980	1985	1989	1992	1993	1994	1995	1996	1997
Czech Republic		2,5	2,5	2,7	(3,19)	(3,14)	(3,73)	2,8	2,8
Hungary	2,4	2,6	3,1	3,6	3,6	4,2			4,2
Poland	2,9	2,7	2,4	2,7	2,6	2,9	2,6	2,7	
East Germany			2,1	2,3					
Germany	2,7		2,5	2,4	2,3		2,4		
Austria	2,6		3,6	3,5	3,6	3,7			
Belgium	2,0		2,4	2,3	2,3	2,1			
Denmark	2,1	2,2	2,2	2,2					
France	3,1	3,1	3,3	3,2	3,3	3,3			
Italy	2,6	2,5	2,2		2,8		3,1		
Netherlands		2,9	3,1	3,1		3,0	2,6		
Portugal		3,6	3,5	4,0	4,1		4,0		
Sweden	2,0	2,1	2,1	2,1	2,1				
Switzerland			2,7	2,7	2,7	2,7	2,7	2,8	
UK	2,8	3,1	3,3	3,3	3,3	3,3	3,4		
United States					4,2	4,4	4,4		
Japan	3,0	3,1	3,2	3,0	3,0	3,0			

Sources:

Czech Republic *Mzdová šetření ČSÚ (Salary Survey of the Czech Statistical Office)* figures in brackets are based on construed estimates, therefore their reliability is limited.

Hungary *Atkinson and Micklewright, 1992*; since 1992, based on information provided by Elizabeth Lindner from the Statistical Bureau.

Poland *Atkinson and Micklewright, 1992*; since 1992, Newell and Socha, 1998 (the information comes from labour surveys and is probably underestimated according to the OECD, the share in 1995 is 3.39).

East Germany *Krueger and Pischke, 1992*.

Other countries *OECD Economic Outlook, 1993, 1996*.

Data for 1995 for Germany, France, Netherlands and Portugal *OECD database*.

*OECD Economic Survey. Czech Republic, 1998* gives a different figure for Austria 1994 than the one in *OECD Economic Outlook* 2.95

hered from a labour force survey since 1992) indicate the significant stability of salary differentiation, which can partially be caused by the panel nature of the respondents. The high increase of salary differentiation in the Czech Republic in 1993-1995 also raises the suspicion that figures are rather exaggerated, due to the fact that they were built from different sources. If we omit these years, we get a rather continuous line of slowly increasing salary spread. Even this, however, is only due to the increase in highest salary categories.

Despite the above reservations, it is obvious that, after long-term stagnation, the salary spread has started moving. Although the salary spread in the Czech Republic will probably still grow to a certain degree, it no longer has to try to catch up with the West in this aspect. What is more important and also more complicated, is a convergence with the West as regards the contents of the salary differentiation – its dimensions and context which, in the end, define the way differentiation works in economy.

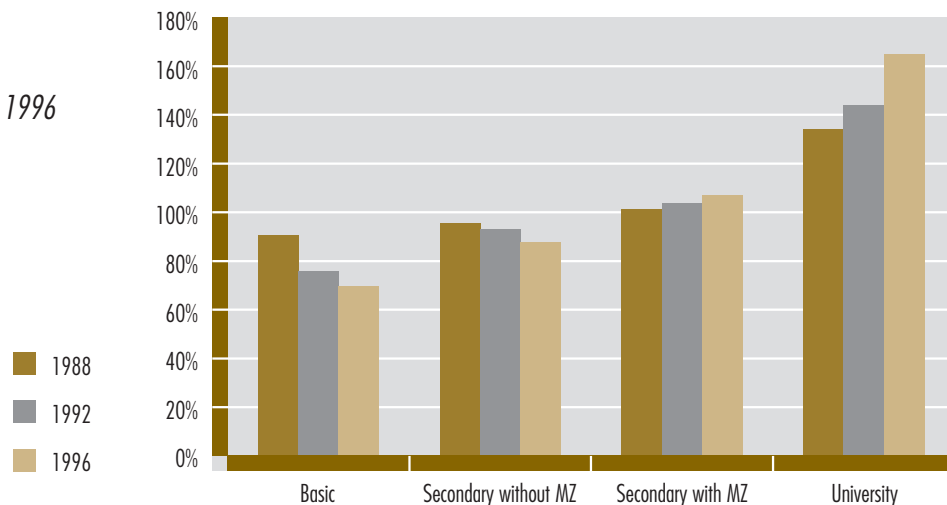
### IV.1.3 Changes in Income Factors

The changes brought about by the transformation of the economy include a radical change in the differentiation of salaries. Major shifts in employee categories are hidden behind the movements of the salary spread. Various factors play a role in this process:

**Return of investment in education.** According to the human capital theory, it is the education of the employee and the experience gathered over the years that has a major co-influence on the productivity of work and therefore income as well. Socialist Czechoslovakia was one of the countries where education was least valued, even when compared to other socialist countries. On the other hand, today it should not be expected that the differences in salaries caused by different levels of education and training will necessarily grow. It is necessary to understand that the level of education and training achieved under the communist regime was rather problematic as diplomas for political activity were often more important than knowledge and skills, and also that the transformation process has not yet been completed and necessary institutional and functional changes are still to be made.

Nevertheless, statistical data shows a gradual increase in the value of human capital, even if we only measure it as achieved formal training. While, in 1988-1996, the salary of employees with an elementary education decreased dramatically (it is a shrinking category of older people) and the position of people with a vocational education decreased by 8 percentage points, the position of people with an upper secondary education increased by 5 percentage points and the position of university graduates even increased by 30 percentage points. The return on every additional year of studies (or according to the level of education achieved) in the

**Graph 4.1**  
Gross Salary by Education  
(% of average pay) 1988 - 1996



Source: Mikrocensus, 1989, 1992 a 1996.



Return on Investment in Education and Practice  
(Increase in Gross Pay for One Year of Studies or Employment in %) (1988–1996)

	1988	1992	1996	1988	1992	1996
<b>Male Respondents:</b>						
One Year of Studies	4,6	6,0	8,3	–	–	–
One Year of Experience	4,6	4,6	3,7	4,6	4,6	3,7
<b>Education:</b>						
Secondary without MZ	–	–	–	5,0	9,0	16,6
Secondary with MZ	–	–	–	13,5	24,8	39,1
University	–	–	–	34,4	50,9	73,2
<b>Female Respondents:</b>						
One Year of Studies	5,7	7,9	9,5	–	–	–
One Year of Experience	3,1	2,2	1,5	3,1	2,2	1,5
<b>Education:</b>						
Secondary without MZ	–	–	–	6,7	8,8	10,7
Secondary with MZ	–	–	–	21,6	36,2	42,1
University	–	–	–	50,4	63,2	75,7

Source: *Microcensus*, 1989, 1992 and 1996.

Gross Salary Differentiation in Terms of Education in OECD Countries in 1995–1996  
(in % of Salary at the Level of Complete Secondary Education)

Country	Lower Education			University Education			Lower/University Education Ratio		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Czech Republic	78	75	69	151	143	138	1,94	1,91	2
Germany	76	82	82	158	152	151	2,08	1,85	1,84
Denmark	84	86	87	134	138	132	1,59	1,6	1,53
Finland	93	91	93	187	190	174	2,01	2,09	1,87
France	82	85	79	178	185	167	2,17	2,18	2,11
Ireland	85	77	62	183	171	187	2,15	2,22	3,02
Italy	77	74	74	134	142	120	1,74	1,92	1,62
Netherlands	86	87	77	137	135	143	1,59	1,55	1,86
Portugal	64	62	64	184	182	175	2,88	2,94	2,73
Sweden	90	88	89	153	158	144	1,7	1,8	1,62
Switzerland	71	80	75	161	146	161	2,27	1,82	2,15
UK	74	79	69	181	161	190	2,44	2,04	2,75
United State	67	64	64	183	183	175	2,73	2,86	2,73

Note: Only salaries of people aged 25–64.

Source: OECD, for the Czech Republic, calculated from *Microcensus 1996*.

percentage of salary was an increase by 80 % among men and 66 % among women, while the role of years of experience in both cases decreased significantly. It is also true that the higher the level of education, the higher the increase in return. If we measure how the return on education increased in 1988–1996 in percentage points, we can see that it was higher for men (by 26 percentage points for upper secondary education and by 39 percentage points for university graduates) and lower for women (by 20 percentage points for an upper secondary education and by 25 percentage points for university graduates).

In Western Europe the return on one year of education for men represents approximately 7–8 % of salary, while in the United States it is up to 10 %. The OECD data also documents that, as regards how education is valued, we are coming close to Western Europe. However, different countries have a different return on the level of education achieved, with the extremes of socially friendly countries (such as Denmark and Sweden) on one side and the very liberal countries (the United Kingdom and the United States) on the other. The question is of how reliable these data are because Italy, with very weak, and France, with very strong differentiation, do not fit the picture one expects.

Without doubt, the return on education in the Czech Republic has exceeded the spread of not only

socialist Sweden but also other socially-oriented Western countries, although the situation in the Czech Republic is still similar to Sweden in the relative evaluation of people with a university education against people with an upper secondary education. It is roughly at the same level as it is in Germany. If we take the spread for men separately, it reveals similar values as there are in Italy, Switzerland or even the United Kingdom. The total spread of the two more liberal countries, Switzerland and the United Kingdom, is higher and is due to a bigger difference in the income of men and women. The United States is an extremely differentiated country in this respect (as well as in many others). However, it is not quite clear if the statistical data for the United States represents the fully-employed population only, or if it includes part-time employment as well.

The general rule is that, the rarer the education (which applies to less-advanced countries), the higher the remuneration for higher levels of education in comparison to the elementary level. The gap grows with the level of development in the country and then becomes smaller again.

**Industry.** Differences in salaries in different industries remain important, despite strong balancing movements. After 1989, the element of salary differentiation created under the communist government in line with the reproduction needs of emplo-

*Gross Salary in Terms of Sector (% of Average Salary) (1989–1997)*

Sector	1989	1990	1991	1992	1993	1994	1995	1996	1997
Industry	104,4	103,8	103,6	103,5	101,3	99,9	99,7	99,1	100,5
Construction	111,2	109,9	106,6	108,2	112,3	110,6	108,1	105,1	104,9
Agriculture	108,2	109,6	97,7	91,8	87,7	85,0	84,2	80,7	79,5
Transport and Communication	106,4	104,6	103,2	99,1	97,5	98,7	100,8	101,8	105,8
Commerce	83,8	85,0	86,2	90,1	88,6	91,6	88,4	87,8	98,1
Health Service	90,1	92,6	96,6	94,5	95,0	93,9	92,1	93,7	90,0
Education	89,8	88,1	90,3	90,6	90,3	91,7	90,9	92,9	88,1
Financial Sector	98,3	102,0	136,9	169,6	177,7	175,2	171,5	169,6	174,5
Administration and Defence	101,3	100,4	105,3	114,6	117,8	120,7	117,6	118,3	110,2
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

Source: *Statistické ročenky* (Statistical yearbooks).

Number of Employees and their Salaries by Type of Ownership (%) (1997)

Type of Business	Number of Employees			Gross Salary		
	Total	Male	Female	Total	Male	Female
Entrepreneurial Sphere	72,8	86,0	57,5	101,2	99,0	97,5
Non-Entrepreneurial Sphere	27,2	14,0	42,5	96,9	106,2	103,3
Private Business	24,7	29,8	18,8	93,4	92,4	86,6
Co-operatives	2,7	2,1	3,3	70,3	72,0	72,7
State-Owned Companies and Organisation	33,4	25,4	42,7	97,9	99,7	103,0
Municipal Companies and Organisations	5,0	3,1	7,2	95,1	102,7	99,6
Social Sphere – Pol. Parties, associations	0,2	0,2	0,2	76,7	75,3	81,3
Foreign Companies	2,6	2,2	3,2	117,6	132,7	108,2
International Companies	7,0	8,0	5,8	116,1	114,5	112,2
Mixed Type	24,5	29,3	18,9	107,4	103,5	106,4
<b>Total:</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

Note: The first part of the table shows the structure of employees according to the type of ownership, the second part shows the relationship between salaries and average salary in the national economy.

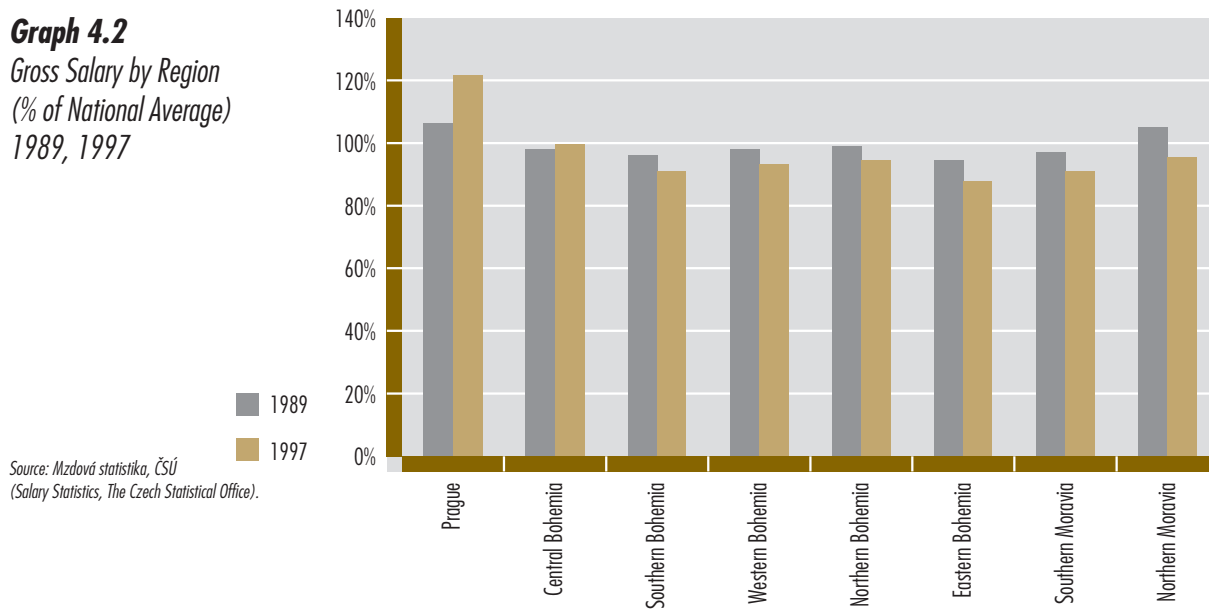
Source: *Mzdové šetření ČSÚ* (Salary Survey of the Czech Statistic Office), 1997.

yees and the planning priorities of the regime, was levelled quite quickly. Today, a much bigger portion of the differences between industries can be explained by the different qualification structure of employees. As result of the transformation of the economy, salaries in manufacturing industries have decreased in the course of the transformation and have come down, closer to the national average, while salaries in services have increased and come up to the national average. Banking and insurance industries have experienced a rapid increase, and a major increase in income has been experienced in the state administration sector as well. However, at the opposite end of the scale there are jobs in such areas of the public sector as health service and education where the general level of salaries remains low and, despite some fluctuation, does not show a any systematic tendency towards growth. This results in major differences in remuneration

of people with comparable levels of education in different industries.

**Type of ownership.** The privatisation process restored the diversity of forms of ownership and this is reflected in the level of salaries in various ways. It means differences between the remaining state-owned companies which have not yet been privatised and the private sector, differences between old and new companies, between the so-called business and non-business sector, and between Czech and foreign companies. According to the sociological survey *Economic Expectations and Attitudes*, conducted in the course of the privatisation process, one tenth of the differences in income could be explained by different type of ownership. The highest income was reached by entrepreneurs, followed by self-employed people. On the other side, employees of former state-owned companies earned the lowest salaries. It can be assumed that

**Graph 4.2**  
Gross Salary by Region  
(% of National Average)  
1989, 1997



today the type of ownership has a somewhat lower influence on the level of income.

According to a selective statistical survey on salaries for 1997, salaries in the business area were four percentage points higher than those in the non-business area. The highest income was reached in

foreign and international companies, where salaries were 17 % higher, and in companies with mixed ownership. Salaries and income in state-owned organisations were roughly five percentage points higher than those in domestic private companies. Although the survey included the variable of edu-

*Salaries of Typical Professions (% of Average Salary) (1988 and 1996)*

Profession	1988	1996
Miners	209,8	138,1
Bricklayers and masons	104,2	92,6
Bus, trolley-bus and tram drivers	129,5	102,7
Enginedrivers	128,9	111,0
Shop assistants	71,3	65,6
Teachers in basic schools	107,8	94,3
Teachers in general secondary schools	115,9	108,7
Nurses	86,1	68,6
Doctors, medical superintendents	147,5	157,9
Judges	152,4	199,9
Qualified staff in banking and insurance	107,1	170,7
Managers in banking and insurance	195,8	332,0

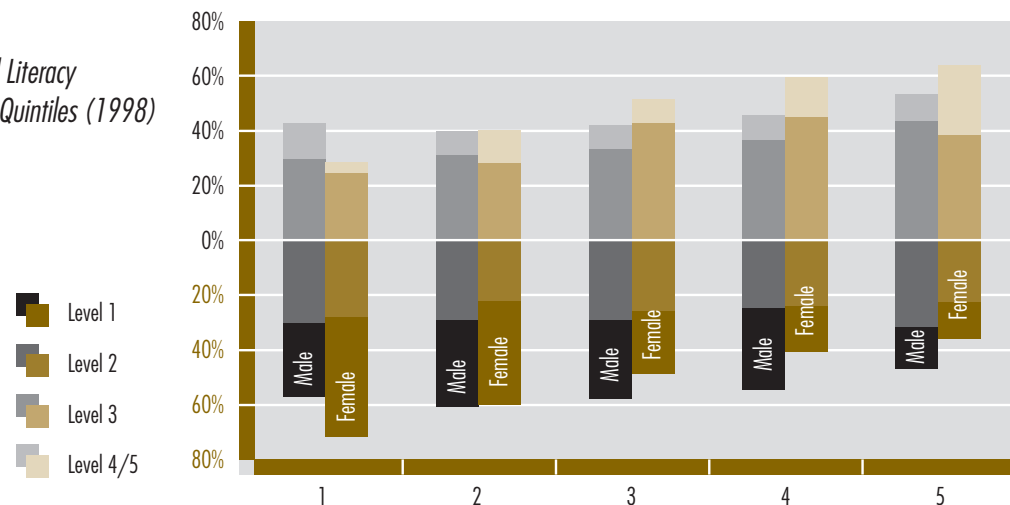
Source: Mzdové šetření ČSÚ (Salary Survey of the Czech Statistical Office)

cation, unfortunately the tables published by the Czech Statistical Bureau do not classify data in a way which would allow a comparison of the level of remuneration of different levels of education in organisations with different types of ownership. However, from an earlier survey (which had a different methodology) conducted for the 2nd quarter of 1996, it is obvious that foreign and international firms give higher remuneration, particularly for the work of experts with a university education. There are various relationships between salaries in the private and in the public sectors in the world. While in less advanced countries a job in the public sector usually pays comparatively well (in 1993, in Spain, for example, the ratio of salaries in the public against the private sector was 1.27; in Portugal, it was even 1.61), in more advanced countries the differences in income between the two sectors are not so large (1.10 in France and the United States, 1.14 in the Netherlands, but only 1.02 in the United Kingdom). If we look at the trends, usually the situation changes in favour of the public sector (such as in France or the United Kingdom) or is stable (in the United States). The improving position of the public sector can be explained by several factors: the declining number of jobs with lower qualification requirements; the need of the public sector to become attractive in order to avoid a massive migration of experts to better-paid jobs in the private sector; and, partially, by the fact that the private sector is trying not to overpay its employees.

However, the situation in the Czech Republic is rather different because the relationship between labour in the two sectors is changing very quickly. This is due to the current privatisation process. The relationship of labour in the private and the public sectors was 51/49 in the year 1995, 57/43 in 1996 and 66/34 in 1997. However, the salary relationship did not show any clear trend during this short period because it was 1.01 in favour of the public sector in 1995, increased to 1.03 in 1996 and went down again to 0.99 in 1997. The increase in salary tariffs at the beginning of 1999 should slow down the decrease of salaries in the public sector. However, due to economic recession, the increase of salaries in the private sector may be slower or even come to a halt.

**Regions.** When the policy of the former regime which focused on removing differences between regions stopped affecting the economy, several factors appeared: differences in the performance of industries; concentration of the expanding financial sector; the management of companies in Prague; and different flows of public funds related to the growing state administration. Of course, all this had an impact on the regional level of average salaries. While some regions were propelled forwards by the transformation of economy, others stayed behind. Only Prague and, to a certain extent, Central Bohemia gained and this was at the expense of the other regions. By contrast, Northern Moravia experienced a dramatic decrease accompanying the loss of its former priorities – mining and heavy industry.

**Graph 4.3**  
Persons by Functional Literacy  
and Personal Income Quintiles (1998)



**Profession.** Changes in the individual dimensions of the structure of income are finally being combined in the salary position of different job categories. We are seeing an increase in the salaries of highly qualified technical staff and a growing difference between white collar and blue collar jobs. While professions requiring medium qualifications are maintaining their relative position, the situation of workers with or without an apprenticeship certificate has deteriorated. Among university graduates, there has been a growing difference between people working in management, finance and justice on one side and those employed in schools, the health service and research on the other side. Entrepreneurs employing other people were at the level of higher technical professionals, and self-employed people with no employees were at a slightly lower level. However, in this case in particular, information about income may have been manipulated because it is difficult to estimate the salary of an entrepreneur and also because personal income is often undervalued for tax reasons.

#### IV.1.4 Influence of Functional Literacy

The *SIALS* survey adds a totally unique variable to the usual statistical characteristics results of the functional literacy tests. Undoubtedly, functional literacy has a positive influence on income. But, again, there are major differences in the replies depending on the sex of the respondents: while men show a very low relationship between their income and functional literacy and it is almost insignificant from the statistical point of view, women have a very strong dependency. The same applies to language skills, which have almost no effect on the salaries of men, while women's salaries are very strongly affected by this skill, even more than by functional literacy.

There are several explanations as to why the influence of functional literacy is stronger for women than men. The first is that the tests applied are more sensitive to those working skills which are typical for women that is, a sense of detail and careful work with documents and numbers. On the

other hand, they apparently do not cover skills that are allegedly typical of men, namely higher creativity, an aggressive approach and leadership abilities. The second explanation which is partially built on the first is that the jobs performed by women are those that have the highest requirements on such qualities and therefore the intensity of the qualities is reflected in remuneration and status. The third and very likely explanation is that it is more difficult for women to find a job than for men and they must therefore show that they have more formal pre-requisites and actual skills.

For the total set of respondents, the various education indicators show the following importance: the level of education is most important, followed by the number of years at school, then the functional literacy achieved, and language skills as the last. In the case of women, the picture is rather different: years at school are insignificant but functional literacy and language skills are much more important. The *SIALS* survey also makes it possible to monitor some differences, depending on the type of ownership (however, the number of respondents working in a foreign company was very low, so this type was not monitored). Education and functional literacy have the highest effect as far as salary is concerned in the public sector, where functional literacy even beats the number of years at school. In fact, the lowest appreciation of years of study is in the public sector (the very lowest is in agriculture). Second are joint-stock companies, i.e. former big state-owned companies. In small businesses, human capital has practically zero weight.

The influence of the abilities measured by the functional literacy tests is usually reflected more in the characteristics of the current situation (e.g. current social status, position on the ladder of professional prestige, salary or financial situation) rather than in mobility characteristics (change of social status, shifts in professional prestige, etc.). However, even in the characteristics of mobility, the influence is more intensive if we focus not on the entire set of the working population but on people with a higher education alone. The influence of functional literacy is also much higher when people climb up the functional hierarchy in their job.

## IV.2 Work, Education and “Life Success”

*Under the communist regime, the use of human resources was subjected to bureaucratic control and political objectives. The centralised system of management had a devastating effect on individual responsibility, motivation at work and personal investment in education and training. As well as companies, individuals quickly learnt to live within “soft budget limitations” and in the environment of “secured social welfare” – they did not expect more for their mediocre performance than a mediocre standard of living. The market economy makes much greater demands on people’s work and, at the same time, opens the field for achieving higher social status and salary differentiation. Qualification, performance and activity are gradually becoming factors of the utmost importance. However, this requires a legal and institutional framework of equal conditions and a suitable motivational environment.*

The transformation not only has its institutional forms but also its contents with values. These contents are often ignored because it is difficult to put your finger on them. Unlike Western countries, where the system of values continuously developed, the heritage of communist paternalism is a big problem in the Czech Republic.

### IV.2.1 Value Environment of Human Resources

Economic reform relied on the liberal idea that it was always the individual who, by pursuing his own happiness, contributed to the wealth of society. This attitude was a natural reaction to collectivist doctrine and the related directed economy, which had been proven to be wrong in past decades. Marxist political economy was replaced by neo-classical theory. However, that theory is based on many assumptions which in reality are often not fulfilled. The rules and standards of economic behaviour that were established by the communist regime form an extremely difficult obstacle to the development of a market economy.

Social transformation cannot be completed unless the markets not only affect the formal aspect but also the substance of the economy. This includes economic institutions (primarily private ownership), economic behaviour (based on the values of work and trust among participants in the market) and economic players (individuals, firms and corporations). People’s behaviour is also influenced by

the values they embrace, their attitude to work and the social networks that bind them. The importance of human behaviour grows with the depth at which it is embedded in the economic process and only reveals its force if there is a major failure.

When studying the value of work and education, we can only rely on **answers from respondents and their attitudes**. This, of course, entails certain limitations. Neverthe-

less, it corresponds to the attention paid to human behaviour in a modern economy. In the end, the ultimate arbitrator is always the individual, they way he/she acts with regard to the social environment and his/her career aspirations.

### IV.2.2 Factors for “Life Success”

The transformation process has had a significant impact on the professional careers, income positions and living standards of a great number of people. When studying the subjective evaluation of changes, it is necessary to realise that criticism of the present as compared to the past tends to be sharper as that past receded. The enthusiasm of the period following the political turnover in November 1989, related to recently gained political freedom, has already disappeared and so criticism of the economic situation is becoming stronger.

According to an international survey conducted by ISSP, people evaluate **the change which happened in the past period in income** relatively favourably: for 1989–1998, 32 % of the working population stated an improvement in personal income, 54 % stability and 16 % a drop in their income. The evaluation of change in living standards (which applies to the situation of the whole family) is less favourable: 26 % experienced an increase, 46 % stability and 28 % a decrease. The worst assessment related to position on the social ladder: only 16 % have experienced an upward

### International Social Survey Programme – ISSP

ISSP is a long-term international survey which was launched in 1983. The project has four founding members – SCPR (Social and Community Planning Research) from the United Kingdom, NORC (National Opinion Research Center) from the United States, ZUMA (Zentrum für Unfragen, Methoden und Analysen) from Germany and the Institute of Advanced Studies of the Australian National University. The number of participants is constantly growing and reached 29 in 1998.

ISSP focuses on attitudes and opinions of the role of government, social differences, family, male and female social roles, environment, national identity, job orientations and strategies and religion. The series of surveys makes it possible to combine comparisons of countries and over time. The institutes of the member countries are responsible for the gathering and initial preparation and documentation of data for their country. Linking, data cleaning, final checking and archiving of data sets from all countries is performed by the Zentralarchiv für Empirische Sozialforschung at the university in Köln am Rhine. The data gathered from ISSP surveys is made available to the scientific community. In this text, we are namely using these modules: Social Differences (1992), Job Orientation (1997) and Social Differences (1999). International data from the latest surveys are only available in limited types.

movement, 54 % are stable and 30 % have experienced a downward movement. Although the above evaluation has become ever less positive as time elapses, in all aspects it is still better in the Czech Republic than it is in Hungary or Poland.

Even more important than people assessment of improvement or deterioration in their lives, **is the way in which they achieve their income and job position.** It is understandable that the transition to a market economy and democracy has opened the way to the top especially to people were disadvantaged by the communist system – in particular experts and people with entrepreneurial talents. On the other hand, because the space suddenly created for free activities was not well protected by the law and social institutions, it could be exploited by those who found unethical ways to the top, which were usually based on the social capital of acquaintances and contacts from the days of the previous regime.

Although, throughout in the world, value surveys show that the most valued factors are normally health and a happy family, in modern society life success, as such, is mostly attributed to economic activity, a professional career and an income. This range of originally male values has already fully affected women. Today, a large percentage of women have basically similar ambitions as far as their professional and salary careers are concerned, although their conditions for fulfilling these aspirations remain worse. However, a different question arises when we consider the fact that sources of life success are not the same at different levels of the professional and qualifications ladder.

The transformation of the economy was expected to bring major changes, both as far as the opportunity to achieve life success in general was concerned (against obstacles built by the communist regime) and as far as its legitimate sources were concerned (performance factors were expected to replace political sources). The previous regime stressed stability more than the mobility of employees and the word career mainly had political connotations and a pejorative connotation. In addition, the environment of levelled salaries lacked the necessary free space for material incentives.

Individual **life success factors** can roughly be divided into four basic groups: (1) personal characteristics and merits, also called human capital (education, talent, ambition and professional abilities); (2) membership of social networks, also called social capital (acquaintance with the right people, political contacts, possibly political views or religion); (3) social background (wealth and the cultural level of the family, country or place of origin); (4) other ascriptive characteristics which cannot be influenced by the individual (sex, nationality, race).

Unfortunately, no data is available to evaluate shifts in values related to the change of social regime. However, it is at least possible to study the changes in the perceived factors of life success in 1992–1999. It appears that, in the long term, the first place is occupied by performance factors, especially hard work. Second comes social capital, especially acquaintance with the right people. Third are factors of family background and last are ascriptive characteristics. Education itself is one of



## Success Factors in Life (Index) (1992–1999)

Factor	1992	1997	1999	Change 1992–97	Change 1997–99	Change 1992–99
Rich parents	36,8	49,1	39,3	12,3	-9,8	2,5
Educated parents	30,4	41,8	36,1	11,4	-5,7	5,7
Own education	48,5	63,9	54,5	15,4	-9,4	6,0
Ambition	70,3	75,2	72,6	4,9	-2,6	2,3
Talent	68,6	71,4	68,3	2,8	-3,1	-0,3
Hard work	75,5	72,3	75,4	-3,2	3,1	-0,1
Knowing the right people	63,7	71,6	64,3	7,9	-7,3	0,6
Political contacts	31,4	50,1	38,7	18,7	-11,4	7,3
Race or nationality	19,2	30,4	27,7	11,2	-2,7	8,5
Religion	12,0	13,2	12,7	1,2	-0,5	0,7
Place of origin	23,5	20,3	28,7	-3,2	8,4	5,2
Sex	26,8	30,5	28,7	3,7	-1,8	1,9
Political views	34,3	31,3	29,5	-3,0	-1,8	-4,8

Note: The index is built up from a five-level scale where 100 = important and 0 = not at all important.

Source: *ISSP, 1992, ISSP, 1997, ISSP, 1999.*

## Success Factors in Life in OECD Countries (Index) (1992)

Factor	Czech Republic	Poland	Hun- gary	Austria	Germa- ny	Nor- way	UK	United States
Rich parents	36,8	61,4	51,4	46,9	40,4	35,4	36,9	38,4
Educated parents	30,4	55,5	42,0	50,2	51,5	37,4	49,3	56,8
Own education	48,5	65,8	50,4	83,9	80,7	66,3	74,6	81,0
Ambition	70,3	75,1	66,9	79,1	68,3	81,6	77,3	82,4
Talent	68,6	78,8	66,8	72,8	63,1	63,2	63,6	62,2
Hard work	75,5	74,6	64,5	70,9	62,6	74,0	79,5	81,7
Knowing the right people	63,7	66,6	56,8	69,7	63,1	51,1	55,1	58,3
Political contacts	31,4	42,3	42,0	54,6	38,7	27,3	25,2	37,6
Race or nationality	19,2	22,8	32,5	33,4	34,7	41,2	36,1	33,9
Religion	12,0	27,6	17,0	17,6	18,9	19,0	16,8	25,1
Place of origin	23,5	28,4	22,9	12,9	19,3	22,9	24,0	22,4
Sex	26,8	34,5	25,9	28,9	29,4	27,3	31,8	34,0
Political views	34,3	33,4	28,7	34,0	34,6	22,5	26,0	28,2

Note: The index is built up from a five-level scale where 100 = important and 0 = not at all important.

Source: *ISSP, 1992.*

the least important factors. It is possible to say that the Czech Republic has a long way to go to get to the meritocratic definition of life success typical of advanced Western countries.

Development so far has not been straightforward. While in the initial period, 1992–1997, respondents tended to attribute importance to most factors, in the second period of 1997–1999 the tendency was quite the opposite. After a certain clarification of the structure of the perception of life success this structure again became cloudy, undoubtedly due to the loss of transformation dynamics and the overall blurring of social consciousness after 1997. The overall balance is therefore much more modest than one would expect from an optimum course of transformation. Nevertheless, the position of education has improved, i.e. both the education of parents and the respondents themselves. The importance of political contacts has increased in perception. Unfortunately, the same has happened with race or nationality and, recently, region as well.

The position of perceived success factors and their overall structure differs depending on the demographic and social characteristics of respondents. The general principal is that while sex and age have relatively little influence, the level of education is a significant indicator, especially in the evaluation of the importance of performance factors, education and ambition. It is quite understandable that more educated people should attribute more importance to education as a life success factor. It is surprising, however, that the perceived importance of political contacts also rises with level of

education. Data from the most recent period, however, shows that this relationship has become less strong, which would imply that educated people are putting greater trust in their own human capital and capabilities.

When compared to other post-communist countries, respondents in the Czech Republic assign less importance to social background and political contacts, which may testify to a higher level of modernisation of society and a system of values which is closer to the Western countries. The traditional character of the Polish population is revealed, particularly by the greater importance assigned to religion and sex. On the other hand, in Hungary the stress is more on race or nationality. However, in the Czech Republic the importance of education is ranked lower than in the West, i.e. both the level of education achieved by parents (and the related cultural traditions of the family) and, especially, the employees themselves.

Answers to the question concerning the wealth factor give similar results. The view that wealth is derived from hard work and abilities has become stronger since the fall of the communist government. However, it has not yet become dominant. On the contrary, we are again finding a widespread belief that dishonesty, acquaintance with the right people in the right places and a bad social system give people the chance for unearned income. The journey towards a Western system of values is winding and thorny, and the question of when we shall once again feel ourselves to be going in the right direction, as we did in the first years of the transformation is a major one.

#### *Success Factors in Life in OECD Countries (Index) (1992)*

Czech Republic	Hungary	Slovenia	East Germany	Germany	France	Sweden	Spain	Japan
Money is a means of earning money, nothing more:								
38,8	27,6	36,6	37,8	27,9	25,2	16,3	46,2	40,3
I would like to have a paid job, even if I did not need the money:								
49,0	62,9	42,9	75,8	73,5	51,6	76,8	54,3	73,7
Work is the most important human activity:								
51,1	60,5	72,9	60,7	37,9	39,4	41,0	61,4	71,7

Source: ISSP, 1997

### IV.2.3 Values of Work and Happiness at Work

The impact of economic changes on the work process itself has not been as strong as expected. In the

tenth year of reform, only about one third of the working population states that the tempo of their work, compared to before 1989, has increased and these are self-employed people and entreprene-

*Evaluation of Various Characteristics of Work in Different Countries (%) (1997)*

Criterion	Czech Republic	Hungary	Slovenia	East Germany	West Germany	France	Sweden	Spain	Japan
<b>Importance of the criterion for the respondent:</b>									
Security	92,6	95,7	96,5	98,5	97,5	91,8	91,6	97,9	84,0
Remuneration	81,9	95,2	93,6	88,6	77,8	77,3	72,1	89,4	79,3
Promotion	46,4	74,1	80,2	62,0	74,0	69,7	48,7	87,0	24,1
Interesting job	90,9	87,8	95,2	98,4	98,0	97,8	96,7	92,0	80,1
Independence	60,1	78,6	91,1	89,1	94,3	63,4	86,7	81,3	40,3
Work which helps people	69,1	74,2	87,6	66,7	62,5	59,0	71,0	86,0	66,5
Work which is useful	63,9	78,0	86,3	59,5	60,1	64,3	62,5	85,7	76,7
<b>How the criterion is met in the respondent's current job:</b>									
Security	55,1	47,4	68,0	38,1	71,4	46,2	57,5	59,6	68,0
Remuneration	11,2	9,2	32,1	12,4	28,9	14,9	16,8	17,3	22,1
Promotion	10,6	13,6	27,5	11,2	19,3	13,3	20,4	16,5	10,3
Interesting job	65,6	65,3	75,0	82,5	85,2	74,4	75,9	65,0	58,8
Independence	72,1	73,8	76,2	84,9	86,7	47,9	83,5	58,7	39,4
Work which helps people	67,5	74,0	78,4	54,8	50,5	66,6	65,2	62,7	50,9
Work which is useful	78,0	79,0	79,5	69,7	65,2	66,7	67,4	76,3	63,3
<b>Difference between the desired and actual situation:</b>									
Security	-37,5	-48,3	-28,5	-60,4	-26,1	-45,6	-34,1	-38,3	-16,0
Remuneration	-70,7	-86,0	-61,5	-76,2	-48,9	-62,4	-55,3	-72,1	-57,2
Promotion	-35,8	-60,5	-52,7	-50,8	-54,7	-56,4	-28,3	-70,5	-13,8
Interesting job	-25,3	-22,5	-20,2	-15,9	-12,8	-23,4	-20,8	-27,0	-21,3
Independence	12,0	-4,8	-14,9	-4,2	-7,6	-15,5	-3,2	-22,6	-0,9
Work which helps people	-1,6	-0,2	-9,2	-11,9	-12,0	7,6	-5,8	-23,3	-15,6
Work which is useful	14,1	1,0	-6,8	10,2	5,1	2,4	4,9	-9,4	-13,4

Note: The index is built up from a five-level scale where 100 = important and 0 = not at all important.  
Source: ISSP, 1997

urs. Moreover, only one fifth of respondents think that they make better use of their qualification today. Of course, these results are not very encouraging. However they are not surprising if we remember the slow re-structuring of most of the ex-state owned companies and the weak pressure on micro-economic change.

According to international comparisons with selected countries, the Czech population (together with the Slovenian one) shows the strongest materialism expressed in the work relationship. Strong agreement with the opinion that work is only a means of earning money was expressed in 1997 by 15 % of Czech working respondents, and overall agreement with this opinion by 40 %. This is not only more than in any Western country but also more than in Hungary. On the other hand, the reaction to the opinion that work is the most important human activity is not so clearly negative and, surprisingly, the level of agreement with this statement is higher in all post-communist countries than in the typical developed countries of the West. It may be a reflection of some ideological stereotypes of the past.

What is important is how the respondents evaluate the importance of various characteristics of work and job, both according to their personal scale of values and their fulfilment in their jobs.

In principle, different countries share the stress on **job securities and remuneration**, but also on what makes the job interesting. However, different countries have different opinions of the importance of **promotion at work and independent work**. As regards the profile of desirable values, the

Czech Republic is closest to France; Czech respondents, however, do not stress career and interest in the job as much as the French.

No systematic differences between post-communist and developed countries are to be found on the question of how individual expectations are met in the current jobs of the respondents. In general, the greatest difference appears to be between desired and actual remuneration. Dissatisfaction with remuneration in the Czech Republic is high, but it is even higher in Hungary, East Germany and Spain. As for the achievement of desired social security and promotion at work, there are major differences between the countries, but the Czech Republic lies somewhere in the middle. What is unique, however, is that actual independence at work in the Czech Republic is even higher than expectations. The overall profile of fulfilled values in the Czech Republic is closest to Sweden, although Swedish respondents are happier with their remuneration.

The comparison of happiness at work reveals a rather surprising picture. The first positions are occupied by non-comparable countries such as Spain and Sweden. In last place, we can again find such non-comparable countries such as Hungary and Japan. The Czech Republic had the best results of the post-communist countries since 80 % of employees were happy in their current jobs. Much more surprising is that one fifth of respondents think they will probably change their job in the next 12 months. This percentage is much higher than in other post-communist countries but also higher than in most developed Western countries. It may

*Happiness at Work, Measured in Different Countries (%) (1997)*

Level of happiness	Czech Republic	Hungary	Slovenia	East Germany	West Germany	France	Sweden	Spain	Japan
Very happy	28,1	23,3	27,4	31,5	39,0	33,2	40,4	50,9	29,2
Rather happy	50,6	39,2	39,5	45,9	42,5	42,4	42,5	32,9	43,1
Neither happy nor unhappy	14,3	29,4	26,2	15,2	12,9	14,2	11,5	11,5	12,9
Rather unhappy	5,1	5,0	5,3	5,1	4,2	7,7	4,2	3,4	9,8
Very unhappy	1,9	3,1	1,6	2,3	1,4	2,5	1,4	1,3	5,0
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

Source: ISSP, 1997

result from a certain alienation they feel towards their work, which makes it easy for them to change their jobs. Both findings may, however, be a sign of an increasing level of job insecurity.

While we do not find systematic differences between Eastern and Western countries as far as the level of happiness is concerned, such differences appear when we look closely at the structure of this happiness. Although the influence that a person's interest in their work has on their happiness

dominates in all countries, without exception, other valued factors in the post-communist countries are job security and remuneration, while, for Western countries, independent work is more important. The characteristics of the post-communist countries that we have already mentioned contain residues from the past, as well as difficulties of the transformation period which are reflected in the slow growth of real income and in previously unknown insecurity.

#### *Job Selection Criteria in Different Countries (%) (1997)*

Option	Czech Republic	Hungary	Slovenia	East Germany	West Germany	France	Sweden	Spain	Japan
<b>To be employed or to be independent:</b>									
Employed	52,6	40,4	33,7	34,8	32,2	54,1	56,3	55,3	50,3
Independent	39,5	57,1	51,3	45,5	51,8	38,0	34,1	41,3	39,4
Undecided	7,9	2,6	15,0	19,8	16,0	7,9	9,6	3,4	10,2
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>
<b>To work in a small or a big company:</b>									
Small	68,9	58,9	63,2	48,2	48,0	48,9	64,7	41,1	33,1
Big	19,6	36,2	21,6	39,5	32,9	39,3	23,4	51,7	48,1
Undecided	11,5	4,8	15,2	12,3	19,0	11,9	11,9	7,2	18,8
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>
<b>To work in a private firm or state owned organisation:</b>									
Private firm	42,7	56,8	27,6	39,5	51,3	41,4	66,6	39,3	48,7
State-owned	41,2	38,0	62,6	49,5	33,9	43,7	16,5	54,8	38,7
Undecided	16,0	5,1	9,8	10,9	14,9	14,8	17,0	5,9	12,6
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

Source: ISSP, 1997

#### **IV.2.4 Preferred Type of Work and Loyalty to the Employer**

The transformation of the economy has led to the opening up of new opportunities, not only in the selection of sector and type of company but also in the selection of the type of contract and working hours. However, formal freedom in this sense is rather limited, both due to the availability of the preferred type of job and because of the financial

needs of the employee. Another limiting factor may also be the loyalty of the employee to the employer, which means priority assigned to keeping the job, even if at the price of a certain loss lower financial remuneration or worse working conditions.

An international comparison shows that the Czech population relies on **employee security** more than its post-communist neighbours in Poland and Slovenia, where people probably have better expe-

## Readiness to Work Longer Hours for More Money (%) (1997)

Response	Czech Republic	Hungary	Slovenia	East Germany	West Germany	France	Sweden	Spain	Japan
Longer hours for more money	36,3	36,8	34,4	20,5	18,2	17,9	15,4	28,3	22,3
The same hours for the same money	51,9	54,9	57,7	66,7	64,6	59,7	63,4	63,4	57,6
Shorter hours for less money	4,6	5,0	2,7	5,0	10,0	13,6	16,1	6,8	15,4
Undecided	7,2	3,3	5,2	7,8	7,2	8,8	5,1	1,5	4,7
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

Source: ISSP, 1997

rience of being entrepreneurial. This is one aspect where the Czech Republic contrasts strongly with its immediate Western neighbours as well Austria or Germany and is closer to socialist France or Sweden. On the other hand, **preference for work in a small company** is highest in the Czech Republic, although this is a preference that we share with other post-communist countries. Interest in working in a big company is higher in Western countries than in the Czech Republic and, without a doubt, relates to higher job security and the advantages of social welfare.

The population of the post-communist countries (with the understandable exception of the former East Germany) are all of the same opinion that they would be willing to **work longer** hours if they received more money and more than one third of employees in all these countries gave this response. However, even in other countries, the percentage of people who need a higher salary cannot be ignored. Sweden is the only country where the categories of employees who would like to work longer hours are balanced by those who would prefer shorter hours. Any significant distinctions based on sex, age or education, which would at least outline the social structure of such choice, are very rare. Women would only accept a lower salary for less work in countries with strong elements of traditional behaviour (Spain or Japan).

Employee mobility used to be restrained by the directive regime as an undesirable fluctuation. The idea of the planners was that, starting from the strictly-regulated selection of their professional training, people should be directed to a certain work-

place, where they would remain for the rest of their life. However, because of the law of natural resistance to forced values, this resulted in the diminution of spontaneous or rational loyalty to the employer. Nevertheless, the level of loyalty did not drop as much as could be expected. While on the one hand the advantage of **loyalty to one company** in the open job market becomes weaker, on the other hand it is strengthened by limited migration and the ability to commute.

Different opinions were presented in answers on the question of loyalty. Respondents from post-communist countries reach the high level of the Japanese when they say that they would be willing to work more intensively for the success of their company. Such attitudes may have strong links to the hope of the possible prosperity of the company and, therefore, the improvement of their own financial situation. However, post-communist countries are low on the list when it comes to the question of whether or not they are proud that they work for the company or organisation, and respondents from the Czech Republic sit right at the bottom. These attitudes are confirmed by answers on pride in the respondent's own work in general, where first positions are occupied by Slovenia, Spain, France and Japan, while respondents from the Czech Republic are last. Czech respondents (together with the French) are those who most frequently answer that they would change their jobs as soon as they could. In addition, in the Czech Republic all these statements are related to the level of education and training achieved.

*Loyalty and Pride in One's Work as Measured in Different Countries (% of consent) (1997)*

Czech Republic	Hungary	Slovenia	East Germany	West Germany	France	Sweden	Spain	Japan
I would be willing to work more intensively, if it helps my company or organisation to be successful:								
56,8	60,1	58,5	58,4	57,3	24,0	48,9	47,8	56,9
I am proud to be working for my company or organisation:								
42,8	51,9	64,8	54,2	47,7	52,6	55,4	68,5	58,0
If I had the change, I would change my job:								
40,7	29,7	43,8	33,2	28,4	42,8	29,7	38,0	31,8
I am proud of my work:								
46,7	57,3	72,1	61,5	61,2	64,8	64,2	73,1	62,1

Source: ISSP, 1997

### IV.3 Qualification as a Factor in Remuneration and Human Development

Attempts to analyse the influence of education and other factors on salaries by using statistical data face several problems. First, the range of characteristics of the employees included in the statistics is often very limited - it is usually narrow in terms of demographic, and sometimes professional and educational categories. Second, surveys covering the entire working population cannot take into account the characteristics of the work micro-environment. People do not usually evaluate their work by general, national measurements; instead, they compare their performance and income with regard to their close collective and work environment or, more often, within their so-called professional community.

This means that the subjective view of individual employees is monitored in addition to objective statistical data. Although such a view may be distorted by individual evaluation, it takes into account the specifics of the environment. According to proven sociological experience, for people, reality is what they perceive as reality, because that affects how they act. Similarly, in a modern economy it is as a rule people's subjective preferences that decides their choice of consumption and professional life.

#### IV.3.1 Income Factors from the Employee's Point of View

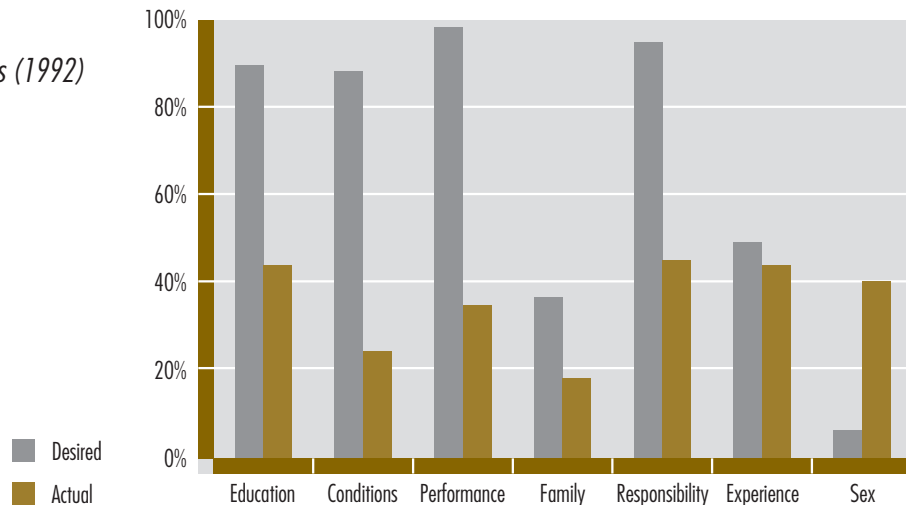
It would be interesting to compare current opinions on salary factors with the situation under the

communist regime. We are, however, missing the required data. A comparison can be made for the period of 1992-1997, at least for the most important factors. The respondents commented on **what influence the given factor should have on salary** and also **what influence it actually has, in their view**.

The order of importance that the individual factors should have, according to respondents, fully corresponds to the model of a functioning market economy: performance, responsibility and qualification come first, and only after that come work conditions, years in the job (which can be perceived as the achieved working experience or loyalty to the company) and social aspects. This order did not change in the period 1992-1997, and this implies that the values of performance and output are deeply rooted in the mind of the population. The only major change is a significant decrease in the importance assigned to the social obligations of the employee - that is, the size of the family the employee is looking after.

The differences in the ranking of the desired and actual factors reflect deep criticism of the current situation. The picture of the desired situation

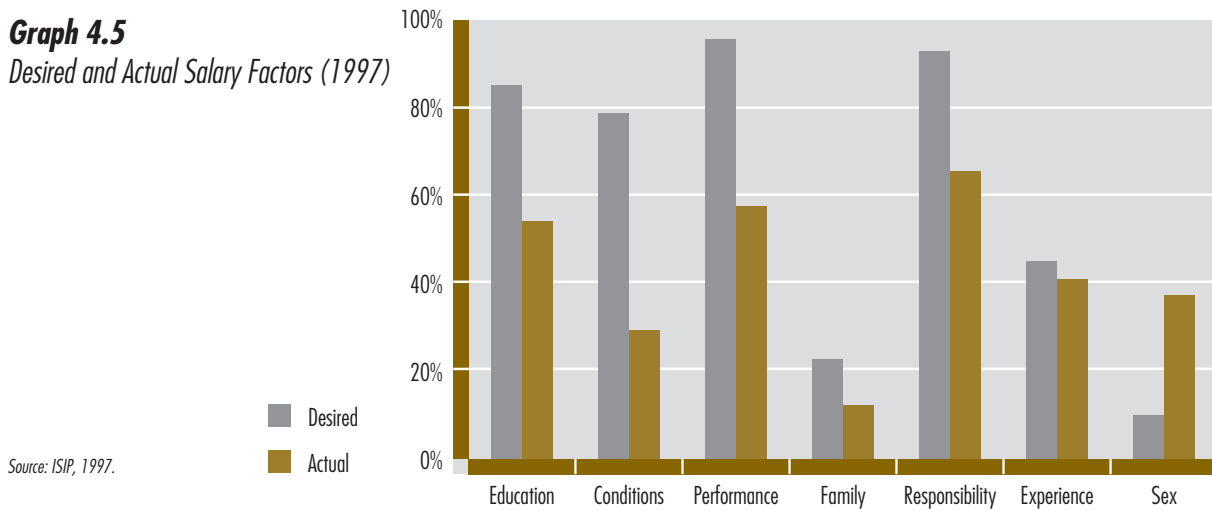
**Graph 4.4**  
Desired and Actual Salary Factors (1992)



Source: ISIP, 1992.



**Graph 4.5**  
Desired and Actual Salary Factors (1997)



Source: ISIP, 1997.

shows differences in the weight assigned to the various factors, but the picture of the actual situation suggests that these factors are perceived as more evenly weighted in current practice. This suggests a deficit in the actual application of the main income factors, which is most marked in the case of individual performance, followed by work conditions, and then by responsibility and qualifications. By contrast, the perceived actual importance of work experience is roughly the same as its importance in the desired picture, family size is perceived to have only slightly more actual than desired significance, and differences between men and women are quite understandably, felt to be much bigger than they ought to be.

During the survey period, the structure of the perceived actual salary factors moved towards modern principles of remuneration. According to the respondents, the application of all functionally important income factors had improved. The biggest improvement was in the weight given to individual performance, then responsibility and finally education. Hence the distance between the desired and actual importance of the factors had diminished. The respondents felt that, in particular, the actual influence that education and responsibility had on the income in 1997 came closer to the desired picture. On the other hand, evaluation of the performance of the individual employee has the longest way to go to achieve the desired level, although we can see a shift in favour of performance factors of income differentiation.

#### IV.3.2 Opinion of Remuneration in Terms of Employee Characteristics

As regards the analysis of the income factors and their changes, it is important to identify differences between different categories of population both in the area of the perception of the functional system of remuneration (desired remuneration factors) and in the area of happiness with the current situation (the relationship between the desired and the actual weights of the factors).

The most important driving force for the development of human resources is the weight people attach to achieved **qualification**. It is important to develop a more intensive feedback process that would lead to the further enhancement of qualifications. Although remuneration is not the only factor in this process, it is very important. There must be a return on education, in other words higher incomes must make up for the later economic start of the individual and must cover the expense of the studies. In addition, education should represent a very profitable investment, not just in the sense of a response to temporary boom fields (such as the earlier sharp increase of numbers in some legal and accounting professions) but in the sense of opening up opportunities for the individual in a wide spectrum of professions and lines of business.

The **education** of respondents has the clearest influence in relation to perceptions of the weight attached to education: the higher the level of respondents' education, the more critical the respon-

*Salary Factors in Terms of Education and Age*  
(Difference between the "Desired" and "Actual" Indexes) (1997)

Salary factors	Education category				Age category				Total
	basic	lower vocational	full secondary	university	20-29	30-39	40-49	50-59	
Education	13,7	18,8	17,4	16,5	8,3	18,3	13,9	25,3	17,8
Conditions	29,1	21,0	27,9	28,2	32,7	29,0	24,7	12,2	25,9
Performance	31,7	27,6	31,4	29,5	26,3	27,4	28,4	39,6	28,4
Responsibility	13,1	8,6	6,5	12,6	6,6	14,4	7,4	-1,6	18,2
Family	16,9	15,1	21,8	17,8	14,9	19,1	16,5	20,4	11,9
Experience	2,4	-3,2	8,9	11,3	7,3	11,2	1,3	-6,2	7,7
Sex	-21,0	-26,9	-20,8	-24,8	-19,7	-20,2	-23,9	-30,6	-23,6

Source: ISIP, 1997

dent's opinion of failure to make it a major criterion. Understandably, while intellectuals underline the qualification dimension of the job, manual workers stress its physical demands and the character of the work environment. However, the central criterion for appraisal of work is individual performance. In this case, it is a standard generally shared by respondents regardless of educational level.

As for as **age categories** are concerned, we can see a combination of the influence of professional career and the influence of generational identity (personal life linked with a certain time in history). Both influences cumulate in the value attached to experience by the senior generation, who would like to receive better remuneration and, at the same time, whose past is in the old system where experience and loyalty to the organisation (and regime)

*Salary Factors in Terms of Type of Ownership*  
(Difference between "Desired" and "Actual" Indexes) (1997)

Salary factors	Type of Ownership								Total
	1	2	3	4	5	6	7	8	
Education	11,6	-0,1	13,3	15,6	15,3	17,6	22,8	21,2	17,8
Conditions	14,9	33,2	27,2	25,6	28,6	23,1	22,8	25,6	25,9
Performance	22,7	33,5	31,7	30,9	23,8	19,4	24,8	38,3	28,4
Responsibility	6,2	6,7	11,1	10,5	7,1	10,6	17,5	5,0	18,2
Family	14,4	29,2	19,3	17,4	12,0	23,5	18,3	20,4	11,9
Experience	-5,3	-6,2	1,7	7,7	10,4	5,4	9,4	0,0	7,7
Sex	-25,5	-39,3	-25,5	-26,1	-17,3	-11,2	-17,4	-27,4	-23,6

Legend:

Types of ownership: 1. entrepreneur, 2. small business man, 3. joint stock company with foreign capital, 4. domestic joint stock company, 5. private firm, 6. state-owned company, 7. other type of ownership, 8. public institution.

Source: ISIP, 1997

were rated most highly. In many cases, most criticism comes from people aged 30–39, undoubtedly because of the combination of the historically exceptional opportunities open to this age group, which entered the job market in the favourable times after the changes to the system when there was a demand for young, high-performing people. It is very interesting to compare the difference in the fulfilment of desired remuneration criteria in different ownership sectors. The results here, of course, reflect the character of the work and the corresponding qualifications of employees (for example while joint stock companies mainly employ workers, in the public sector the intelligentsia predominates). The difference is more or less as expected: entrepreneurs and self-employed people do not stress qualifications and experience very much, because they sometimes see these criteria as merely formal criteria and prefer to emphasise performance. It is also not surprising that the strongest criticism of failure to apply the performance criterion comes from the public sector, where standardised tariff salaries are the norm prevail and bonuses are apparently insufficiently based on individual effort.

As far as **sex** is concerned, both men and women agree that this factor should have only a small influence (in both cases this was the view in 90% of the responses). Opinion differed, however, as regards the real influence of this factors: 32% of the men and 44% of the women stated that it had a major influence. Women are also much more critical than men in their views of other remuneration factors above all about conditions of work and how hard the work is, and to a lesser extent about qualifications, performance, experience and family responsibilities; they are only less critical than men on the question of the factor of responsibility. These results imply that our current system of remuneration is more tuned to the male section of the labour force and that women must invest considerably higher skills into their work as well as more energy if they want to achieve the same position.

### IV.3.3 Application of Qualification and Knowledge

In a market economy, it is not possible consistently to monitor the relationship between the requi-

#### Survey of Economic Expectations and Attitudes

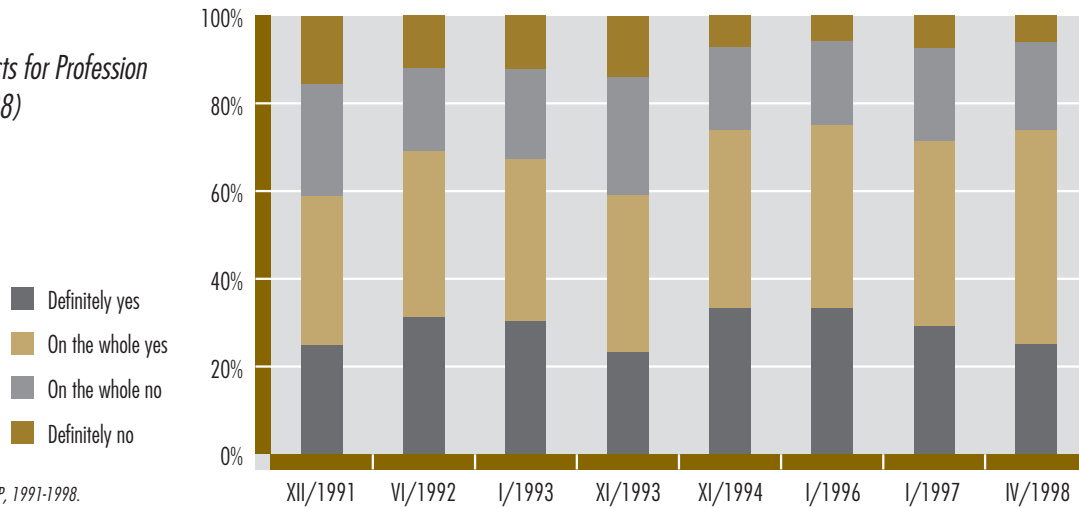
The regular surveys, Economic Expectations and Attitudes, were started in May 1990 and first conducted twice annually (1990–1992) and, later on, annually (1993–1998). They were organised by the Social Economy Team of the Sociological Institute of the Czech Academy of Science. The respondents were selected from adults using a two-level quota. The first step was to make a selection based on the variables of region and size of town or village, and the second was based on the sex, age and education of the respondents. Data was collected by the Centre of Empiric Surveys – STEM. The surveys include a wide scale of opinions of people regarding the economic situation in the country and their own families, participation in the job market, and incomes and property; they monitor political attitudes and social position. In addition to standard questions, each survey focused on some specific topic (poverty, privatisation, health, authoritarianism, etc.).

red qualifications for the job and the actual qualifications of the worker. In fact, the notion that the two were identical was a fiction in the past as well: a required qualification was defined by a bureaucratic centre, without knowledge of the real requirements of the job, and the fulfilment of the required qualification could be replaced by something else or postponed. In an open economic system the required qualification is not centrally defined for the great majority of jobs (except for some jobs in the public sector and so-called certified licences licenses which can only be obtained if certain education criteria are fulfilled); job catalogues only serve as a guideline. Employers are more interested in the specific skills of the applicant and in how well he or she is prepared for the required performance than in how far he/she meets any formal pre-requisites for the job.

We should not, however, get carried away by the opposite idea that a perfectly functioning job market exists where employers are able precisely to establish the input of each employer into work productivity and have up-to-date information about the structure and quality of labour on the market. Education and qualifications have become a very important signal of quality for employers.

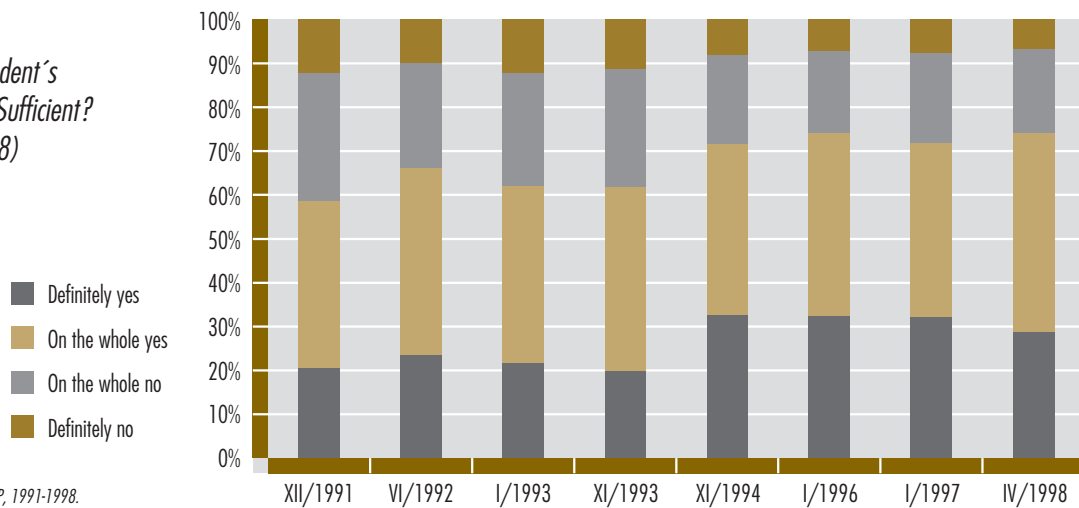
In spite of the positive trends in the evaluation of education after 1989, there have been some negati-

**Graph 4.6**  
*Good Prospects for Profession*  
 (1991 - 1998)



Source: Researches EOP, 1991-1998.

**Graph 4.7**  
*Is the Respondent's*  
*Qualification Sufficient?*  
 (1991 - 1998)



Source: Researches EOP, 1991-1998.

ve developments on the job market. The low level of unemployment and shortage of employees in many professions has led to an unhealthy self-confidence among employees, a lower fear of failure but also lower activity. Concurrently, there were growing expectations that the government would ensure jobs and regulate salaries. But the future of the job market lies, of course, in its adaptability and flexibility; the qualification of the employee is not simply a single completed training phase but a question of lifelong activity, and a job cannot be guaranteed forever with one organisation.

In relation to **the prospects of their professions and the adequacy of their qualifications** in new conditions, the answers from the respondents are

clearly optimistic. In this area there has been an important shift away from the rather critical initial view of the situation after 1990. This development can be regarded as positive, of course, but it can also be interpreted as a warning sign of an unjustified return to past complacency, resulting from the fact that the expected pressure for major changes has not yet happened. Over time, however, we can see an important **differentiation of attitudes**. If we look at the respondents' rating of the prospects for their profession and adequacy of their qualifications from the point of view of education and age, it is quite natural that the higher the education of the respondents, the better their evaluation of the situation. Age, however, is an

## Prospects for Profession and Qualification (%) (1997)

Question	Education category				Age category			
	basic	lower vocational	full secondary	university	20-29	30-39	40-49	50-59
<b>My profession has good prospects</b>								
Definitely yes	22,5	26,7	29,6	36,7	31,0	31,9	27,5	24,8
Probably yes	29,4	36,3	35,7	38,6	41,0	38,3	35,4	30,7
Probably no	34,3	25,6	23,2	19,1	18,7	19,6	26,6	32,0
Definitely no	13,8	11,3	11,6	5,6	9,3	10,2	10,5	12,5
<b>Total</b>	<b>28,6</b>	<b>35,8</b>	<b>24,7</b>	<b>10,9</b>	<b>28,6</b>	<b>35,8</b>	<b>24,7</b>	<b>10,9</b>
<b>My current qualification is sufficient</b>								
Definitely yes	31,4	32,4	37,0	60,7	25,1	34,6	41,4	43,4
Probably yes	38,0	43,1	41,4	28,4	42,7	41,7	39,8	38,2
Probably no	16,5	16,2	16,6	8,5	25,3	16,2	11,9	11,7
Definitely no	14,2	8,3	5,0	2,3	6,9	7,5	6,9	6,7
<b>Total</b>	<b>37,3</b>	<b>40,3</b>	<b>15,4</b>	<b>7,0</b>	<b>37,3</b>	<b>40,3</b>	<b>15,4</b>	<b>7,0</b>
<b>My knowledge and skills are sufficient</b>								
Definitely yes	37,7	38,4	36,3	43,5	23,1	36,1	39,1	49,9
Probably yes	36,7	45,5	45,9	48,0	52,4	45,6	45,5	39,7
Probably no	19,8	11,7	14,7	7,6	21,0	14,8	11,3	6,9
Definitely no	5,9	4,4	3,1	1,0	3,5	3,4	4,1	3,5
<b>Total</b>	<b>38,3</b>	<b>45,2</b>	<b>12,8</b>	<b>3,7</b>	<b>38,3</b>	<b>45,2</b>	<b>12,8</b>	<b>3,7</b>
<b>Today, my qualification is used better than before 1989</b>								
Definitely yes	22,6	28,9	32,9	31,8	41,2	35,7	28,1	20,5
Probably yes	33,7	33,6	31,4	35,7	32,0	31,1	36,9	31,3
Probably no	31,4	21,4	23,5	23,2	14,6	22,8	22,7	29,6
Definitely no	12,3	16,1	12,1	9,3	12,3	104,0	12,3	18,5
<b>Total</b>	<b>30,0</b>	<b>33,2</b>	<b>23,1</b>	<b>13,7</b>	<b>30,0</b>	<b>33,2</b>	<b>23,1</b>	<b>13,7</b>

Source: SIALS, 1998.

important factor here as well. Prospects for profession and use of qualifications are rated best by young people, while, as far as adequate qualification and sufficient knowledge are concerned, the most optimistic respondents are middle-aged (40-49 years). Women are less optimistic as far as prospects of profession and use of qualification are concerned. As far as differentiation by sector is

concerned, the only major differences lie in the evaluation of the prospects for profession, specifically because of the low rating of agriculture. The position of the quaternary sector (education, health care, research and public administration) is specific: the respondents' rating of sufficient knowledge is above average, but prospects for the profession are rated below average. Obviously, this is a sector

full of differences and tension where self-confidence in the area of qualification has been shaken by bad prospects for higher salaries.

As for regional differences, the Prague respondents show greater confidence only in the area of evaluation of prospects of profession. Otherwise, Prague respondents and to an even greater extent the

inhabitants of Central Bohemia tend to be more critical of their qualifications and knowledge. The inhabitants of Northern Bohemia and Northern Moravia are less self-critical. This means that if they are not successful on the job market, they mostly blame the demand side, i.e. failure of the system.

## IV.4 The Institutional Environment: The Social Network and The Unemployment Trap

*There are two conditions that must be met in order to achieve a motivational environment suitable for the development of human resources. First, there must be sufficient remuneration for highly qualified work and performance. This not only motivates people to good quality work but is also an incentive to the development of the required skills and knowledge in the present and future generations. On the other hand, differences in salaries must not exceed a certain limit above which the integrity of the society and social peace would be endangered. The social democratic traditions of pre-war Czechoslovakia and its proximity to "social" Western Europe has prevented the occurrence of wild capitalism in the form in which it appeared in some Eastern countries. Despite widely used liberal rhetoric, great attention has been paid to **social security in employment and life**, even in the very first phases of transformation. Indeed, it appears that too much attention was given to preserving security in the employment area, which has had an unfortunate effect on the efficiency of the Czech economy.*

In 1989, Czech society stood at a crossroads and had to choose from a range of possible theoretical models of how to achieve social welfare. For citizens, the best option may have been a social democratic government with a state budget, moving money between sectors of the society and maintaining the social securities of the past. This model had been achieved in pre-war Czechoslovakia when it was a good example of social insurance and a relatively generous social policy. The pendulum of history, however, swung towards the **liberal stream** and the concept of a residual social state such as exists in the United States or, partly, in the United Kingdom. Theoretical ideas, however, had to give way to political and economic reality, always more complicated than any theory.

### IV.4.1 Building A New System

As soon as the economic system started changing after 1989, it was necessary to implement several **social rescue measures**. Their objective was to relieve the decrease in the living standard for those who were unable to cope with the financial difficulties. A minimum wage was defined and regular valorisation of pensions and other social benefits was introduced. The *Minimum Living Standard Act*

was passed in autumn 1999 and defined social need in other words, it established a sort of a legal poverty line. At the same time, a legislative framework was created for the job market and employment policy was formulated. The new *Labour Code*, together with the *Act on Collective Bargaining*, were the prerequisites for the assertion of employee rights during the implementation of the new economic policy.

Due to a new feature unemployment it was necessary to implement **standard job**

**market institutions**. Within their framework, unemployment benefits were established and, soon after, were tightened up: the period for which the benefit was provided at the level of 60 % of the previous income was cut from six to three months (with a 50 % benefit for the following three months), and the maximum period for which the benefit was provided was reduced from one year to six months and its upper limit was set as 150 % of the minimum wage (since 1996, the maximum benefit has been derived from the minimum living standard limit defined for a person over 26). While on the dole, people are not allowed to have any other income. This regulation is quite strict, but is not in harmony with social benefits that are quite generous, especially for low-income categories.

The period after the elections in 1992 gave priority to **individual funding of social security** (personal insurance) over **collective insurance** (through employers and professional organisations). In order to achieve a more effective system of social policy, the system started shifting in the following directions: (1) in the area of **pensions**, it was decided that pensions should gradually become less dependent on the previous salary and that there should be a bigger difference between average wage and average pension; simultaneously, private insurance and pension funds should be expanded and people

should be encouraged to take care of themselves and not to rely on the government; (2) in the area of **child allowance** and other family allowances, it was decided that a family means test be introduced some allowances restricted to households that did not exceed a certain income limit; (3) **social benefits** were based on strict verification of the applicant's income and property and the aim was to transfer responsibility for social benefits to local authorities. These tendencies may be considered a rejection of pre-war social democratic traditions, but correspond to the efforts of some European countries to impose stricter checks on the actual funds and means of applicants and to make social policy less generous. Such measures help reduce the number of those who qualify and compensate for their difficulties at the lowest cost and with the highest motivational effect possible. In reality, however, despite the changes mentioned above the Czech Republic did not create a liberal environ-

ment which would place fewer financial demands on the state, would require more responsibility from the citizens and, at the same time, create sufficient pressure on employment and the development of the positive work values. The system has remained **strongly re-distributive** and is a burden especially for entrepreneurs. For low-income categories, it is has become more advantageous to apply for social benefits than to live on wages.

#### IV.4.2 Taxation: The "Tax Wedge"

The tax and social contribution burden on employees and entrepreneurs with taxes is a very important factor in moulding the environment for the use and re-production of human resources. Here the data are not very encouraging. The results of *Microcensuses* in 1988 and 1996 show that overall taxation of households increased during that peri-

*Tax and Social Benefits Distribution in Quintile Groups of Income per Consumption Unit in Selected OECD Countries (%)*

Quintile share	Germany	Netherlands	Sweden	UK	United States	Czech Republic 1988	Czech Republic 1996
<b>Taxes and contribution to social funds paid by employee:</b>							
1	5,5	10,3	6,3	4,5	3,8	1,7	1,8
2	10,4	10,0	12,5	8,1	6,9	11,1	5,4
3	17,0	16,2	17,7	15,9	13,9	20,2	14,1
4	23,4	22,3	23,3	25,0	22,6	27,3	25,1
5	43,7	41,2	40,1	46,4	52,7	39,7	53,6
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>
<b>Average:</b>	<b>24,4</b>	<b>36,4</b>	<b>32,5</b>	<b>21,4</b>	<b>21,2</b>	<b>14,8</b>	<b>20,2</b>
<b>Social benefits:</b>							
1	21,8	24,9	15,2	26,7	29,2	27,5	27,5
2	22,2	21,3	25,8	25,9	21,2	23,4	30,6
3	16,7	16,9	21,7	19,4	17,1	17,1	20,4
4	21,0	17,7	19,9	16,1	17,5	15,8	12,7
5	18,3	19,2	17,4	11,9	15,1	16,2	8,8
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>
<b>Average:</b>	<b>24,1</b>	<b>43,4</b>	<b>42,7</b>	<b>30,1</b>	<b>14,5</b>	<b>26,2</b>	<b>24,9</b>

Source: OECD; *Microcensus*, 1988 a 1996.



od. **The average taxation of the gross salaries received by households** (including the contribution paid to social and health insurance) rose from 13 % to 17 % and the **share of social benefits received** (pensions, family and social allowances) in the net income of households dropped from 26 % to 25 %. If we take the two figures together, it means that while in 1988 households received 17 % more than they earned at work, it was only by 11 % more in 1996. Most of the transfer is of course due to pensions.

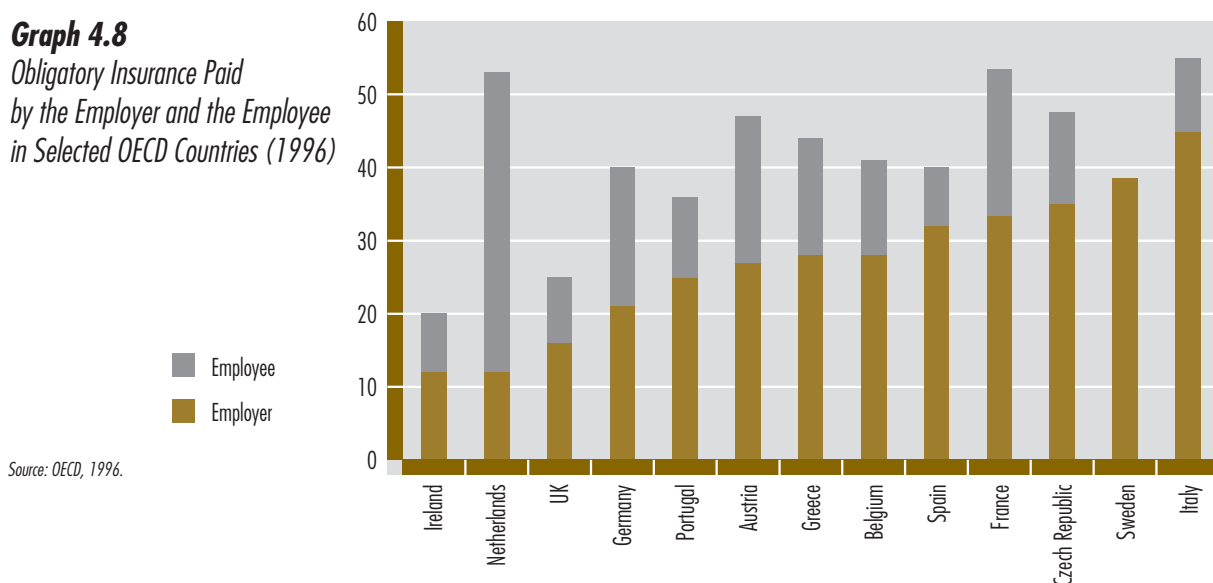
However, not all incomes were declared and taxed and the share of household income derived from the shadow economy probably increased due to new opportunities.. The real loss of households is on average probably lower and the difference between the households of the working population and those of pensioners is undoubtedly higher than the figures in the statistical surveys would suggest. On the other hand, additional earnings are possible only for part of the population, mainly self-employed people and entrepreneurs and households living in economically better-off regions. In addition, there are undoubtedly huge differences between levels of additional income.

Income differentiation, together with the redistribution channels of taxes, contributions and social benefits, can, however, be relatively closely monitored in the area of officially declared incomes. Put simply, this is the relationship between how much

the rich pay and how much the poor receive. Inverted commas are appropriate here because taxes and contributions to social and health insurance are paid in the Czech Republic by 70 % of households and state allowances or benefits of some kind are received by 80 %. This is because there are only very few really rich people in the population, and also because the more progressive the system of taxation, the greater the efforts by high-income categories to evade the obligation to pay tax. The main burden therefore usually falls on the middle class, who pays much and receives little.

There are major differences between different types of country in **the scope and flow of re-distribution**. Liberal countries have lower but steeper re-distribution because the aim is only to assist those who are really in need and it is legitimate to place the main tax burden on the rich. Social democratic countries have a higher level of taxation but the share of social funds is spread more evenly across the population. Very often households pay with one hand and receive with the other which is why there is sometimes a call for merging the two re-distribution channels into a so-called negative income tax . In a choice between a liberal and a social democratic regime, the real issue is whether or not the middle class should be left to its own devices or should be involved in redistribution channels (which means they would be charged and supported).

**Graph 4.8**  
*Obligatory Insurance Paid by the Employer and the Employee in Selected OECD Countries (1996)*



Source: OECD, 1996.

It seems that while carrying the flag of liberalism, the Czech Republic took a third way, which combines relatively **high taxation with rather steep re-distribution**. Tax reform strengthened progressive taxation and social reform strengthened the principle that social benefits should go only to those in need. The result is redistribution which according to our data cannot be found anywhere else in the world in terms of steepness of gradient: e.g. 20 % of the households with the highest incomes pay 55 % of the tax in the Czech Republic (which is

at the level of the United States and above the level of West European countries), and the same households receive only 9 % of the social transfer (in the United States it is 15 %, in the United Kingdom 12 % and in other West European countries significantly more). The share of the lowest 20 % of households in the transfer in the Czech Republic corresponds to that of liberal countries but their share in taxation is insignificant.

The prevailing opinion (except for the orthodox liberal approach) is that redistribution from the

*"Tax Wedge" in terms of Household Type of Industrial Worker in Selected OECD Countries (%)*

Country	Single, no children 67	Single, no children 100	Single, no children 167	Single, 2 children	Couple, 2 children 100 – 0	Couple, 2 children 100 – 33	Couple, 2 children 100 – 67	Couple, no children 100 – 33
Czech Republic	41,4	42,6	45,0	26,2	31,4	34,5	36,6	41,4
Hungary	46,8	52,0	58,3	26,8	40,4	40,6	43,0	49,3
Poland	43,6	44,7	45,9	37,9	39,5	40,8	42,0	35,8
Belgium	50,5	56,4	61,6	33,8	40,4	45,8	49,4	53,2
Denmark	41,3	44,8	52,6	13,6	31,1	36,5	39,5	41,3
France	44,3	49,7	53,5	36,0	40,7	41,3	43,2	46,8
Ireland	26,5	36,1	45,7	2,5	25,6	26,5	28,7	29,7
Italy	48,3	50,8	53,6	37,1	43,8	46,3	49,1	48,4
Germany	46,5	51,2	54,9	31,9	35,0	41,1	44,8	46,5
Netherlands	39,3	43,8	44,2	22,3	33,5	35,9	38,1	40,7
Portugal	30,6	33,8	38,9	22,0	26,9	27,9	29,4	32,6
Austria	37,4	41,5	45,8	16,3	28,0	30,2	32,6	39,4
Greece	34,9	35,8	38,9	34,3	35,9	35,6	35,5	35,7
Spain	34,4	38,8	40,7	29,3	33,5	36,3	36,1	37,4
Sweden	48,6	50,2	56,2	40,1	44,6	45,5	46,2	49,7
Switzerland	27,6	30,4	35,2	14,2	18,6	21,1	24,4	28,3
UK	26,8	32,6	34,6	12,6	25,3	22,6	25,9	27,0
United States	29,2	31,1	36,6	11,8	23,9	27,2	28,7	29,7

Note:

Tax wedge: Taxes and contributions to social funds paid by the employee, plus insurance paid by the employer, minus mandatory social benefits, expressed in percentage of gross work cost (gross salary plus insurance paid by the employer).

Household types include single and married persons, persons with no children or with two children, and relationship of the salary (of the single person or the couple) and the average salary of an industrial worker (for example, 100-67 means average salary of the husband and 67% of average salary of the wife).

Source: OECD, 1996.

rich to the poor is legitimate. However, if redistribution channels push the middle class, which carries the quality of the human resources, to the edge of poverty, or if they prevent the middle class from rising to the standard expected, the state interrupts the healthy social reproduction of the society and paves the way for social polarisation. From an economic point of view, it is very dangerous to burden entrepreneurs and, so to discourage them from keeping existing jobs and creating new ones. Excessive regulation of employment, together with high taxes and contributions which the employer has to pay for his/her employees, lead to lower demand for labour, especially for less-qualified employees and the lowest salary categories. It also encourages employers to limit full employment contracts in favour of temporary jobs, black jobs, or various combinations of formal employment with the proven practices of the unofficial economy.

For the employer, it is important how much he/she has to pay in **contributions to social and health insurance** for his/her employees and how easily and at what additional cost the employee can **be dismissed**. Unfortunately, the social and health insurance paid by the employer in the Czech Republic is one of the highest in Europe. The only countries in which employers pay more than the 35 % paid in the Czech Republic are Italy (45 %) and Sweden (38 %). In Austria it is 27 %, in Germany 21 %, in the United Kingdom 16 % and in Ireland 12 %. In addition, there are plans in the Czech Republic to increase insurance and, again, the greater part of it will have to be paid by the employer. Another question is the introduction of handshake money for dismissed employees, which, together with other factors, may also discourage employers from hiring people as full-time employees.

The problem is not only with the costs to be covered by the employers (in some countries the burden is on the employees) but with the **overall financial burden on labour**, i.e. the social cost spread over the two parties. The combined index which includes the income tax of the employee together with obligatory contributions to the social and health insurance (expressed as gross income including contributions paid by the employer) is also sometimes called the tax wedge. The OECD calculates this index for comparison using what are known as tax equations based on marital status,

number of children and salary. The calculation does not include contributions to health insurance (probably because it would be difficult to compare it internationally) and so the actual amounts paid are somewhat higher.

The international comparison shows that we are one of the states where the employees' salaries are subject to charges at a level that is above the average, but not the highest. The two other reform countries (Hungary and Poland) together with a number of welfare West European countries, come before the Czech Republic in almost all types of family. However, if a comparison is made with Austria, an undoubtedly socially developed and geographically close country (with many years under the strong influence of the Socialist party), the Czech Republic has a higher burden on labour in all types of households. And the distance of the Czech Republic from true liberal countries (the United Kingdom, the United States, Switzerland and, partly, even Ireland) is a difference of 10-15 percentage points.

Although it is not a huge burden, if compared to West European countries, it almost reaches the level of net salary. Because the amount to be paid to the state budget and health care funds is divided into two amounts to be paid by the employer and the employee, the total amount charged from the salary by the state is blurred. The non-transparency of the redistribution system helps overcome aversion to taxes and other payments, but on the other hand reduces the healthy pressure which citizens should exert on politicians with the aim of making the services provided by the state more effective. According to the surveys, people even underestimate the amount that they pay to the state directly, let alone the aggregate amount.

#### IV.4.3 The "Unemployment Trap"

For the absolute majority of people, work is a necessity of life and only a few people would like to stay at home, even if they were looked after by the state. In the first place, unemployment brings not only financial but above all psychological suffering – people feel they are useless, and this impression may grow into the feeling that they have been excluded from society. Nevertheless, the degree of material compensation that the social

*Social Compensation for Salary at the Level of 67% of the Wage of an Industrial Worker  
in Different Household Types in Selected OECD Countries (%)*

Country	After the first month of unemployment				After the 60 <sup>th</sup> month of unemployment			
	single	couple	couple, 2 children	single, 2 children	single	couple	couple, 2 children	single, 2 children
Czech Republic	60	74	76	77	53	91	100	100
Hungary	86	86	90	91	64	64	74	75
Poland	49	52	61	58	42	42	51	51
Belgium	84	76	76	82	78	90	91	98
Denmark	90	94	95	95	68	98	80	88
France	85	85	87	87	57	56	58	60
Ireland	45	64	72	71	45	64	72	75
Italy	35	42	46	44	0	6	14	11
Germany	73	74	76	80	76	87	92	91
Netherlands	86	90	86	86	85	95	96	94
Portugal	89	88	87	87	0	0	8	8
Austria	57	62	77	73	54	59	74	70
Spain	71	71	73	74	37	47	63	57
Sweden	78	78	85	87	89	116	122	82
Switzerland	76	76	88	88	76	76	88	88
UK	75	88	80	63	74	92	96	83
United States	59	59	50	52	11	18	58	50

Source: *OECD*, 1996.

After the first month of unemployment: The situation in different types of household when the main bread-winner has lost his/her job and receives unemployment benefits together with other family allowances.

After the 60<sup>th</sup> month of unemployment: The situation in different types of household when the main bread-winner has been unemployed for a long time and the family receives general and specific social benefits.

system provides for the missing salary, i.e. the relative loss people suffer when they lose their job, is scarcely a matter of indifference. This is very important from the tax payers' point of view because the more generous the system is, the more they pay. As unemployment grows, so does the burden on the rest of the working population. The way the system works, however, is important for the recipients of the benefits as well.

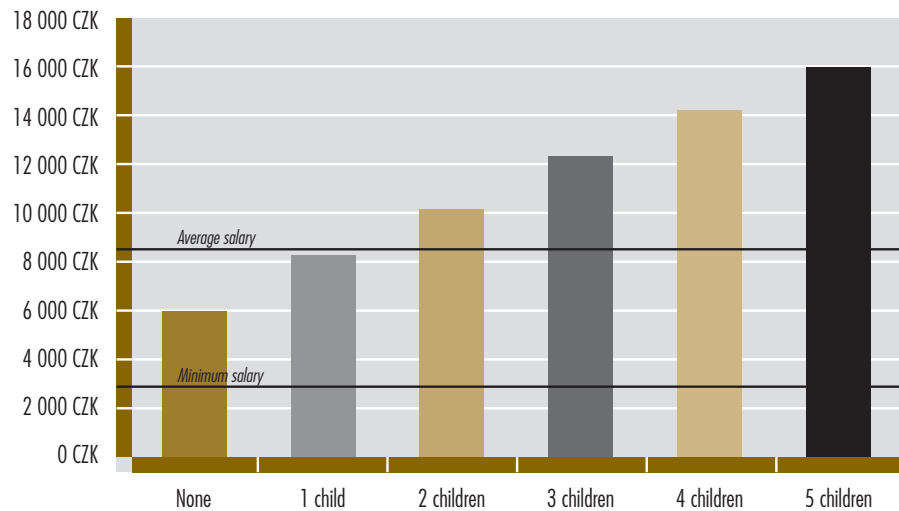
Without doubt, in each society there is a category of people who like to live on social benefits and who take the care provided by the state for granted. Of course, higher benefits encourage such an attitude. The younger the people are and the lower

their education, the more probable it is that they will become addicted to assistance from the state. Even in the socially hard United States, the AFDC (Aid for Families with Dependent Children) allowances, originally designed for widows of soldiers who had died in World War I, led to the emergence of a category of the population who plan their life depending on the conditions of such benefits; such a way of life is passed down from one generation of single mothers to the next. The so-called unemployment trap is defined in terms of the **difference between the income from a job and the income from the social benefits paid in the event that people lose**

**their job.** This difference must be enough to cover the additional cost related to the job (transport, clothes) and also to provide sufficient motivation. However, the material aspects of work are closely linked with the psychological aspects, depending on the cultural level and personal attitudes of the individual person. For people who were brought up in the traditional way and were taught to be self-supporting, it would be unacceptable not to work, even if the difference were zero or even negative. For people of a consumer and lazy type, however, this difference must be very significant. Bearing in mind the factors mentioned above, we can take a look at the international comparison of the differences between the income from job and

compensating income from social funding. This is the so-called net social compensation, or the percentage of the original income that a person receives based on insurance or citizenship when he/she stops working. Here we compare different family situations but only on one income level, which represents two thirds of the average wage of an industrial worker. The first section shows the situation shortly after the person became unemployed (which, in the Czech Republic and most other countries, is covered by unemployment benefits based on insurance) and the second section shows the situation of long term unemployment (which, in the Czech Republic, is covered by social need benefits and, in other countries, by similar benefits).

**Graph 4.9**  
*Life Minimum of Married Couples with Different Numbers of Children, Compared to Minimum and Average Salaries (Approximately) 1998*



The comparison of the selected OECD countries shows the inconsistency of the Czech system of unemployment (or poverty) benefits. The system is rather strict for the unemployed in the short term, but is relatively generous towards long-term unemployment. If the Czech Republic is compared, for example, with Austria, the situation after the first month of unemployment is the two countries is similar, but while in Austria social benefits decrease in the event of long-term unemployment, in the Czech Republic they rise. In the event of long-term unemployment, a worker with a below average wage, living in a family, will receive the same income in social benefits in the Czech Republic, while in Austria it would be a maximum of three quarters. A similar situation to that in the

Czech Republic is to be found only in the socially most generous European countries (Belgium and the Netherlands); the only country with a better situation is socialist Sweden. All other countries undergoing social and economic reform show a significantly worsening position for those who are unemployed for a longer term because when they stop receiving their insurance and start receiving social benefits, this means a significant drop in their income (they do not have the social need benefits that we do). This applies to all the other European countries except for Germany and the United Kingdom. The Czech unemployment trap is also exceptional because of the fact that there is almost no difference between social need benefits and low

wages and sometimes (depending on the family situation) people may even be better off on social need benefits. Allowances for a family with one child are much higher than the minimum wage and for two children they are even above the average wage. The solution is not only to increase the minimum wage, which means that the state dictates to private entrepreneurs how much they will pay for work, but also to undertake a complete reconstruction of the social benefits system. It is obvious that the low performance of the economy and the resulting low purchasing power of wages (especially of low ones) play their role in this demotivating relationships between wages and social benefits.

In the Czech Republic the minimum living standards are based on the principle of re-production needs, a criterion that takes overwhelming account of individuals rather than of the family as a whole unit that can make savings depending on the number of family members. This results in the situation where the amounts paid to maintain the minimum standard of an individual or small family are low, but bigger families receive relatively high amounts. This is expressed by the elasticity coefficient of benefits which shows dependence on the number of members: while this is 0.8 in the Czech Republic, in Western countries it is only around 0.5, and according to the views of families on the necessary minimum income themselves, it is only 0.3. This means that, with every additional child, the advantage of legal social benefits probably grows more than basic needs, leading to higher chances of addiction to permanent benefits. It is a situation which is of course convenient for the style of life usual for the Romany ethnic minority but at the same time, it drives up the salary level required by job-seekers to approximately double the current minimum wage.

It is not easy to find a solution to the unemployment problem in the institutional area. On the one hand there is the European way, offering generous social welfare and strict regulation of the job market which then responds with growing salaries and a high unemployment rate. On the other hand, there are recommendations to adopt the American recipe, prescribing very limited coverage by the state and relative freedom of job contracts which leads to higher employment but also to greater differences in salaries to the detriment of

unqualified workers. It seems that while social friendliness leads to the unemployment trap and to a large percentage of long-term unemployment, socially hard policies force people to work at any price, often in jobs that are not full-time and are badly paid.

One does not, however, simply have to make a stark choice between betting on **flexibility of salaries** (typical for the United States) or **of job contracts** (the Netherlands is a frequently-quoted example). Some European countries have been wise enough to put their bets on **flexibility of qualification**, which has brought surprising results. The unemployed are obliged to invest in their training and various qualifications and temporary job opportunities are created for them with a view to making them more attractive on the labour market. That was the path taken by Denmark, where unemployment dropped from 12.7 % to 7.9 % in 1994-1997 without increasing inflation and even without cuts in a social welfare system that is one of Europe's most generous. Similar procedures are being implemented in the Netherlands, the United Kingdom and other countries.

The purpose of the change required is not to provide higher or lower amounts of money but to change the quality of the channels through which the money is being provided and strictly to control the payment of the benefits. It is a move from a welfare state to a workfare state, in other words from social benefits support to the support of opportunities on the job market. The unemployed person's obligation towards social solidarity is to invest in his/her own education and skills. The money given to the so-called non-productive part of the population is used much more effectively because it is turned into a long term investment in human capital.

Such change, however difficult it may be, is necessary in the Czech Republic. It means demanding much more of employment offices and related educational and training institutions and consulting firms. The desired **activation of the unemployed** is one of the few existing possibilities for preventing the exclusion of part of the population from participation in employment and, at the same time, is a way of achieving the permanent adaptation of labour to the rapidly changing requirements of the modern economy.

## IV.5 What Can Help in the Area of Values and Remuneration?

*Developments in the **wage sector** after the political upheaval of 1989 meant a significant shift away from levelled salaries typical for the directive system. Together with bigger differences in wages and salaries, the importance of education and training also increased. The privatisation process causes a temporarily high return on education, especially in joint venture companies with foreign capital.*

When compared to the past regime, the value of years of practice has dropped. The formerly very strong age curve of salaries became almost a horizontal line. After 1989, the market opened up to young people (including students) who were able to adapt to the market very quickly. There have been major shifts in the remuneration system in favour of young people – especially those with a higher education and more abilities.

However, even after ten years of economic reform, the Czech Republic does not have a job market which is open and provides equal chances to everyone. The changes did not create sufficient pressure on individual investment in qualification growth. Shifts in mobility (especially those of a horizontal nature) were relatively easy and did not require any major activation of employees. Nor was it a problem for the overwhelming majority of employees to keep their jobs. Even becoming independent at work was not so complicated and required characteristics other than the entrepreneurial spirit.

In the late nineties, the situation is more complicated. Companies have to face tougher criteria which reveal the failures or absence of restructuring. Banks which used to be very generous now have financial difficulties which do not allow them to continue with the policy of hidden subsidies to state-owned companies. Nor will the state be such a generous employer as it was in the recent past. The number of jobs will be reduced and in the event of positive development of the economy requirements on the intensity, productivity and effectiveness of work will be increasing. So too will the return on the education, qualification and functional capabilities of employees.

What is very important for the use and development of human resources is the **value environment of work**. In short it can be summarised as the perception of life success. In the Czech Republic, this perception is close to that of Western

countries in the sense that, unlike other post-communist countries, Czech respondents assign a minor role to social background and political contacts. However, the Czech Republic shows a different

rating of education. It is clear that the Czech Republic is far from the meritocratic ideal where education and performance serve as the main lifts to the upper floors of the social hierarchy. During the transformation, the picture of a successful life and its sources became blurred and the belief that people get to the top mainly thanks to their abilities and hard work lost ground again.

Czech respondents, as well as people from other countries in the East or West, think that the most important values of a job are: job security, remuneration and how interesting the work is. The biggest gap between the desired and the actual situation is in the area of remuneration. The economic reform which preserved a greenhouse environment of artificial employment for many employees did not lead to healthy concerns about finding and keeping a job and to the encouragement of work-related values. This is linked to the low pride in work performed by employees and weakness of loyalty to the employer.

Undoubtedly, the situation since 1997 has seen many changes, even in this area. Increasing unemployment inevitably leads to a higher rating of the value of both work and job. The question is, however, the extent to which tension on the job market will result in a change in the value environment that is, whether or not it will strengthen the sense of responsibility – starting with investment in one's own education and the effort to achieve higher education, via active behaviour on the job market, to hard work. The transformation period has only seen the start of the desired rehabilitation of **the central role of qualification and performance in remuneration**. On the one hand, people's ideas about desired remuneration factors are already not far from the optimum ideals of a performance society, but when they evaluate the reality, it emerges as distant from the optimum state. In relation to **the prospects of profession and**

**the adequacy of the achieved qualification** in the new conditions, the answers are optimistic. People have lost their initial fears, unfortunately mainly because of the slow restructuring of industry and low pressure for changes in the work performed in a significant part of the economy. Positive evaluation grows along with the achieved level of education. Age is an important factor as well: young people are the most optimistic in terms of prospects for profession and use of qualifications, while the middle-aged are most confident about adequacy of qualification and sufficient knowledge.

One very important prerequisite for a sufficient level of employment is **the appropriate structuring of the tax and contribution environment** in a way that would neither discourage entrepreneurs from creating new jobs, nor attract people to living without work. It is obvious that the tax system, insurance and the system of social benefits will never be in the kind of absolute harmony which would allow them to be equally economically and socially effective, but that is not a reason for accepting the extensive re-distribution which solves the problems of poverty but represents a heavy burden for entrepreneurs and the middle class. We should not be misled by the idea that higher redistribution brings the Czech Republic closer to social Europe because, in the end, its economic consequences may be an obstacle on the way to achieving success in European competition.

The institutionalised rules and cash flows between different categories of population can represent significant motivation for economic growth and employment if they support industrious people and the development of human resources. But they can also turn into a dangerous trap if they make life easy for certain groups of the population at the expense of the others and if they are not in com-

pliance with available resources. The state redistribution system is permanently on the edge of such dangers, especially if it is not divided into transparent sub-systems (direct and indirect taxes, insurance payments, benefits from insurance and social transfer) and the accumulated total is illegible.

The increase in unemployment since 1997 has dramatically changed the situation. Job opportunities are rarer and the more tax and contribution obligations the state imposes on employers, the rarer jobs will be. Higher unemployment means less people to carry the related social cost. It is necessary to achieve significantly higher transparency of the whole system so that it is clear what the total costs of work and social security are and who pays for these. Together with **making the system more transparent**, it is possible to make it work in a **rational and effective way**. We should not forget the unofficial economy and the radical solutions that it offers for entrepreneurs and employees. The exodus to the unofficial economy is reducing the number of people who contribute to the state budget and funds and then have to bear an even larger share of the social cost.

Attention to wage distribution and employment motivation is part of any standard economy of work. However, the transfer from a directed economy to an open one creates non-standard situations which result from a different value environment. So far, the changes have been focused on structure and form rather than on content, i.e. on issues related to attitude to work, style of work, contents of work and personal involvement. This, of course, is the most difficult and long-term task for which there are no legislative tools. The fulfilment of this task can be assisted by the creation of **a demanding environment of economic competition** which may be anticipated in connection with the move towards the European Union.



## Conclusion: How to Continue with the Development of Human Resources in the Czech Republic

*At the end of **Human Resources in the Czech Republic**, it is not necessary to repeat all the details of the summaries and recommendations given in the four main chapters. However, it is possible to draw attention to several facts which will undoubtedly have an impact on human resources in the forthcoming period and which represent a challenge for the future. It is obvious that Czech society has arrived at a turning point caused by the delay in the implementation of some of the accumulated transformation processes. As a result of those processes, the unemployment rate has significantly increased and the situation on the job market has become less clear. There has also been an increase in some problems related to social distribution. This situation should lead to certain activation, and pressure for positive change, both on the side of the state and the employers, as well as among the population itself. On the basis of the numerous facts documented here, the reader can decide whether **the activation has already started or whether the Czech Republic still has to take this step.***

Recent surveys clearly show that companies and schools have little interest in co-operation and that the interest of adults and employers in continuing education has decreased. The indices of functional literacy confirm that working conditions are not very demanding and that the higher rating placed on education by the employers is sometimes artificial because education does not necessarily bring the competence required by the modern working conditions which have not yet been fully established in the Czech Republic. However, it is possible that some results are affected by a **certain time lag and that the situation is changing.**

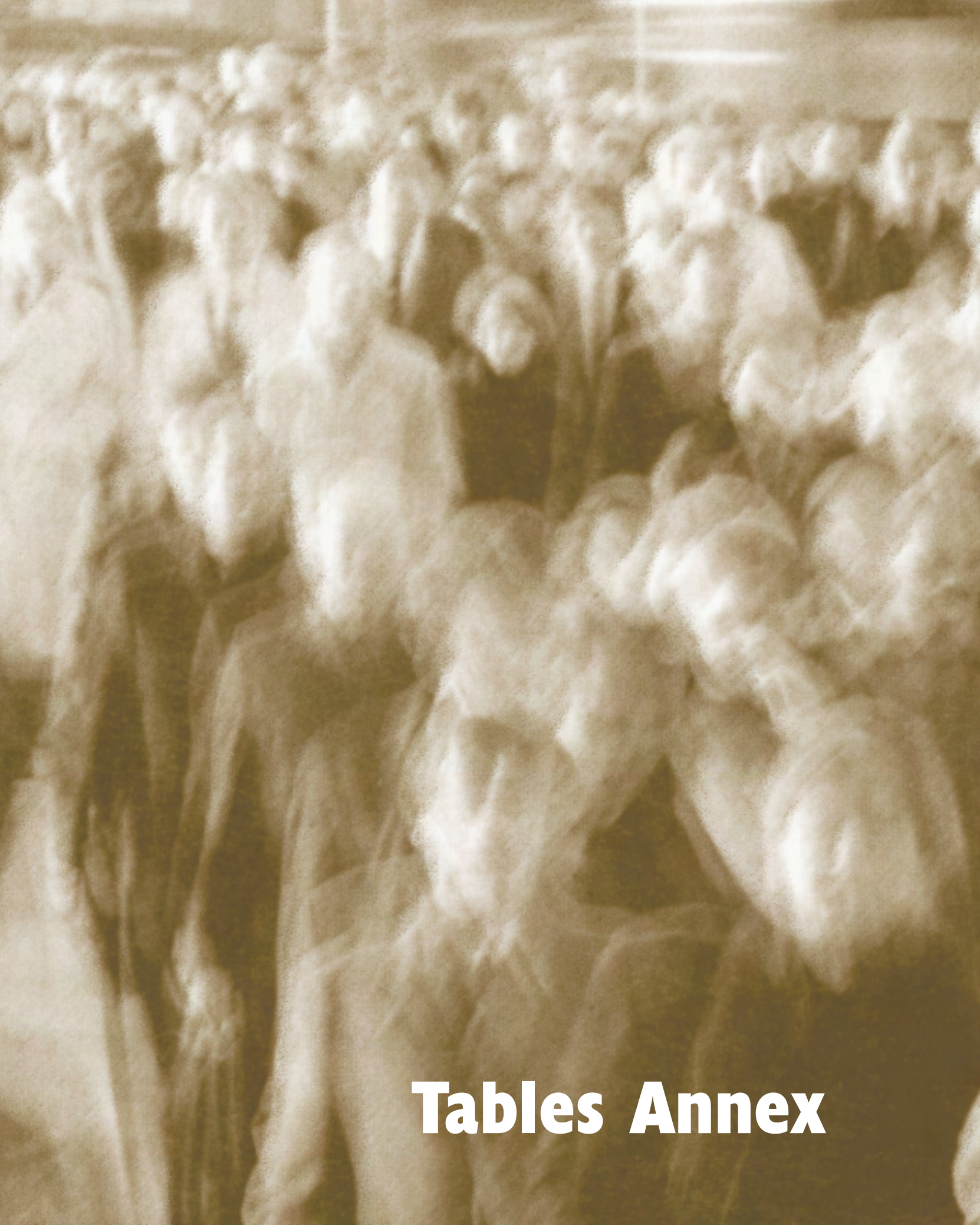
For example, there may already be an increasing **interest on the part of employers** in those employees who show chances of future economic advancement, i.e. in capable and **well prepared people**. This certainly applies to those employers who have undergone the necessary change and are now getting their second wind, or who have managed to keep to the required speed. However, these are questions which are still waiting to be answered. On the human resources side, the question is whether work conditions have so far led to

no more than a formal interest in achieving the required education or if the tougher situation is raising **people's efforts to gain new competence and working habits** which, if not immediately applicable, could be used in the near future. Another question is whether or not these requirements have already **had an impact on the education system**. The reader can draw his/her own conclusions and decide whether the **measures taken by the state**, which can however only be successful in **close co-operation with employ-**

**ers and the system of education**, are focused sufficiently on the following areas:

- the support of sufficient and diverse opportunities of education and continuing training for all potential participants; and the motivation of interest in education and training;
- encouraging close co-operation between educational and training institutions and employers;
- stimulating the development of the key competencies applicable in a modern society (functional literacy) through educational and working environments;
- the creation of a true job market policy by integrating measures to support the development of the economy, and social, preventive and activation measures.

**The current turning point period will decide whether the Czech Republic will take the path of a society orientated towards growth and competitive power, which requires well prepared and competent human resources, or if the country will decide to play the role of an outsider, orientated towards average performance and cheap labour.**



# **Tables Annex**



## TABLES ANNEX

The tables annex is a relatively independent part of the publication called Human Resources in the Czech Republic. Its objective is to provide the reader with a comprehensive overview of specific information relating to human resources. There is no straightforward link to the structure of the publication text. It is assumed that the structure of the table section may be more or less maintained in other similar publications so as to facilitate comparison over a longer period of time, while the textual part will change according to the specific focus of each publication. The tables are complemented by graphs in order to provide well-structured and comprehensible information.

The annex provides data both about the situation abroad – particularly in the countries of the European Union and the OECD – as well as comparable, but substantially more detailed, information about the situation in the Czech Republic. It is divided into the following parts:

- **The basic characteristics of macro-economic and demographic development**
- **The economically active population**
- **Education indicators in relation to the labour market**
- **Graduates in the sphere of labour**
- **Expenditure on education and employment policy**
- **Wages, remuneration**

## Abbreviations used in the area of education (including tables and graphs in the textual part of the publication)

**ISCED** International Standard Classification of Education (ISCED 1997)

### Types and levels of education:

Basic	completed basic school
SOU	secondary vocational school
SOŠ	secondary technical school
MZ	"maturita" examination
SO	secondary vocational education (see also SOŠ without MZ)
ÚSO	full secondary vocational education (see also SOŠ with MZ and SOU with MZ)
ÚSV (G)	full secondary general education ( <i>gymnázium</i> )
VOŠ	post-secondary technical school
VŠ	higher education

### Graduates:

SOU without MZ	graduates from training courses at secondary vocational schools which are not completed with a "maturita" examination
SOU with MZ	graduates from study courses at secondary vocational schools which are completed by the "maturita" examination, and graduates from follow-up courses for those in the previous category which allow subsequent completion by "maturita".
SOŠ without MZ	graduates from study courses at secondary technical schools which are not completed by the "maturita" examination
SOŠ with MZ	graduates from study courses at secondary technical schools which are completed by the "maturita" examination
ÚSV (G)	graduates with full secondary general education ( <i>gymnázium</i> graduates)
VOŠ	graduates from post-secondary technical schools
VŠ	graduates from HE institutions

### Abbreviations used in the area of employment:

KZAM	Classification of Occupations used in the CR (compatible with ISCO)
ISCO	International Classification of Occupations (ISCO 88)
OKEČ	Sector Classification of Economic Activities used in the CR (compatible with ISIC)
ISIC	International Standard Industry Classification
JKZ	Unified Classification of Jobs
VŠPS	Labour force sample survey of the Czech Statistical Office

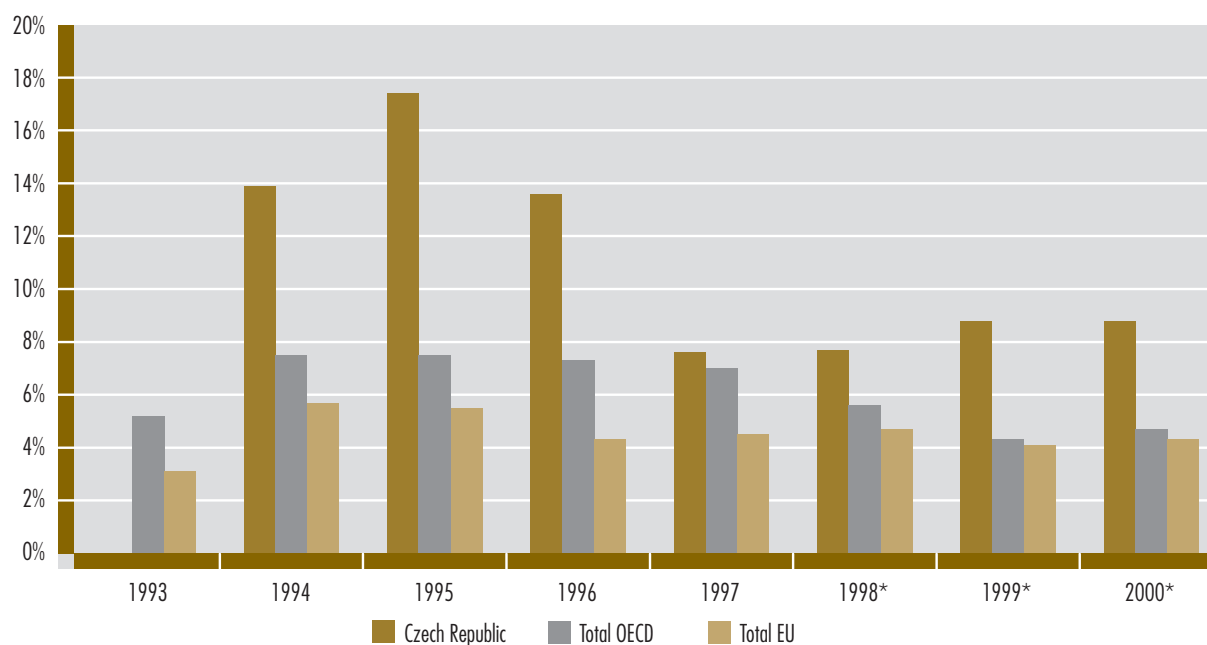
### Explanation for marks used in the tables:

a	the data cannot be stated since the category is not used
m or	the data is not available
n	the figure is approaching zero
x	the data is not calculated separately and is included in another category

## A.1 Development of Nominal Gross Domestic Product (1993–2000)

	Year-on-year change in %								
	1993	1994	1995	1996	1997	1998*	1999*	2000*	
<b>Czech Republic</b>	–	<b>13,9</b>	<b>17,4</b>	<b>13,6</b>	<b>7,6</b>	<b>7,7</b>	<b>8,8</b>	<b>8,8</b>	
Hungary	–	23,0	28,6	21,9	23,5	20,6	16,0	14,2	
Poland	–	35,1	37,2	25,7	22,7	18,4	15,2	13,5	
Denmark	1,4	7,3	5,0	5,2	5,3	4,1	4,7	5,2	
Austria	3,3	5,4	4,2	3,8	3,9	4,1	3,7	4,0	
France	1,1	4,4	3,7	2,7	3,3	3,9	3,5	3,9	
Germany	2,8	5,2	3,4	2,3	2,9	3,9	3,5	3,9	
Ireland	7,7	8,6	11,6	9,2	12,3	13,3	9,8	9,6	
Netherlands	2,7	5,6	4,1	4,6	5,9	5,8	4,9	4,8	
Spain	3,1	6,3	7,7	5,7	5,6	6,5	5,9	5,9	
United Kingdom	5,1	0,6	5,4	5,9	6,3	5,0	3,9	4,1	
<b>Total OECD</b>	<b>5,2</b>	<b>7,5</b>	<b>7,5</b>	<b>7,3</b>	<b>7,0</b>	<b>5,6</b>	<b>4,3</b>	<b>4,7</b>	
<b>Total EU</b>	<b>3,1</b>	<b>5,7</b>	<b>5,5</b>	<b>4,3</b>	<b>4,5</b>	<b>4,7</b>	<b>4,1</b>	<b>4,3</b>	

\*Projection



Source: OECD

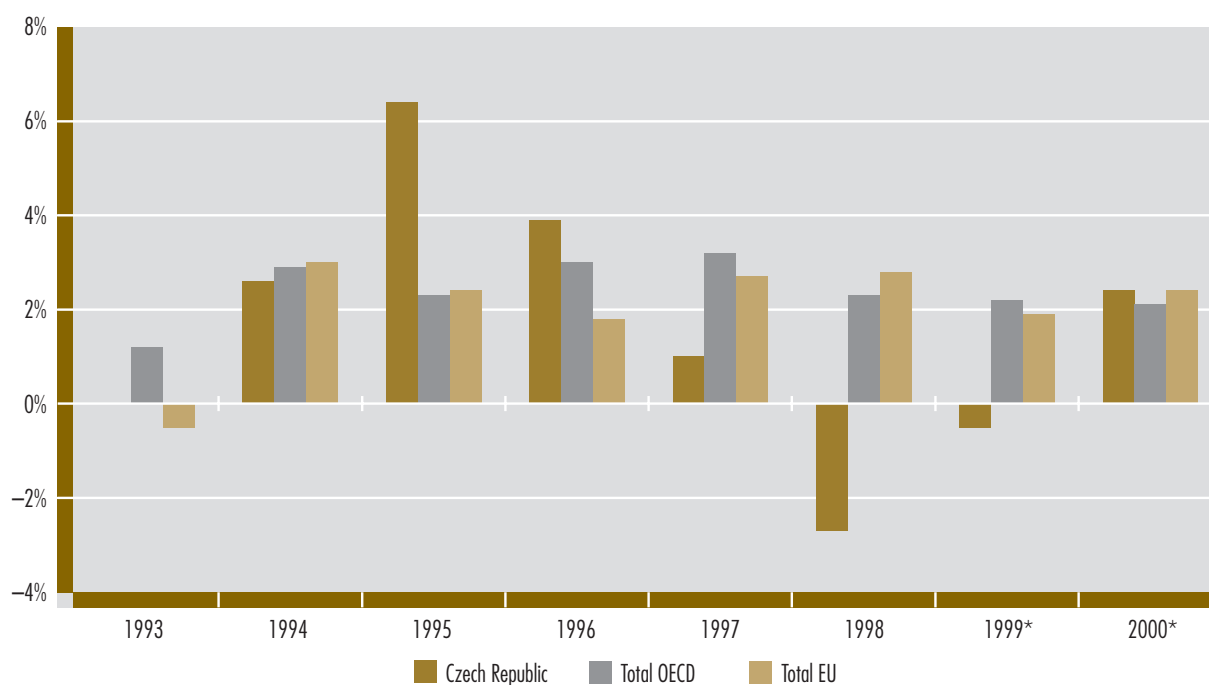
A.2 Development of Real Gross Domestic Product (1993–2000)

	GDP in Current	Purchasing	Year-on-year change in %							
	Year Prices	Power Parity	1993	1994	1995	1996	1997	1998	1999*	2000*
	USD	USD								
<b>Czech Republic</b>	5 057	13 087	–	2,6	6,4	3,9	1,0	-2,7	-0,5	2,4
Hungary	4 478	9 875	–	2,9	1,5	1,3	4,3	5,1	4,1	3,2
Poland	3 502	7 487	–	5,2	7,0	6,1	6,9	4,8	3,5	5,0
Austria	25 332	23 077	0,5	2,5	2,1	1,6	2,5	3,3	2,2	2,6
Denmark	32 258	25 514	0,8	5,8	3,2	3,2	3,3	2,9	1,6	2,0
France	23 756	21 293	-1,3	2,8	2,1	1,6	2,3	3,2	2,3	2,6
Germany	25 445	22 049	-1,2	2,7	1,2	1,3	2,2	2,8	1,7	2,3
Ireland	20 973	20 634	3,1	7,3	11,1	7,4	9,8	10,4	7,5	6,7
Netherlands	23 173	22 142	0,8	3,2	2,3	3,1	3,6	3,8	2,2	2,4
Spain	13 425	15 990	-1,2	2,3	2,7	2,4	3,5	3,8	3,3	3,3
United Kingdom	21 874	20 483	2,3	4,4	2,8	2,6	3,5	2,1	0,7	1,6
<b>Total OECD</b>	<b>20 071</b>	<b>**21 487</b>	<b>1,2</b>	<b>2,9</b>	<b>2,3</b>	<b>3,0</b>	<b>3,2</b>	<b>2,3</b>	<b>2,2</b>	<b>2,1</b>
<b>Total EU</b>	<b>21 593</b>	<b>20 546</b>	<b>-0,5</b>	<b>3,0</b>	<b>2,4</b>	<b>1,8</b>	<b>2,7</b>	<b>2,8</b>	<b>1,9</b>	<b>2,4</b>

\*Projection

\*\*excluding Korea, the Czech Republic, Hungary and Poland

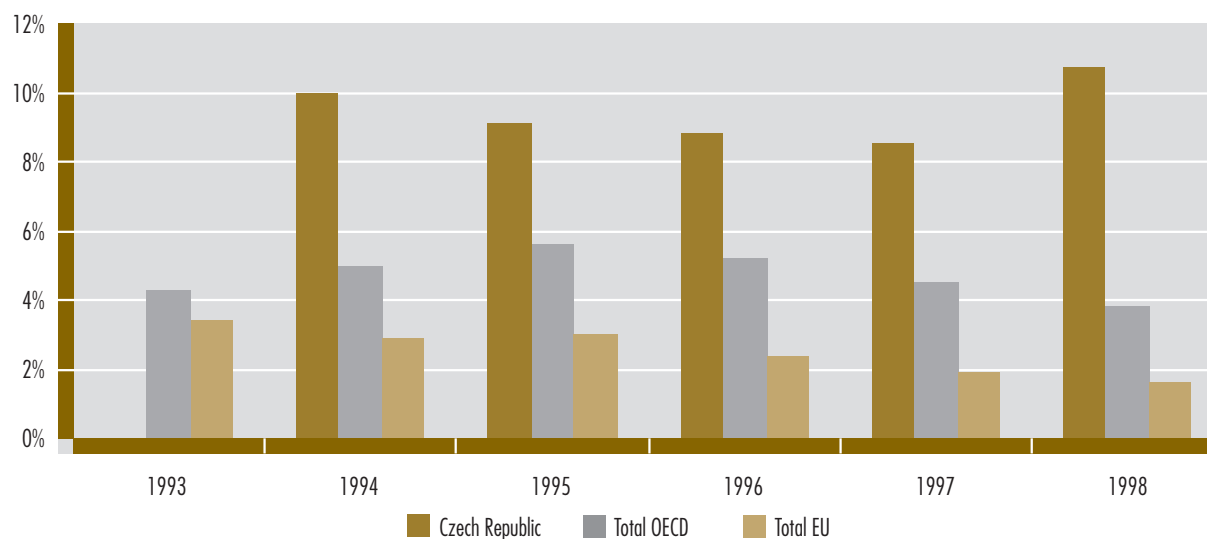
Source: OECD, National Accounts, 1998.



Source: OECD 1998

## A.3 Development of the Rate of Inflation (1993–1998)

	Year-on-year change in %					
	1993	1994	1995	1996	1997	1998
<b>Czech Republic</b>	–	<b>10,0</b>	<b>9,1</b>	<b>8,8</b>	<b>8,5</b>	<b>10,7</b>
Hungary	–	18,9	28,3	23,5	18,3	14,2
Poland	–	32,1	27,9	19,9	14,9	11,6
Austria	3,6	3,0	2,2	1,9	1,3	0,9
Denmark	1,3	2,0	2,1	2,1	2,2	1,8
France	2,1	1,7	1,7	2,0	1,2	0,8
Germany	4,5	2,7	1,8	1,5	1,8	0,9
Ireland	1,4	2,3	2,5	1,7	1,4	2,4
Netherlands	2,6	2,8	1,9	2,0	2,2	2,0
Spain	4,6	4,7	4,7	3,6	2,0	1,8
United Kingdom	1,6	2,5	3,4	2,4	3,1	3,4
<b>Total OECD</b>	<b>4,3</b>	<b>5,0</b>	<b>5,6</b>	<b>5,2</b>	<b>4,5</b>	<b>3,8</b>
<b>Total EU</b>	<b>3,4</b>	<b>2,9</b>	<b>3,0</b>	<b>2,4</b>	<b>1,9</b>	<b>1,6</b>



Source: OECD 1998



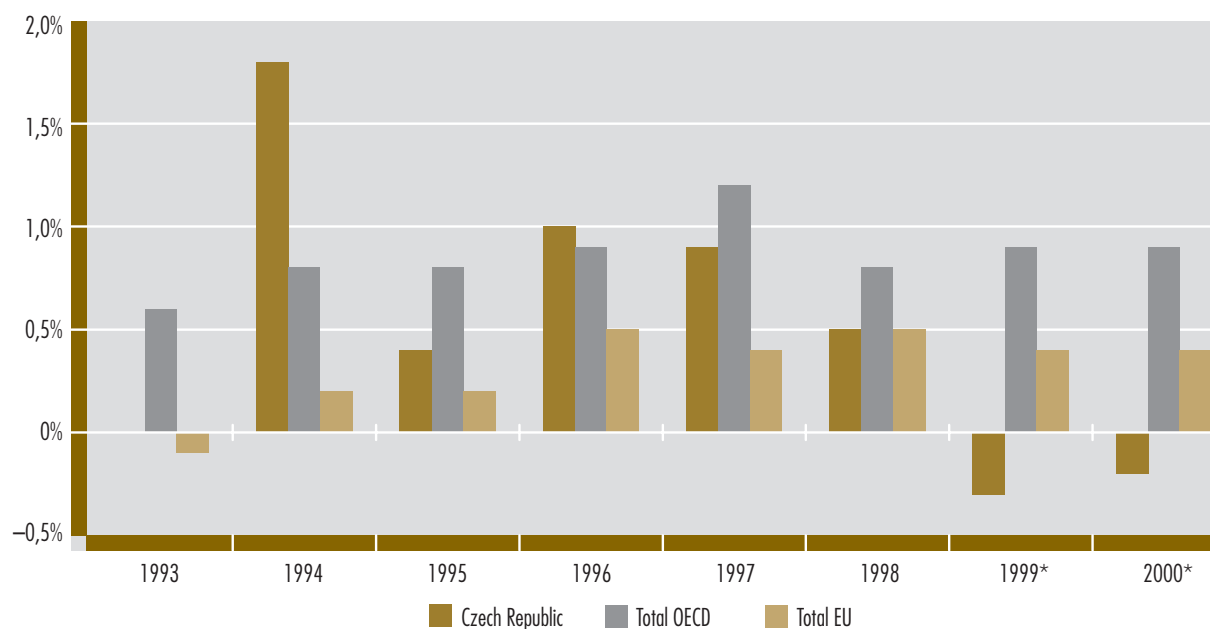
A.4 Development of the Economically Active Population (1993–2000)

	Year-on-year change in %							
	1993	1994	1995	1996	1997	1998	1999*	2000*
<b>Czech Republic</b>	–	<b>1,8</b>	<b>0,4</b>	<b>1,0</b>	<b>0,9</b>	<b>0,5</b>	<b>-0,3</b>	<b>-0,2</b>
Hungary	–	-4,6	-2,5	-0,9	-1,0	0,0	0,6	0,8
Poland	–	-1,1	-0,4	0,0	0,1	0,4	0,8	1,0
Austria	0,5	0,0	-0,3	-0,2	0,3	0,7	0,3	0,3
Denmark	-0,2	-0,5	-0,7	-0,4	1,0	0,7	-0,1	0,2
France	0,3	0,7	0,1	0,9	0,5	0,7	0,6	0,6
Germany	-0,5	0,1	-0,5	-0,2	-0,1	-0,3	-0,3	-0,3
Ireland	2,1	1,9	1,7	3,1	3,0	5,4	3,7	3,3
Netherlands	1,9	1,0	1,9	1,5	2,2	1,4	1,5	1,5
Spain	1,1	1,0	0,5	0,9	1,1	0,9	0,9	0,9
United Kingdom	0,3	-0,1	0,4	0,4	0,4	0,7	0,4	0,4
<b>Total OECD</b>	<b>0,6</b>	<b>0,8</b>	<b>0,8</b>	<b>0,9</b>	<b>1,2</b>	<b>0,8</b>	<b>0,9</b>	<b>0,9</b>
<b>Total EU</b>	<b>-0,1</b>	<b>0,2</b>	<b>0,2</b>	<b>0,5</b>	<b>0,4</b>	<b>0,5</b>	<b>0,4</b>	<b>0,4</b>

In OECD materials, the figure for the Czech Republic was -3.1. It has been corrected.

\*Projection

(increase in %)

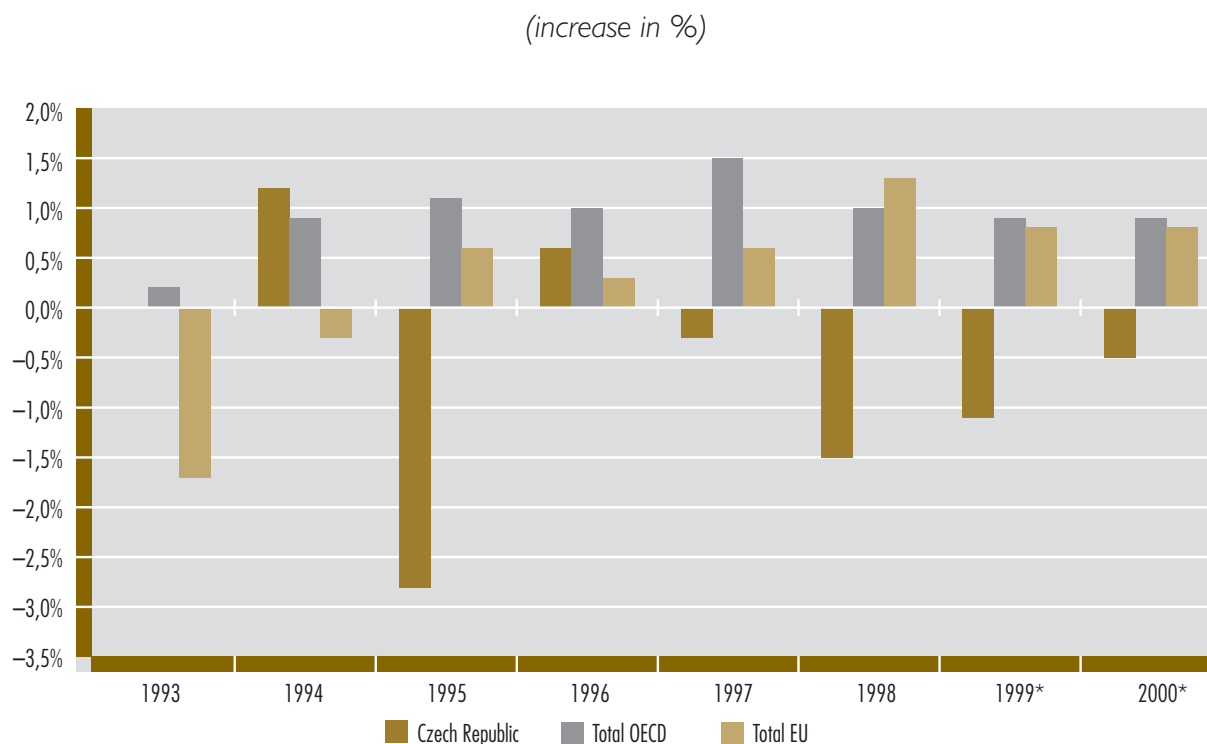


Source: OECD 1998

## A.5 Development of Employment (1993–2000)

	Year-on-year change in %							
	1993	1994	1995	1996	1997	1998	1999*	2000*
<b>Czech Republic</b>	–	<b>1,2</b>	<b>-2,8</b>	<b>0,6</b>	<b>-0,3</b>	<b>-1,5</b>	<b>-1,1</b>	<b>-0,5</b>
Hungary	–	-3,4	-1,9	-0,5	0,3	1,5	1,5	1,3
Poland	–	-1,6	0,9	1,2	1,3	1,2	0,3	1,2
Austria	-0,3	0,2	-0,4	-0,7	0,3	0,7	0,4	0,5
Denmark	-1,5	-0,4	1,4	1,3	2,1	2,2	0,6	0,2
France	-1,2	0,1	0,8	0,1	0,4	1,4	1,2	1,3
Germany	-1,7	-0,7	-0,4	-1,3	-1,3	0,0	0,3	0,4
Ireland	1,4	3,0	4,8	3,4	4,8	8,4	5,2	3,8
Netherlands	0,7	-0,1	2,4	2,0	3,4	2,9	1,7	1,4
Spain	-4,3	-0,9	1,8	1,5	2,9	3,4	2,6	2,4
United Kingdom	-0,4	1,0	1,2	1,1	1,6	1,4	-0,1	-0,2
<b>Total OECD</b>	<b>0,2</b>	<b>0,9</b>	<b>1,1</b>	<b>1,0</b>	<b>1,5</b>	<b>1,0</b>	<b>0,9</b>	<b>0,9</b>
<b>Total EU</b>	<b>-1,7</b>	<b>-0,3</b>	<b>0,6</b>	<b>0,3</b>	<b>0,6</b>	<b>1,3</b>	<b>0,8</b>	<b>0,8</b>

\*Projection

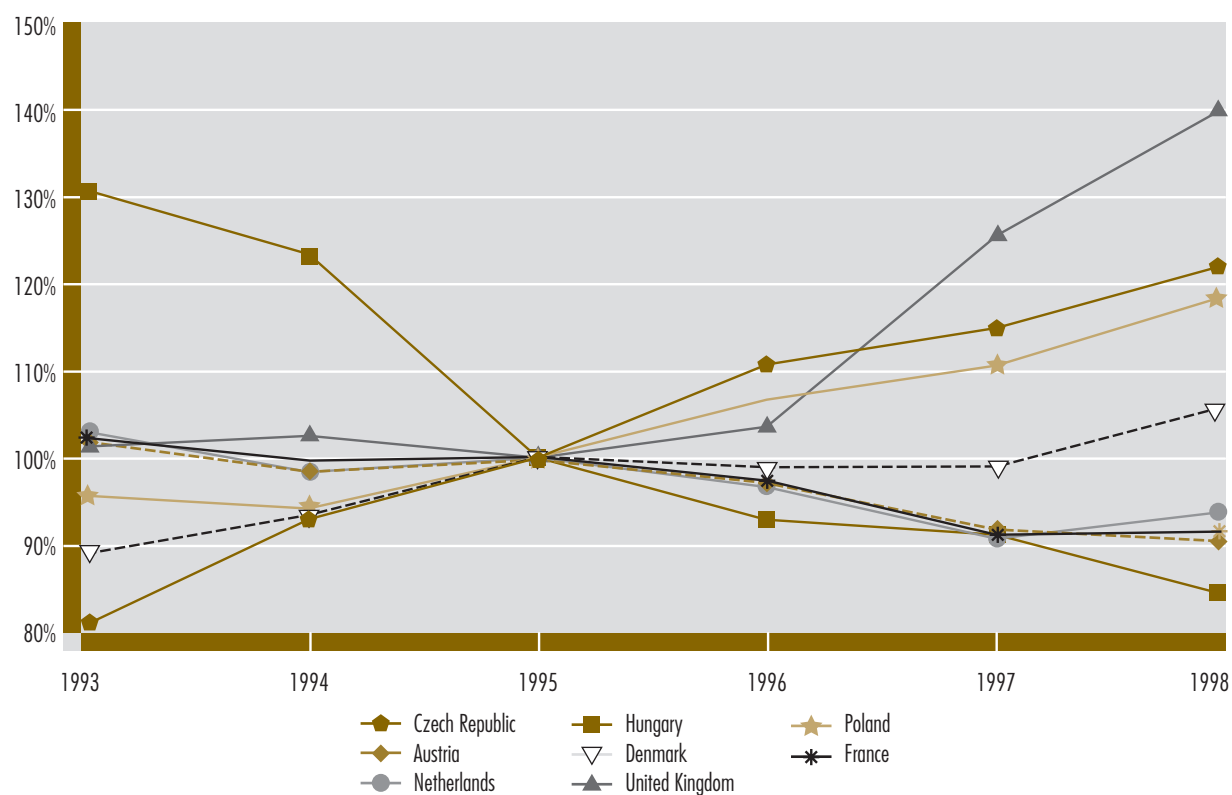


Source: OECD 1998

A.6 Proportion of Unit Costs in the Entrepreneurial Sector (cost of labour) in Comparison with 1995

	1993	1994	1995	1996	1997	1998
						in %
<b>Czech Republic</b>	<b>80,6</b>	<b>93,1</b>	<b>100,0</b>	<b>110,6</b>	<b>114,9</b>	<b>122,4</b>
Hungary	131,0	123,1	100,0	92,9	91,4	84,4
Poland	95,8	94,3	100,0	106,7	110,5	118,5
Austria	102,0	98,6	100,0	97,2	91,6	90,5
Denmark	89,1	93,4	100,0	98,7	98,9	106,0
France	102,4	99,7	100,0	97,5	91,2	91,8
Germany	93,2	94,2	100,0	96,1	86,9	87,2
Ireland	112,0	108,4	100,0	100,1	88,4	82,6
Netherlands	103,2	98,4	100,0	96,7	90,8	94,0
Spain	108,4	101,5	100,0	104,4	102,7	105,2
United Kingdom	101,4	102,6	100,0	103,7	125,4	140,3

Proportion of Labour Costs in the Entrepreneurial Sector in Comparison with 1995



Source: OECD 1998

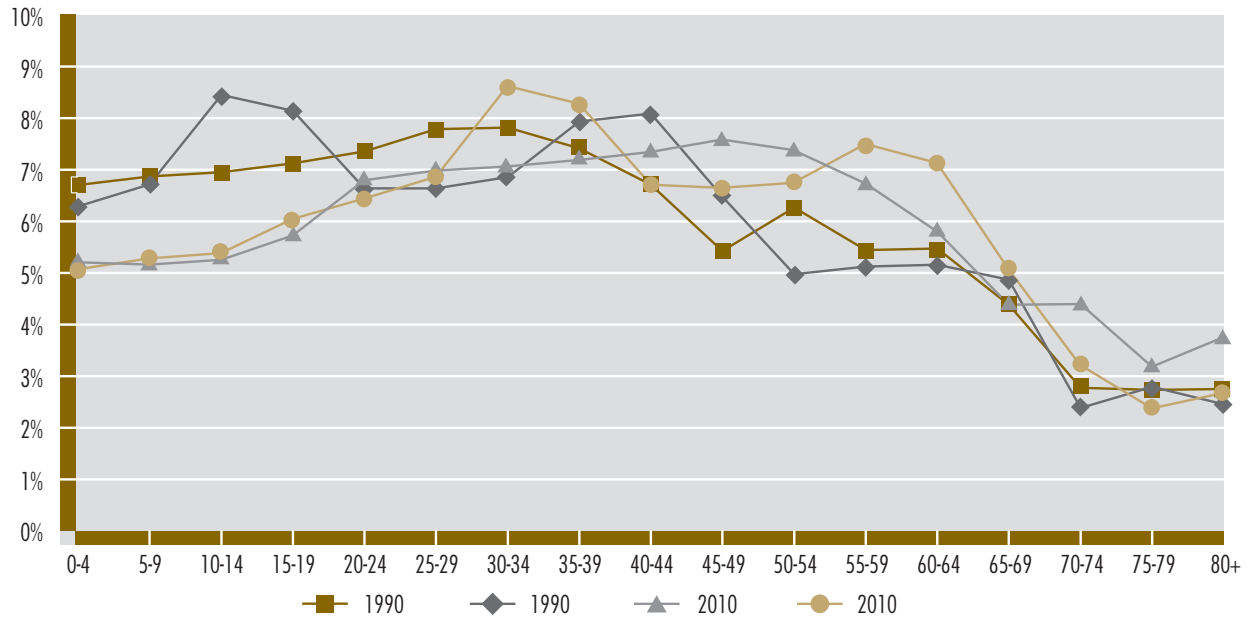
## A.7 Demographic Data on Population

In thousands

Europe						Czech Republic				
Age	1990	1995	2000	2005	2010	1990	1995	2000	2005	2010
0-4	48 409	41 133	37 774	37 233	37 652	648	607	542	531	510
5-9	49 628	48 592	41 296	37 825	37 248	692	648	607	542	531
10-14	50 235	49 941	48 846	41 411	37 889	871	692	647	607	541
15-19	51 472	50 703	50 284	48 997	41 509	839	870	691	647	607
20-24	53 138	52 056	51 071	50 423	49 055	684	837	869	690	647
25-29	56 266	53 611	52 330	51 134	50 409	684	682	835	867	689
30-34	56 469	56 422	53 699	52 247	51 010	707	682	680	833	866
35-39	53 570	56 305	56 238	53 451	51 982	818	703	679	678	831
40-44	48 455	53 062	55 769	55 687	52 987	834	811	698	675	674
45-49	39 214	47 601	52 125	54 780	54 817	668	819	799	690	667
50-54	45 245	38 177	46 317	50 693	53 375	513	648	798	782	677
55-59	39 340	43 232	36 690	44 472	48 726	528	487	618	765	753
60-64	39 535	36 789	40 406	34 560	41 918	532	484	450	575	716
65-69	31 667	35 699	33 353	36 646	31 674	502	460	422	396	510
70-74	20 031	27 299	30 617	28 821	31 748	246	395	366	340	323
75-79	19 753	15 835	21 611	24 187	23 024	288	165	269	253	239
80+	19 887	21 787	20 903	23 906	27 232	253	274	226	257	268
<b>Total</b>	<b>722 314</b>	<b>728 244</b>	<b>729 329</b>	<b>726 473</b>	<b>722 255</b>	<b>10 307</b>	<b>10 264</b>	<b>10 196</b>	<b>10 128</b>	<b>10 049</b>

Europe						Czech Republic				
	1990	1995	2000	2005	2010	1990	1995	2000	2005	2010
0-4	6,7%	5,6%	5,2%	5,1%	5,2%	6,3%	5,9%	5,3%	5,2%	5,1%
5-9	6,9%	6,7%	5,7%	5,2%	5,2%	6,7%	6,3%	6,0%	5,4%	5,3%
10-14	7,0%	6,9%	6,7%	5,7%	5,2%	8,5%	6,7%	6,3%	6,0%	5,4%
15-19	7,1%	7,0%	6,9%	6,7%	5,7%	8,1%	8,5%	6,8%	6,4%	6,0%
20-24	7,4%	7,1%	7,0%	6,9%	6,8%	6,6%	8,2%	8,5%	6,8%	6,4%
25-29	7,8%	7,4%	7,2%	7,0%	7,0%	6,6%	6,6%	8,2%	8,6%	6,9%
30-34	7,8%	7,7%	7,4%	7,2%	7,1%	6,9%	6,6%	6,7%	8,2%	8,6%
35-39	7,4%	7,7%	7,7%	7,4%	7,2%	7,9%	6,8%	6,7%	6,7%	8,3%
40-44	6,7%	7,3%	7,6%	7,7%	7,3%	8,1%	7,9%	6,8%	6,7%	6,7%
45-49	5,4%	6,5%	7,1%	7,5%	7,6%	6,5%	8,0%	7,8%	6,8%	6,6%
50-54	6,3%	5,2%	6,4%	7,0%	7,4%	5,0%	6,3%	7,8%	7,7%	6,7%
55-59	5,4%	5,9%	5,0%	6,1%	6,7%	5,1%	4,7%	6,1%	7,6%	7,5%
60-64	5,5%	5,1%	5,5%	4,8%	5,8%	5,2%	4,7%	4,4%	5,7%	7,1%
65-69	4,4%	4,9%	4,6%	5,0%	4,4%	4,9%	4,5%	4,1%	3,9%	5,1%
70-74	2,8%	3,7%	4,2%	4,0%	4,4%	2,4%	3,8%	3,6%	3,4%	3,2%
75-79	2,7%	2,2%	3,0%	3,3%	3,2%	2,8%	1,6%	2,6%	2,5%	2,4%
80+	2,8%	3,0%	2,9%	3,3%	3,8%	2,5%	2,7%	2,2%	2,5%	2,7%

Age Structure of the Population



Source: *Education at a Glance*, 1998.

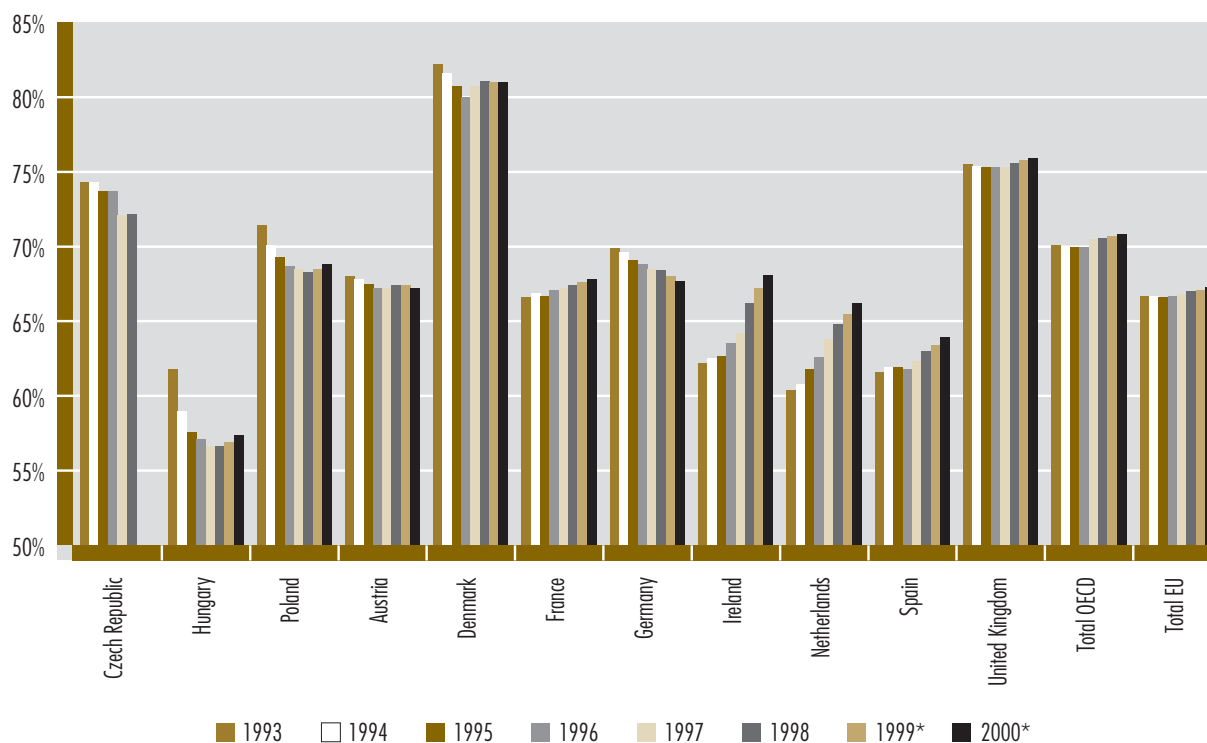
## B.1 Development of the Economic Activity of the Population (1993–2000)

	Proportion of the economically active population in the population aged 15–64 years (%)							
	1993	1994	1995	1996	1997	1998	1999*	2000*
Czech Republic	83,0	83,7	83,5	80,6	81,1	81,0	80,4	79,8
<b>Czech Republic</b>	<b>74,3</b>	<b>74,3</b>	<b>73,7</b>	<b>73,7</b>	<b>72,1</b>	<b>72,2</b>		
Hungary	61,8	59,0	57,6	57,1	56,6	56,6	56,9	57,4
Poland	71,4	70,1	69,3	68,7	68,5	68,3	68,5	68,8
Austria	68,0	67,8	67,5	67,2	67,2	67,4	67,4	67,2
Denmark	82,2	81,6	80,7	80,0	80,7	81,1	81,0	81,0
France	66,6	66,9	66,7	67,1	67,2	67,4	67,6	67,8
Germany	69,9	69,6	69,1	68,8	68,5	68,4	68,0	67,7
Ireland	62,2	62,5	62,7	63,5	64,2	66,2	67,2	68,1
Netherlands	60,4	60,8	61,8	62,6	63,8	64,8	65,5	66,2
Spain	61,6	61,9	61,9	61,8	62,3	63,0	63,4	63,9
United Kingdom	75,5	75,4	75,3	75,3	75,3	75,6	75,8	75,9
<b>Total OECD</b>	<b>70,1</b>	<b>70,0</b>	<b>70,0</b>	<b>70,0</b>	<b>70,5</b>	<b>70,6</b>	<b>70,7</b>	<b>70,8</b>
<b>Total EU</b>	<b>66,7</b>	<b>66,7</b>	<b>66,6</b>	<b>66,7</b>	<b>66,8</b>	<b>67,0</b>	<b>67,1</b>	<b>67,3</b>

\*Projection

Note: Figures stated in the OECD material for the Czech Republic are evidently incorrect. Calculation has therefore been made on the basis of results of the labour-force surveys of the Czech Statistical Office. The relevant figures are stated in bold in the second line.

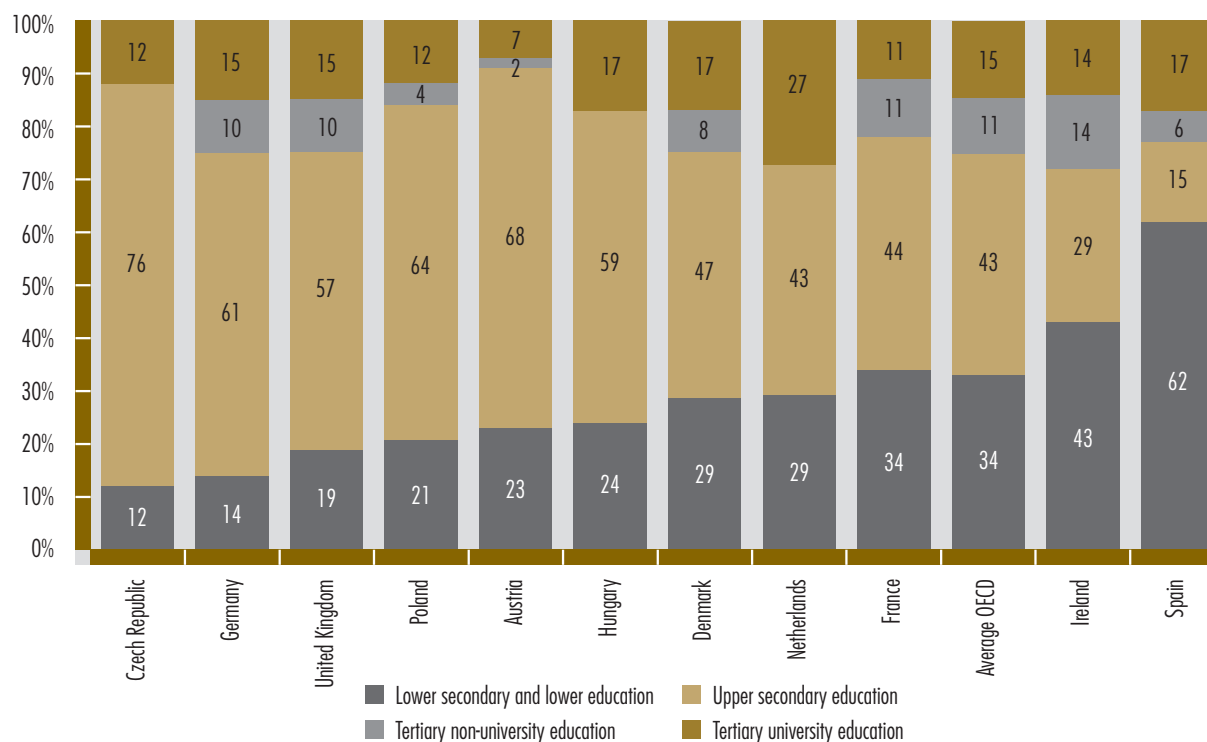
## Development of the Economic Activity of the Population (1996)



Source: OECD 1998, the CR – corrected data: Labour force surveys, Czech Statistical Office

B.2 Educational Structure of the Economically Active Population (1996)

%						
The level of education of the economically active population:						
	Lower secondary and lower education	Upper secondary education	Tertiary non-university education	Tertiary university education	Tertiary Education – total	Total
<b>Czech Republic</b>	<b>12</b>	<b>76</b>	<b>x</b>	<b>12</b>	<b>12</b>	<b>100</b>
<b>Czech Republic 98</b>	<b>11</b>	<b>79</b>	<b>x</b>	<b>10</b>	<b>10</b>	<b>100</b>
Hungary	24	59	x	17	17	100
Poland	21	64	4	12	16	100
Austria	23	68	2	7	9	100
Denmark	29	47	8	17	25	100
France	34	44	11	11	22	100
Germany	14	61	10	15	25	100
Ireland	43	29	14	14	28	100
Netherlands	29	43	x	27	27	100
Spain	62	15	6	17	23	100
United Kingdom	19	57	10	15	25	100
<b>Average OECD</b>	<b>34</b>	<b>43</b>	<b>11</b>	<b>15</b>	<b>26</b>	<b>100</b>

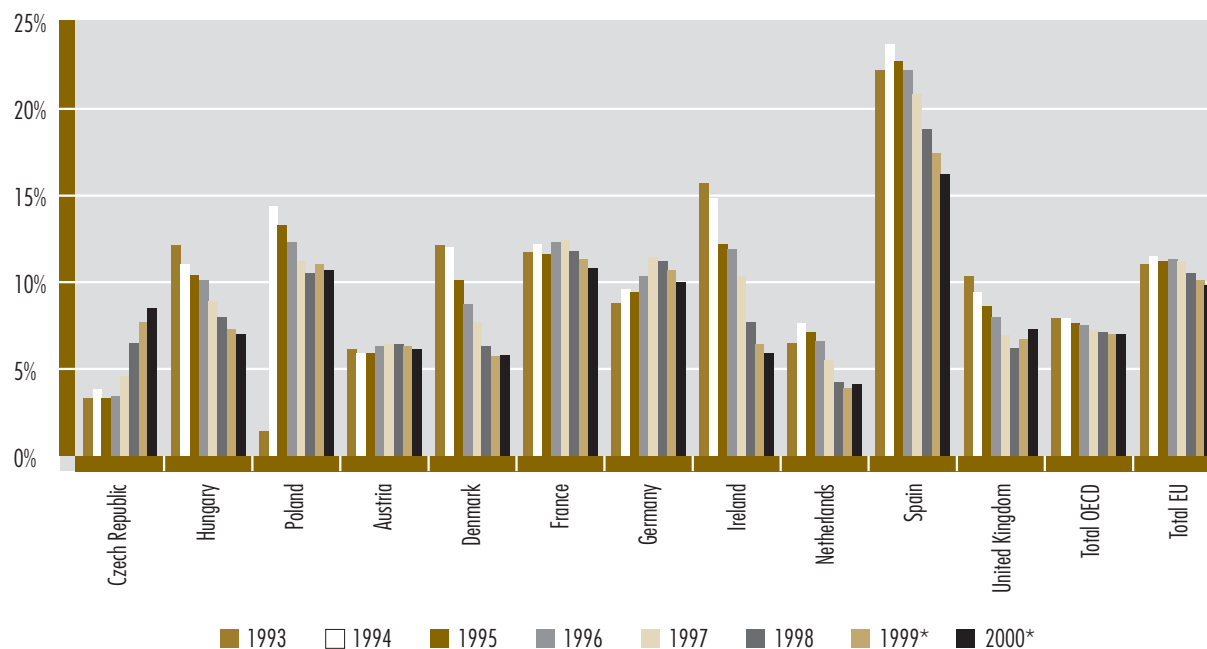


Source: Education at a Glance, 1998, the CR 1998 – Labour force surveys, Czech Statistical Office

## B.3 Development of Rate of Unemployment (1993–2000)

	1993	1994	1995	1996	1997	1998	1999*	2000*
<b>Czech Republic</b>	<b>3,3</b>	<b>3,8</b>	<b>3,3</b>	<b>3,4</b>	<b>4,6</b>	<b>6,5</b>	<b>7,7</b>	<b>8,5</b>
Hungary	12,1	11,0	10,4	10,1	8,9	8,0	7,3	7,0
Poland	1,4	14,4	13,3	12,3	11,2	10,5	11,0	10,7
Austria	6,1	5,9	5,9	6,3	6,4	6,4	6,3	6,1
Denmark	12,1	12,0	10,1	8,7	7,7	6,3	5,7	5,8
France	11,7	12,2	11,6	12,3	12,4	11,8	11,3	10,8
Germany	8,8	9,6	9,4	10,3	11,4	11,2	10,7	10,0
Ireland	15,7	14,8	12,2	11,9	10,3	7,7	6,4	5,9
Netherlands	6,5	7,6	7,1	6,6	5,5	4,2	3,9	4,1
Spain	22,2	23,7	22,7	22,2	20,8	18,8	17,4	16,2
United Kingdom	10,3	9,4	8,6	8,0	6,9	6,2	6,7	7,3
<b>Total OECD</b>	<b>7,9</b>	<b>7,9</b>	<b>7,6</b>	<b>7,5</b>	<b>7,2</b>	<b>7,1</b>	<b>7,0</b>	<b>7,0</b>
<b>Total EU</b>	<b>11,0</b>	<b>11,5</b>	<b>11,2</b>	<b>11,3</b>	<b>11,2</b>	<b>10,5</b>	<b>10,1</b>	<b>9,8</b>

\*Projection



Source: OECD 1998.

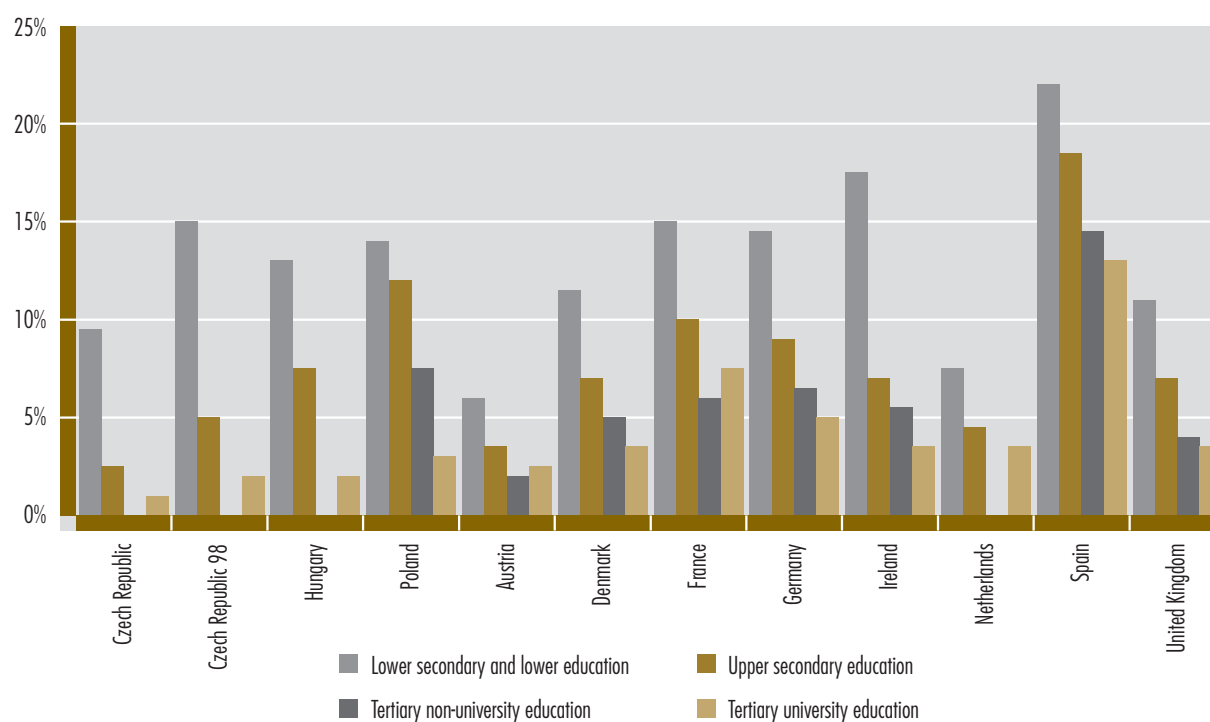


B.4 Rate of Unemployment by Education (1996)

Age 25–64 years

%

	Rate of Unemployment by Level of Education														
	Lower secondary and lower			Upper secondary education			Tertiary non-university education			Tertiary university education			Total		
	M+W	Men	Women	M+W	Men	Women	M+W	Men	Women	M+W	Men	Women	M+W	Men	Women
Czech Republic	9,5	12,0	7,0	2,5	2,0	3,0	x	x	x	1,0	1,0	1,0	3,0	2,0	4,0
Czech Republic 98	15,0			5,0			x			2,0			6,0		
Hungary	13,0	15,0	11,0	7,5	8,0	7,0	x	x	x	2,0	2,0	2,0	8,0	9,0	7,0
Poland	14,0	14,0	14,0	12,0	10,0	14,0	7,5	9,0	6,0	3,0	3,0	3,0	11,0	10,0	12,0
Austria	6,0	6,0	6,0	3,5	3,0	4,0	2,0	2,0	2,0	2,5	2,0	3,0	4,0	4,0	4,0
Denmark	11,5	10,0	13,0	7,0	6,0	8,0	5,0	5,0	5,0	3,5	4,0	3,0	8,0	7,0	9,0
France	15,0	13,0	17,0	10,0	8,0	12,0	6,0	6,0	6,0	7,5	6,0	9,0	11,0	9,0	13,0
Germany	14,5	16,0	13,0	9,0	8,0	10,0	6,5	5,0	8,0	5,0	5,0	5,0	9,0	8,0	10,0
Ireland	17,5	16,0	19,0	7,0	6,0	8,0	5,5	5,0	6,0	3,5	3,0	4,0	10,5	11,0	10,0
Netherlands	7,5	6,0	9,0	4,5	3,0	6,0	x	x	x	3,5	3,0	4,0	5,0	4,0	6,0
Spain	22,0	16,0	28,0	18,5	12,0	25,0	14,5	12,0	17,0	13,0	9,0	17,0	19,5	14,0	25,0
United Kingdom	11,0	15,0	7,0	7,0	8,0	6,0	4,0	5,0	3,0	3,5	4,0	3,0	6,5	8,0	5,0



Source: *Education at a Glance, 1998, the CR 1998: Labour force surveys, Czech Statistical Office.*

B.5 Development of Employment and the Rate of Unemployment in the CR  
in the Educational Structure (1994–1998)

Education	In thousands					%				
	Numbers of the employed					*Rate of unemployment				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
<b>Total</b>	5 047,3	5 103,8	5 110,8	4 942,6	4 865,9	3,1	2,7	2,7	3,8	5,5
Basic	620,0	597,2	546,1	484,5	441,2	6,9	7,9	8,5	12,0	15,8
SOU without MZ	1 995,3	2 032,6	2 063,3	2 017,6	1 949,0	3,5	2,9	2,7	3,5	5,4
SOŠ without MZ	309,0	283,5	278,8	253,0	272,6	2,8	3,0	2,3	3,4	4,6
SOU with MZ	70,5	66,8	61,8	75,7	89,6	3,2	0,7	2,2	2,0	2,5
SOŠ with MZ	1 335,1	1 361,9	1 389,2	1 359,5	1 371,3	2,0	1,6	1,3	2,0	3,6
ÚSV (G)	202,1	212,3	217,3	205,2	190,0	2,5	1,9	1,5	2,9	4,0
VŠ	510,8	547,0	551,2	544,2	532,5	1,2	0,9	0,4	0,8	1,5
No education	3,8	2,5	3,0	3,0	19,5	-	4,3	22,6	3,8	12,7

\*The rates of unemployment are problematic, in that they only cover those who were already employed and lost their jobs in the relevant category of occupations. Therefore the figures are lower than the actual figures. These rates of unemployment are stated primarily for purposes of comparison in terms of major occupation categories, and developments over time.

Note: In 1997, there was a change in the methodology for monitoring the relevant figures. Women on maternity leave are not included, soldiers are calculated. The 1997 and 1998 figures are therefore some 100,000 lower.

Source: Labour force surveys, Czech Statistical Office, 1994–1998

## B.6 Development of the Employment Structure by Sector

In thousands

	Year	Total	1. Agriculture	2. Mining and exploitation	3. Industry	4. Energy, gas and water	5. Construction	6. Trade	7. Transport, storage, communications	8. Finance and insurance	9. Civil service, social security	0. Unidentified
<b>Czech Republic</b>	1990	4 995	613	186	1 663	77	349	582	335	353	837	
	1995	5 100	332	97	1 484	102	462	807	390	348	1 078	
	1997	4 940	283	88	1 370	93	481	828	380	349	1 068	
	1998	4 865	267	86	1 341	93	472	815	378	348	1 065	
Austria	1990	3 412	269	12	922	40	286	634	218	221	810	
	1995	3 759	278	11	818	38	336	781	238	353	906	
	1997	3 709	250	9	758	38	313	796	232	371	942	
Denmark	1990	2 638	147	2	532	20	172	391	189	247	909	29
	1995	2 610	114	4	520	16	163	433	189	261	906	3
	1997	2 682	99	3	513	17	176	440	185	289	956	5
France	1990	21 457	1 368	89	4 588	207	1 569	3 697	1 387	2 081	6 471	
	1995	22 057	1 080	55	4 160	203	1 528	3 726	1 398	2 565	7 330	12
	1997	22 157	1 029	51	4 152	206	1 482	3 713	1 404	2 605	7 507	8
Germany	1990	27 988	990	190	8 841	254	1 847	4 636	1 620	2 375	7 235	
	1995	36 048	1 163	262	8 945	359	3 378	6 188	2 031	3 454	10 268	
	1997	35 806	1 049	202	8 475	339	3 271	6 244	1 941	3 732	10 553	
Ireland	1990	1 115	167	8	220	13	78	194	68	91	272	4
	1995	1 282	149	6	245	13	97	248	57	126	337	4
	1997	1 380	142	6	243	12	110	270	65	135	366	31
Netherlands	1990	6 267	289	11	1 185	41	409	1 104	382	646	2 142	58
	1995	6 830	244	12	1 079	43	406	1 342	406	880	2 179	239
	1997	7 191	259	13	1 103	42	448	1 462	423	1 014	2 269	158
Spain	1990	12 580	1 486	78	2 809	94	1 222	2 547	728	679	2 937	
	1995	12 042	1 106	65	2 326	95	1 135	2 773	725	969	2 849	
	1997	12 765	1 067	67	2 432	82	1 243	2 904	754	1 128	3 089	
United Kingdom	1990	26 639	573	228	5 710	598	2 141	5 415	1 652	3 046	7 276	
	1995	25 973	534	113	4 909	222	1 836	5 233	1 656	3 575	7 774	122
	1997	26 682	494	105	4 991	179	1 865	5 385	1 708	3 804	8 060	92
OECD (mil.)	1990	352	19	2	75	3	27	73	21	33	99	1
	1995	367	16	2	71	4	28	76	22	38	110	1
	1997	376	16	2	70	3	29	77	23	41	114	1
EU (mil.)	1990	142	9	1	34	2	11	26	9	12	39	0
	1995	149	8	1	31	1	12	28	9	15	43	0
	1997	151	7	1	31	1	12	29	9	17	44	0

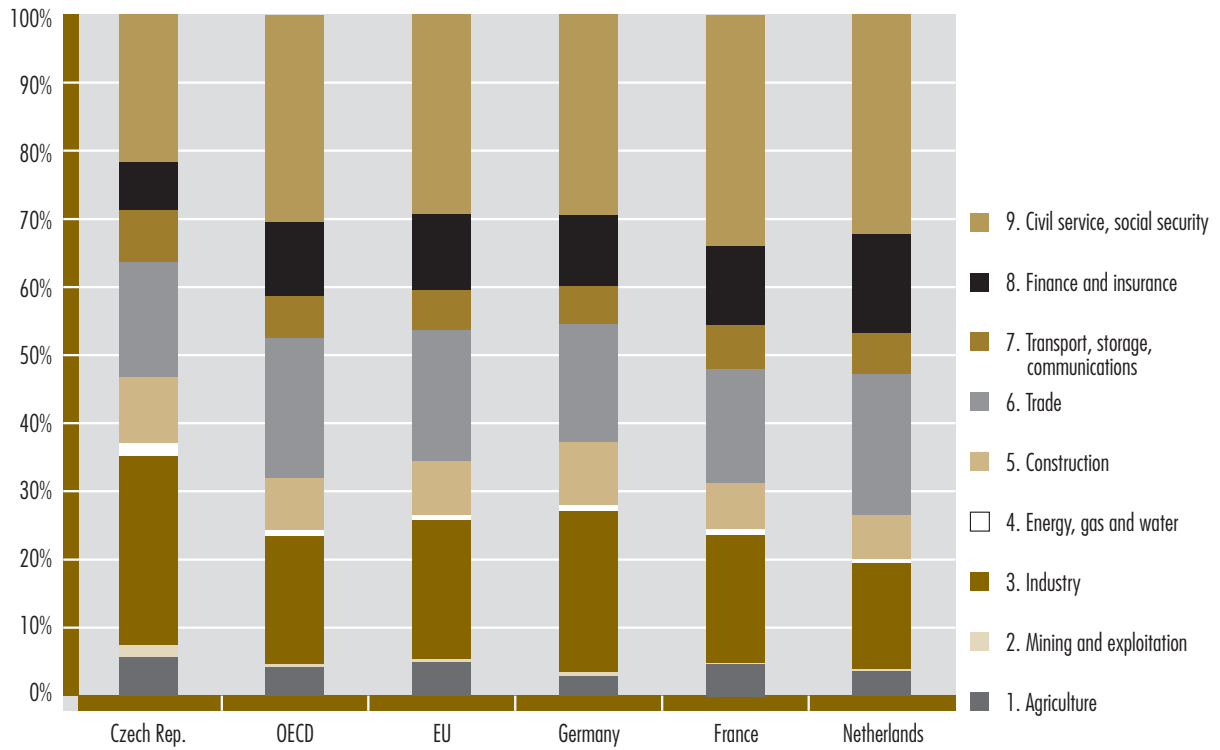
The graph for the table is presented on page 164, above

## B.7 Development of Employment Structure according to Classification of Occupations

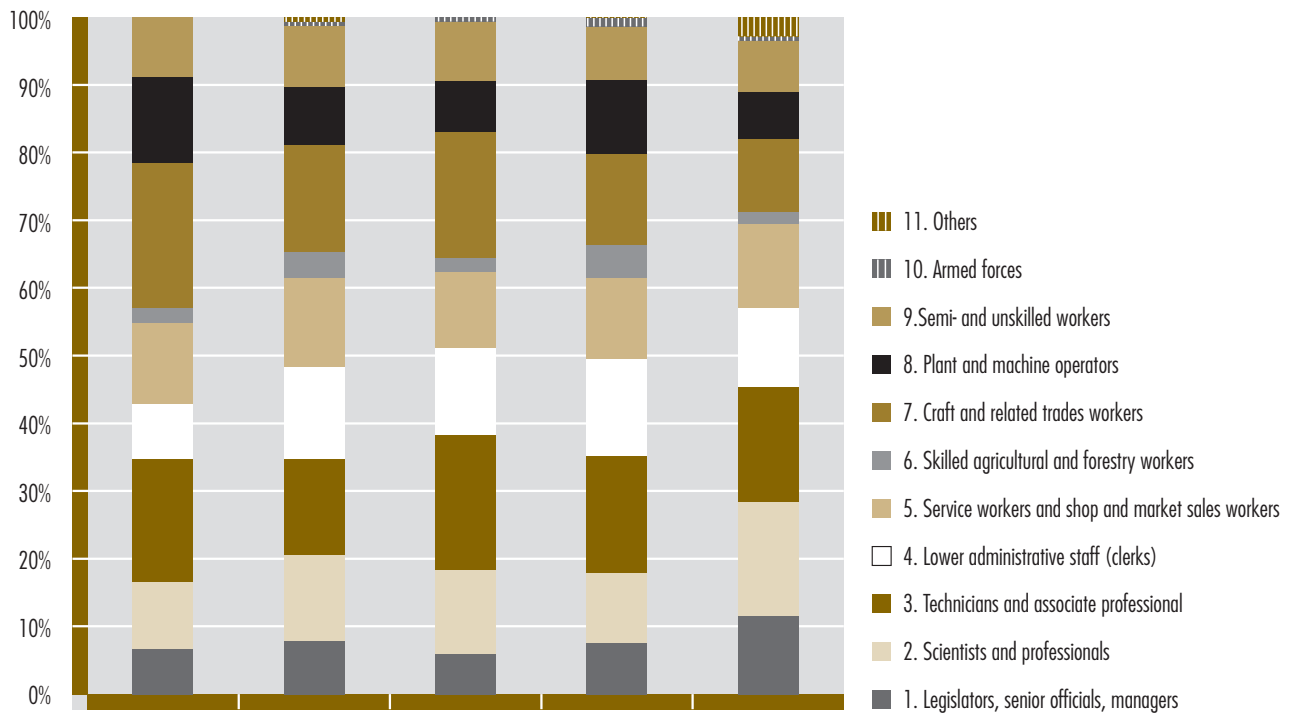
In thousands

	Year	Total	1. Legislators, senior officials, managers	2. Scientists and professionals	3. Technicians and associate professional	4. Lower administrative staff (clerks)	5. Service workers and shop and market sales workers	6. Skilled agricultural and forestry workers	7. Craft and machine operators	8. Plant and machine operators	9. Semi- and unskilled workers	10. Armed forces	Others
Czech Republic	1990	4 995	160	428	895	370	505	176	1 220	681	559	0	0
	1995	5 089	310	485	933	399	589	128	1 095	659	491	10	4
	1997	4 888	328	481	890	399	583	110	1 043	623	431	52	3
	1998	4 820	324	469	876	394	598	105	1 026	612	414	48	2
Austria	1990												
	1995	3 675	270	321	487	520	426	212	720	346	363	10	0
	1997	3 609	269	356	484	517	478	228	616	321	327	11	2
Denmark	1990												
	1995	2 601	170	320	435	329	402	88	327	214	301	15	0
	1997	2 675	187	326	466	327	413	79	329	206	331	10	1
France	1990												
	1995	22 057	1 726	2 277	3 696	3 167	2 637	1 113	3 073	2 392	1 652	297	27
	1997	22 157	1 674	2 319	3 804	3 155	2 685	1 064	3 004	2 391	1 750	281	30
Germany	1990												
	1995	35 782	2 151	4 111	6 739	4 701	3 881	796	6 714	2 750	3 728	211	0
	1997	35 300	2 079	4 416	7 012	4 541	3 973	776	6 518	2 644	3 112	229	0
Ireland	1990												
	1995	1 260	110	187	52	177	210	116	162	107	111	28	0
	1997	1 373	122	235	52	187	237	111	182	122	123	0	2
Netherlands	1990												
	1995	6 783	818	941	1 177	864	888	114	708	488	489	37	259
	1997	7 187	834	1 206	1 223	840	888	133	777	491	543	47	205
Spain	1990												
	1995	12 028	1 000	1 206	881	1 209	1 673	849	2 082	1 332	1 749	47	0
	1997	12 708	1 096	1 449	1 088	1 286	1 726	752	2 164	1 307	1 785	55	0
United Kingdom	1990												
	1995	25 937	3 871	3 836	2 118	4 240	3 669	308	3 242	2 185	2 199	134	135
	1997	26 613	3 963	4 040	2 290	4 354	3 916	302	3 267	2 147	2 138	118	78
EU (mil.)	1990	142,2	10,4	13,7	17,9	20,8	18,4	7,2	25,0	13,8	15,0	0,0	0,0
	1995	148,0	11,9	17,4	20,4	20,2	19,2	6,0	23,8	13,2	13,9	0,9	1,2
	1997	149,9	12,0	18,8	21,3	20,3	19,9	5,8	23,5	13,0	13,4	0,9	1,1

Graph for the table is presented at the bottom of page 164



Czech Republic 1990 reconstruction on the bases of corporate accounting (simplified), not correct  
 Source: OECD 1998



Source: OECD 1998

B.8 Development of Employment and Rates of Unemployment in the CR according to Professional Structure (in major categories of occupations) (1994–1998)

KZAM	In thousands					%				
	1994	Number of the employed				Rate of unemployment *				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
Legislators, senior officials and managers	267,1	310,3	334,5	328,3	324,9	1,3	1,1	0,9	1,1	1,9
Scientists and professionals (including teachers)	449,4	485,3	484,0	481,5	468,6	1,0	0,8	0,8	1,4	1,8
Technicians, health care personnel and teachers (including economists)	934,8	933,3	932,6	890,1	872,7	1,5	1,2	1,2	2,0	3,3
Lower administrative staff (clerks)	392,3	398,8	414,7	398,7	394,0	2,8	2,2	2,1	3,6	5,9
Service workers and shop and market sales workers	581,3	588,9	601,3	583,0	597,3	4,8	3,9	3,6	5,5	7,6
Skilled agricultural and forestry workers	128,0	127,7	121,5	109,9	104,7	3,3	2,2	2,8	4,1	5,7
Craft and related trades workers	1 118,8	1 094,5	1 070,6	1 042,6	1 025,6	2,6	2,4	2,2	3,0	4,5
Plant and machine operators	675,1	659,4	662,0	622,7	613,4	2,7	2,5	3,0	3,9	5,2
Semi- and unskilled workers	487,6	491,0	468,9	431,2	415,3	7,6	7,4	7,9	10,2	12,8
Armed forces	0,0	9,9	18,2	52,4	48,1	–	0,5	1,6	0,8	1,7
Others	3,2	3,6	2,8	2,8	1,3					

\* The rates of unemployment are problematic, in that they only cover those who were already employed and lost their jobs in the relevant category of occupations. Therefore the figures are lower than the actual figures. These rates of unemployment are stated primarily for purposes of comparison in terms of major occupation categories, and developments over time.

Note: In 1997, there was a change in the methodology for monitoring the relevant figures. Women on maternity leave are not included, soldiers are calculated. The 1997 and 1998 figures are therefore some 100,000 lower.

Source: Labour force surveys, Czech Statistical Office, 1994–1998

## B.9 Development of Employment and the Rates of Unemployment in the CR by Sector (1994–1998)

OKEČ	In thousands					%				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
<b>Total</b>	<b>5 047,3</b>	<b>5 103,8</b>	<b>5 110,8</b>	<b>4 942,6</b>	<b>4 865,9</b>	<b>3,1</b>	<b>2,7</b>	<b>2,7</b>	<b>3,8</b>	<b>5,5</b>
Agriculture and game-keeping	292,5	274,1	254,0	227,4	217,8	3,2	2,9	3,0	3,4	4,5
Forestry, fisheries	53,1	62,0	55,0	55,4	49,1	3,5	1,8	2,1	5,3	7,4
Mineral exploitation	98,5	98,9	90,1	88,4	85,8	4,6	3,6	6,2	7,0	10,2
Processing industry	1 482,9	1 484,0	1 468,4	1 370,3	1 340,8	3,1	2,8	2,9	4,0	5,7
Generation and distribution of electricity, gas and water	99,7	102,8	102,7	92,7	93,3	1,3	1,6	1,4	2,4	2,7
Construction	458,0	459,1	470,5	481,5	472,1	3,9	3,6	2,8	4,1	5,4
Trade, repairs of motor vehicles and consumergoods	621,5	645,2	672,3	660,3	645,6	3,5	2,9	2,9	4,5	6,7
Hotels and restaurants	154,4	158,3	162,0	168,0	169,2	6,8	5,3	5,1	8,1	9,6
Transport, storage and communications	380,4	389,8	396,4	379,9	378,2	1,8	1,9	1,8	2,5	4,1
Insurance and finance	84,3	94,7	99,1	96,7	99,7	0,6	0,3	0,6	2,4	3,7
Property, renting, corporate services, research and development	246,9	249,9	262,1	252,0	248,4	1,9	1,6	1,6	2,3	3,3
Civil service, defence	284,1	273,3	280,6	321,2	322,8	2,0	2,2	2,2	2,3	2,9
Education	327,3	327,5	329,5	308,8	289,0	1,8	1,4	1,4	2,1	3,5
Health care, veterinary care and social work	294,5	306,4	293,6	273,7	267,8	2,1	1,5	1,6	2,7	4,2
Other community, social and personal services	165,5	173,4	168,9	161,8	182,6	5,0	4,4	3,3	3,7	4,7
Private households with personnel	0,3	1,3	2,1	1,2	1,3					
Extra-territorial organisations and bodies	1,2	0,9	1,8	1,6	1,5					
Unidentified	2,6	2,7	2,3	2,2	1,0					

\* The rates of unemployment are problematic in that they cover only those who were already employed and lost their jobs. The rates of unemployment are primarily stated for purposes of comparison in terms of sector and development over the years.

Source: *Labour force surveys, Czech Statistical Office 1994–1998.*

B.10 Development of Employment in the CR  
in terms of Education, Sector and Classification of Occupations (1998)

In thousands

	Total	%	Basic	Sou without MZ	SOŠ without MZ	SOU with MZ	SOŠ with MZ	ÚSV (G)	VŠ	No education
<b>The employed – total</b>	<b>4 888,7</b>	<b>100,0</b>	<b>453,0</b>	<b>1 972,7</b>	<b>266,8</b>	<b>86,6</b>	<b>1 364,9</b>	<b>195,1</b>	<b>534,6</b>	<b>14,8</b>
Agriculture and game-keeping	221,5	4,5	38,8	111,1	13,2	3,2	42,1	2,0	10,2	1,0
Forestry, fisheries	51,8	1,1	9,5	24,7	3,4	1,0	9,0	1,0	3,1	0,2
Mineral exploitation	87,0	1,8	9,4	49,8	6,5	1,7	13,9	1,6	3,8	0,4
Processing industry	1 344,3	27,5	167,5	665,0	79,3	26,4	290,0	37,7	74,8	3,6
Generation and distribution of electricity, gas and water	92,5	1,9	6,4	37,5	7,0	2,3	27,3	3,9	8,2	0,0
Construction	482,4	9,9	34,6	285,5	27,2	7,8	88,4	7,5	30,3	1,3
Trade, repairs of motor vehicles and consumer goods	646,3	13,2	44,7	296,5	39,3	12,8	180,3	28,8	42,1	1,9
Hotels and restaurants	171,9	3,5	18,0	86,8	12,1	4,5	38,0	8,5	3,6	0,4
Transport, storage and communications	377,2	7,8	37,0	162,3	26,9	10,0	105,5	17,6	15,8	2,1
Insurance and finance	99,0	2,0	1,4	5,8	2,8	1,3	53,9	11,8	22,0	0,1
Property, renting, corporate services, research and development	249,3	5,1	12,1	38,7	7,0	3,4	94,5	16,4	77,0	0,4
Civil service, defence	321,6	6,6	14,7	60,1	17,1	6,9	141,8	27,5	53,3	0,3
Education	294,5	6,0	21,8	47,7	7,3	2,0	86,9	12,3	115,6	1,0
Health care, veterinary care and social work	270,7	5,5	18,0	42,3	10,8	1,1	140,3	6,7	50,6	1,1
Other community, social and personal services	175,5	3,6	19,0	58,5	7,2	2,6	52,1	11,5	23,6	1,1
Private households with personnel	1,3	0,0	0,2	0,3	0,1	0,0	0,7	0,1	0,0	0,0
Extra-territorial organisations and bodies	1,4	0,0	0,0	0,3	0,0	0,0	0,2	0,3	0,6	0,0
Unidentified	0,8	0,0	0,1	0,3	0,0	0,0	0,2	0,0	0,1	0,0
<b>KZAM</b>										
Legislators, senior officials and managers	325,4	6,6	7,1	55,2	13,4	4,5	127,0	13,4	104,7	0,2
Scientists and professionals (including teachers)	472,3	9,7	1,4	9,1	6,6	3,1	139,5	20,7	291,3	0,5
Technicians, health care personnel and teachers (including economists)	876,0	17,9	12,0	82,2	37,5	16,3	556,3	70,6	100,4	0,7
Lower administrative staff (clerks)	397,6	8,2	25,7	85,9	27,8	7,0	192,4	47,0	11,3	0,6
Service workers and shop and market sales workers	595,6	12,2	58,0	334,2	39,1	13,9	119,8	20,5	7,9	2,2
Skilled workers and forestry workers	106,7	2,2	24,4	55,0	7,3	1,0	14,4	1,2	3,0	0,5
Craft and related trades workers	1 028,9	21,1	69,3	744,7	70,0	23,8	106,0	7,9	4,6	2,8
Plant and machine operators	614,3	12,6	99,0	385,1	43,3	12,1	63,5	6,6	2,0	2,9
Semi- and unskilled workers	422,1	8,6	153,0	200,6	19,7	2,8	33,4	5,8	2,4	4,5
Armed forces	48,9	1,0	3,1	20,6	2,2	2,3	12,0	1,7	7,1	0,0
Others	1,1	0,0	0,1	0,4	0,0	0,0	0,6	0,0	0,1	0,0

Source: Labour force surveys, Czech Statistical Office, OKEČ and KZAM tables for 1997 and 1998, average for 4Q 97 and 1-3Q 98.



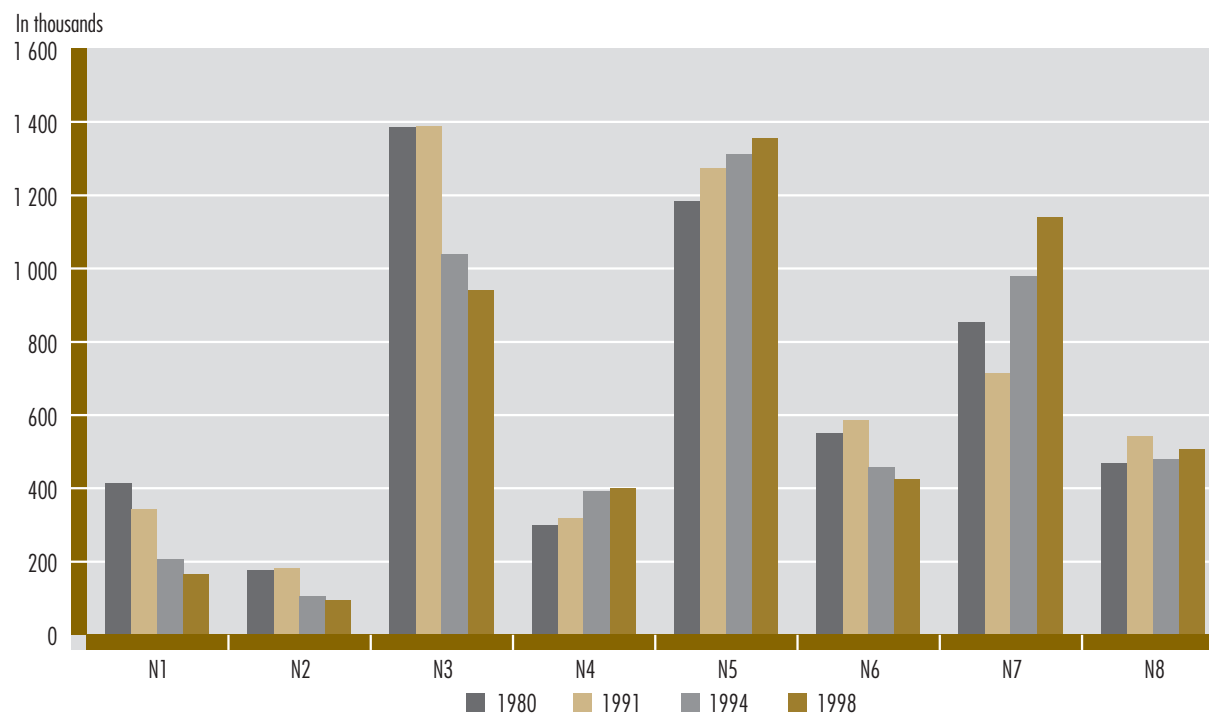
## B.11 Unemployed and Rate of Unemployment in the CR by Education, Sector and Classification of Last Occupation

Education	Total	Proportion	Rate of Unemployment	Basic	SOU		SOŠ		SOU		SOŠ		ÚSV (G)	VŠ	In thousands, %				
					without MZ	with MZ	without MZ	with MZ	without MZ	with MZ	No education								
<b>The unemployed – total</b>	<b>246.2</b>	<b>100.0</b>	<b>5.0%</b>	<b>64.1</b>	<b>14.2%</b>	<b>99.0</b>	<b>5.0%</b>	<b>13.4</b>	<b>5.0%</b>	<b>2.8</b>	<b>3.2%</b>	<b>47.8</b>	<b>3.5%</b>	<b>9.1</b>	<b>4.6%</b>	<b>7.8</b>	<b>1.5%</b>	<b>2.2</b>	<b>14.6%</b>
Section																			
Agriculture and game-keeping	9.3	3.8	4.2%	4.1	10.6%	2.6	2.3%	0.5	3.6%	0.2	6.3%	1.3	3.0%	0.3	12.8%	0.2	1.7%	0.2	20.5%
Forestry, fisheries	4.1	1.7	8.0%	1.4	14.7%	2.0	7.9%	0.2	4.5%	0.1	13.2%	0.2	2.2%	0.1	7.7%	0.1	3.2%	0.1	37.5%
Mineral exploitation	9.2	3.7	10.6%	3.5	36.9%	4.5	9.1%	0.2	3.5%	0.2	9.1%	0.5	3.2%	0.3	20.3%	0.0	0.7%	0.0	0.0%
Processing industry	73.7	30.0	5.5%	22.6	13.5%	32.3	4.9%	4.5	5.6%	0.7	2.5%	9.9	3.4%	1.9	4.9%	1.5	1.9%	0.5	14.7%
Generation and distribution of electricity, gas and water	2.5	1.0	2.7%	1.0	15.7%	0.9	2.3%	0.1	1.4%	0.0	0.0%	0.4	1.3%	0.0	0.0%	0.1	0.9%	0.1	–
Construction	25.0	10.2	5.2%	7.5	21.6%	12.0	4.2%	0.9	3.1%	0.2	2.6%	3.1	3.5%	0.9	12.4%	0.4	1.2%	0.2	11.3%
Trade, repairs of motor vehicles and consumer goods	42.4	17.3	6.6%	6.8	15.2%	19.7	6.6%	3.7	9.3%	0.8	6.5%	8.8	4.9%	1.5	5.2%	1.3	3.0%	0.0	0.0%
Hotels and restaurants	17.0	7.0	9.9%	3.8	20.9%	8.3	9.6%	0.9	7.2%	0.1	2.2%	3.1	8.2%	0.7	8.5%	0.1	2.1%	0.0	0.0%
Transport, storage and communications	14.4	5.8	3.8%	3.4	9.2%	6.1	3.7%	1.3	4.7%	0.2	1.8%	2.3	2.1%	0.5	2.6%	0.4	2.7%	0.3	15.3%
Insurance and finance	3.7	1.5	3.7%	0.2	10.5%	0.1	1.7%	0.2	5.5%	0.0	0.0%	2.1	3.9%	0.6	4.7%	0.6	2.7%	0.0	0.0%
Property, renting, corporate services, research and development	8.1	3.3	3.2%	1.6	13.0%	1.9	5.0%	0.2	3.2%	0.1	2.2%	3.2	3.3%	0.4	2.6%	0.6	0.8%	0.1	25.0%
Civil service, defence	8.9	3.6	2.8%	1.9	12.8%	1.7	2.8%	0.1	0.7%	0.0	0.4%	4.0	2.8%	0.6	2.0%	0.4	0.8%	0.1	41.7%
Education	9.7	3.9	3.3%	1.2	5.4%	2.2	4.6%	0.3	3.8%	0.2	7.6%	3.5	4.0%	0.7	5.7%	1.5	1.3%	0.3	25.6%
Health care, veterinary care and social work	10.6	4.3	3.9%	3.0	16.7%	2.4	5.6%	0.5	4.2%	0.1	4.5%	4.1	2.9%	0.2	2.6%	0.3	0.6%	0.2	16.7%
Other community, social and personal services	7.4	3.0	4.2%	2.4	12.5%	2.4	4.1%	0.1	1.7%	0.0	1.0%	1.5	2.9%	0.5	4.3%	0.4	1.5%	0.1	6.7%
Private households with personnel	0.2	0.1		0.0		0.0		0.0		0.0		0.1		0.1		0.0		0.0	
Extra-territorial organisations and bodies	0.1	0.1		0.0		0.1		0.0		0.0		0.0		0.0		0.0		0.0	
Unidentified	0.0	0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
<b>KZAM</b>																			
Legislators, senior officials and managers	5.6	2.3	1.7%	0.4	5.3%	0.8	1.5%	0.2	1.7%	0.0	0.0%	2.6	2.1%	0.4	3.2%	1.2	1.1%	0.0	0.0%
Scientists and professionals (including teachers)	8.4	3.4	1.8%	0.1	5.3%	0.6	6.0%	0.0	0.0%	0.0	0.0%	3.5	2.5%	0.9	4.3%	3.3	1.1%	0.0	0.0%
Technicians, health care personnel and teachers (including economists)	26.6	10.7	3.0%	0.9	7.3%	2.6	3.2%	1.3	3.4%	0.4	2.2%	16.7	3.0%	2.4	3.4%	2.3	2.3%	0.0	0.0%
Lower administrative staff (clerks)	22.4	9.1	5.6%	1.9	7.2%	5.1	5.9%	1.8	6.3%	0.6	9.0%	10.3	5.3%	2.4	5.2%	0.3	2.7%	0.1	16.7%
Service workers and shop and market sales workers	45.1	18.3	7.6%	8.6	14.8%	23.3	7.0%	3.5	9.0%	0.5	3.6%	7.1	5.9%	1.5	7.4%	0.3	4.1%	0.2	6.8%
Skilled agricultural and forestry workers	5.5	2.3	5.1%	2.3	9.3%	2.2	4.0%	0.2	2.7%	0.2	17.1%	0.5	3.3%	0.1	4.3%	0.0	0.0%	0.2	30.0%
Craft and related trades workers	43.3	17.5	4.2%	6.8	9.8%	29.0	3.9%	2.8	4.0%	0.6	2.4%	3.5	3.3%	0.3	3.8%	0.0	0.5%	0.4	12.5%
Plant and machine operators	31.1	12.6	5.1%	9.4	9.5%	17.3	4.5%	2.1	4.8%	0.4	3.3%	1.4	2.2%	0.3	3.8%	0.2	7.7%	0.2	6.1%
Semi- and unskilled workers	57.5	23.5	13.6%	33.8	22.1%	18.2	9.1%	1.5	7.6%	0.2	8.1%	1.7	5.1%	0.8	13.8%	0.1	2.1%	1.2	27.2%
Armed forces	0.7	0.3	1.4%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.6	4.8%	0.0	0.0%	0.1	1.4%	0.0	0.0%

Source: Labour force surveys; Czech Statistical Office, OKEČ and KZAM tables for 1997 and 1998, average for 4Q 97 and 4-3Q 98.

B.12 Development of the Economically – Active Population and the Rate of Unemployment  
in Major Categories of Occupations (1980, 1991, 1994, 1998)

Occupation category	Economically active population				Ratio 98/91	Relative Unemployment			
	1980	1991	1994	1998		1994	1998	98/94	Poř.
N1 Agricultural, forestry and fisheries workers	413,70	342,97	206,00	165,90	0,48	4,4%	6,1%	1,39	5
N2 Workers concerned with exploitation and treatment of raw materials in mining, energy and water management	175,29	181,28	105,90	92,90	0,51	5,0%	9,0%	1,81	1
N3 Workers-processors (producers, repair and maintenance men)	1 384,54	1 386,99	1 038,80	942,00	0,68	3,1%	4,4%	1,45	3
N4 Construction workers	299,31	317,06	392,60	399,10	1,26	4,3%	5,6%	1,32	7
N5 Operators and service workers	1 183,92	1 273,07	1 311,50	1 355,40	1,06	5,3%	7,5%	1,41	4
N6 Technicians	550,70	586,54	457,10	424,10	0,72	1,7%	2,7%	1,60	2
N7 Managers and administrators	853,62	714,82	979,10	1 139,90	1,59	2,3%	3,2%	1,36	6
N8 Workers in education, culture, health care, science, research and other non-production workers	468,85	542,92	478,00	506,90	0,93	2,1%	2,4%	1,15	8
TOTAL – workers, operators and other staff	5 363,95	5 421,10	4 969,00	5 026,20	0,93	3,5%	4,8%	1,39	

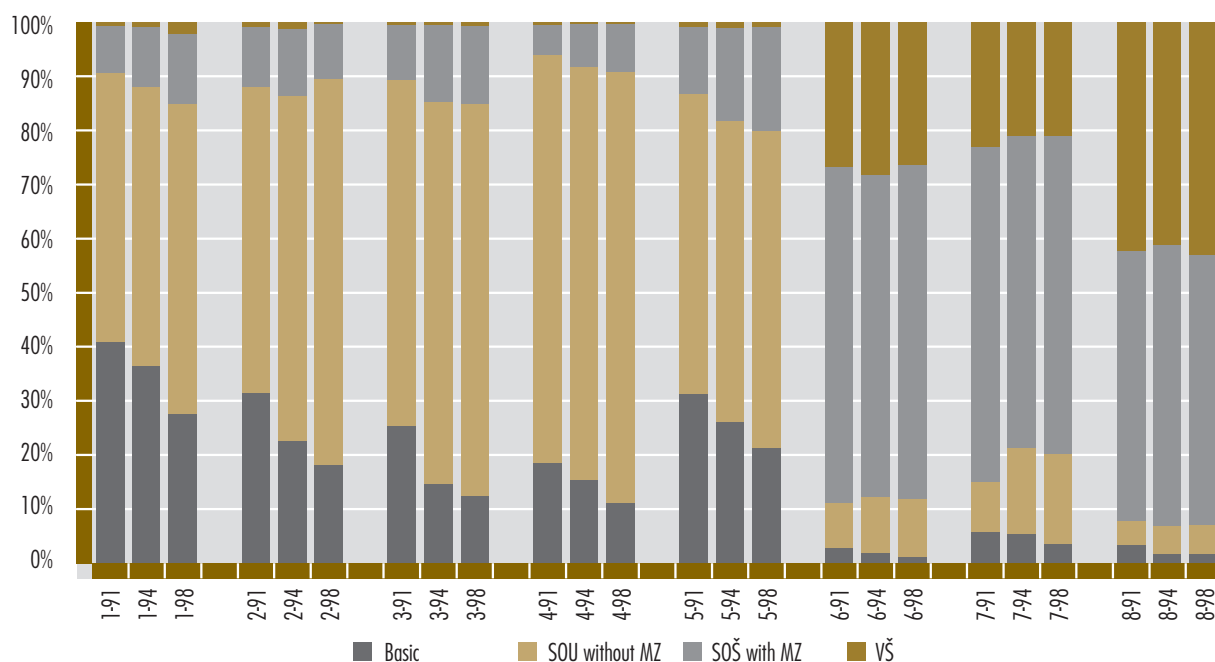
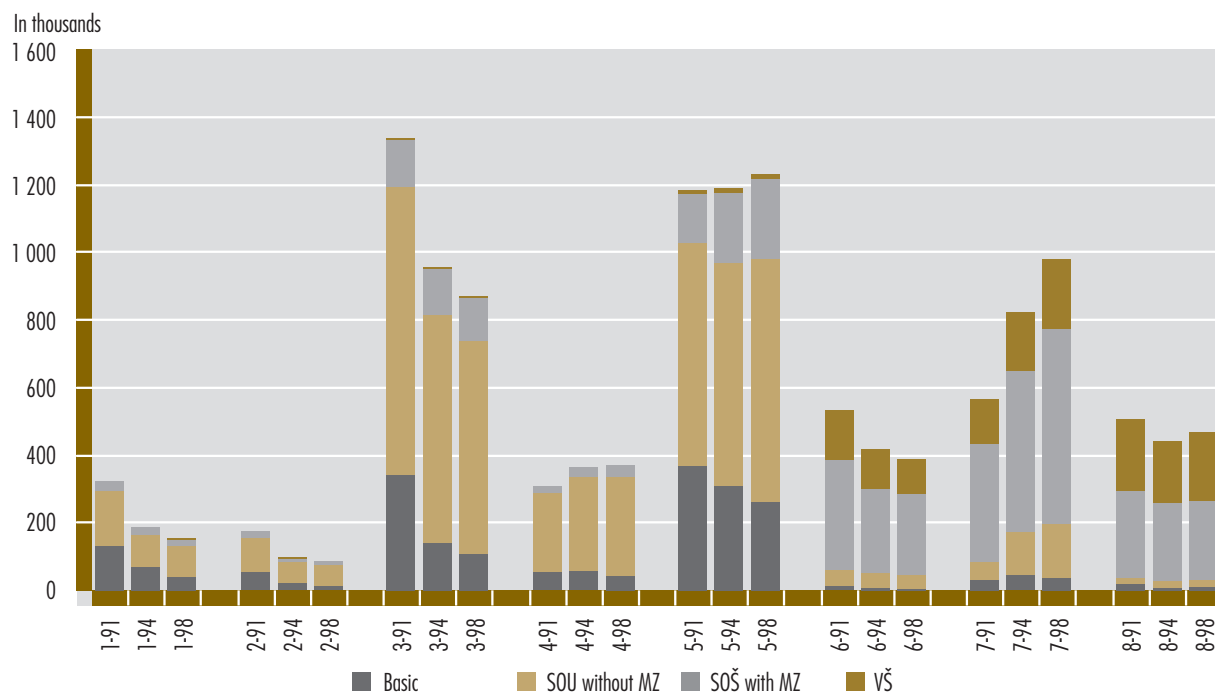


Source: Censuses 1980 a 1991

B.13 Development of the Economically Active Population in Major Occupation Categories  
 by Education (1991, 1994, 1998)

1991		In thousands											%	
Education	Basic	Sou without MZ	SOŠ without MZ	SOŠ with MZ	ÚSV (G)	VŠ	Total	Basic	Sou without MZ	SOŠ without MZ	SOŠ with MZ	ÚSV (G)	VŠ	
														N1
N2	54,6	98,4	3,9	19,2	3,6	1,5	181,3	30,1%	54,3%	2,2%	10,6%	2,0%	0,8%	
N3	340,0	853,3	33,2	138,4	16,4	5,6	1 387,0	24,5%	61,5%	2,4%	10,0%	1,2%	0,4%	
N4	57,6	233,5	5,0	17,5	2,4	1,1	317,1	18,2%	73,6%	1,6%	5,5%	0,8%	0,4%	
N5	371,9	657,7	50,5	145,8	37,0	10,2	1 273,1	29,2%	51,7%	4,0%	11,4%	2,9%	0,8%	
N6	14,8	44,0	22,0	330,4	33,4	141,8	586,5	2,5%	7,5%	3,8%	56,3%	5,7%	24,2%	
N7	33,2	52,7	57,9	351,2	89,6	130,4	714,8	4,6%	7,4%	8,1%	49,1%	12,5%	18,2%	
N8	17,9	21,7	9,4	253,5	26,1	214,3	542,9	3,3%	4,0%	1,7%	46,7%	4,8%	39,5%	
TOTAL – workers, operators and other staff	1 065,8	2 136,8	198,0	1 293,2	215,7	511,6	5 421,1	19,7%	39,4%	3,7%	23,9%	4,0%	9,4%	
1994		In thousands											%	
N1	68,7	97,2	15,2	20,7	2,3	1,7	206,0	33,3%	47,2%	7,4%	10,0%	1,1%	0,8%	
N2	21,9	61,5	6,1	12,1	3,4	1,1	105,9	20,7%	58,1%	5,8%	11,4%	3,2%	1,0%	
N3	140,2	672,1	75,7	135,8	11,0	4,8	1 038,8	13,5%	64,7%	7,3%	13,1%	1,1%	0,5%	
N4	57,0	279,2	22,4	29,7	2,3	0,9	392,6	14,5%	71,1%	5,7%	7,6%	0,6%	0,2%	
N5	309,8	660,8	85,0	203,6	39,8	12,5	1 311,5	23,6%	50,4%	6,5%	15,5%	3,0%	1,0%	
N6	8,4	42,8	19,6	248,0	19,9	117,9	457,1	1,8%	9,4%	4,3%	54,3%	4,4%	25,8%	
N7	44,6	130,5	64,7	476,2	90,7	172,3	979,1	4,6%	13,3%	6,6%	48,6%	9,3%	17,6%	
N8	7,9	22,0	16,1	228,9	22,1	180,7	478,0	1,7%	4,6%	3,4%	47,9%	4,6%	37,8%	
TOTAL – workers, operators and other staff	658,5	1 966,1	304,8	1 355,0	191,5	491,9	4 969,0	13,3%	39,6%	6,1%	27,3%	3,9%	9,9%	
1998		In thousands											%	
N1	42,7	88,5	10,1	20,2	1,2	3,2	165,9	25,7%	53,3%	6,1%	12,2%	0,7%	1,9%	
N2	15,6	60,9	6,5	8,8	1,0	0,2	92,9	16,8%	65,6%	7,0%	9,5%	1,1%	0,2%	
N3	108,1	632,4	61,2	125,9	9,7	4,8	942,0	11,5%	67,1%	6,5%	13,4%	1,0%	0,5%	
N4	41,2	295,5	25,6	33,1	2,4	0,8	399,1	10,3%	74,0%	6,4%	8,3%	0,6%	0,2%	
N5	262,1	720,8	88,2	234,9	38,3	10,6	1 355,4	19,3%	53,2%	6,5%	17,3%	2,8%	0,8%	
N6	4,8	41,3	15,1	241,4	18,3	102,7	424,1	1,1%	9,7%	3,6%	56,9%	4,3%	24,2%	
N7	35,2	162,7	55,6	576,0	104,7	205,4	1 139,9	3,1%	14,3%	4,9%	50,5%	9,2%	18,0%	
N8	8,6	24,4	12,1	234,8	25,6	201,7	506,9	1,7%	4,8%	2,4%	46,3%	5,1%	39,8%	
TOTAL – workers, operators and other staff	518,3	2 026,5	274,4	1 475,1	201,2	529,4	5 026,2	10,3%	40,3%	5,5%	29,3%	4,0%	10,5%	

Source: Censuses 1980 and 1991, Labour force surveys 1993, 1994, 1997, 1998, Czech Statistical Office.



- 1 Agricultural, forestry and fisheries workers
- 2 Workers concerned with exploitation and treatment of raw materials in mining, energy and water management
- 3 Workers-processors (producers, repair and maintenance men)
- 4 Construction workers
- 5 Operators and service workers
- 6 Technicians
- 7 Managers and administrators
- 8 Workers in education, culture, health care, science, research and other non-production workers

Source: Censuses 1980 and 1991, Labour force surveys 1993, 1994, 1997, 1998, Czech Statistical Office.

## C.1 Participation in Education in Terms of Age (1996)

	Age at which compulsory education ends	Number of years during which more than 90% of the population participates in education	Range of age in which more than 90% of the population participates in education	Percentage of participants in education by age						
				5 years and older in population aged 5-29	2-4 year-olds in population aged 2-4	5-14 year-olds in population aged 5-14	15-19 year-olds in population aged 15-19	20-29 year-olds in population aged 20-29	30-39 year-olds in population aged 30-29	40 years and older in population aged over 40
<b>Czech Republic</b>	<b>15</b>	<b>11</b>	<b>6-16</b>	<b>56,3</b>	<b>45,9</b>	<b>98,8</b>	<b>72,2</b>	<b>11,1</b>	<b>0,2</b>	<b>n</b>
Hungary	16	11	5-15	56,6	54,5	99,7	68,5	11,7	m	m
Poland	15	12	6-17	63,6	16,0	90,8	80,9	19,3	m	m
Austria	15	12	5-16	58,0	34,8	98,6	75,7	16,8	2,7	0,3
Denmark	16	11	6-16	63,9	46,3	96,7	79,6	26,0	4,9	0,7
France	16	15	3-17	64,5	79,6	100,1	88,3	19,1	m	m
Germany	18	11	7-17	61,8	44,7	96,5	87,9	20,5	2,5	0,1
Ireland	15	11	5-15	64,9	19,0	99,6	79,3	14,6	x	x
Netherlands	18	14	4-17	65,3	33,4	99,2	88,5	23,7	3,8	0,7
Spain	16	12	4-15	63,0	59,2	104,2	73,8	21,8	2,2	0,2
United Kingdom	16	12	4-15	66,8	49,0	98,8	72,1	17,5	8,4	3,3
<b>Average OECD</b>	<b>16</b>	<b>12</b>		<b>62,8</b>	<b>41,0</b>	<b>97,6</b>	<b>77,2</b>	<b>19,3</b>	<b>4,5</b>	<b>1,5</b>
<b>Average EU</b>	<b>16</b>	<b>12</b>		<b>62,6</b>	<b>44,4</b>	<b>98,0</b>	<b>80,1</b>	<b>20,5</b>	<b>4,4</b>	<b>0,9</b>

 Source: *Education at a Glance*, 1998.

## C.2 Development of Participation in Upper Secondary Education by Types of Educational Programme (1990, 1994, 1996)

	%											
	1990*				1994				1996			
	General	Technical and vocational			General	Technical and vocational			General	Technical and vocational		
Total		Technical	Vocational	Total		Technical	Vocational	Total		Technical	Vocational	
<b>Czech Republic</b>	<b>14,0</b>	<b>86,0</b>	<b>29,0</b>	<b>57,0</b>	<b>15,7</b>	<b>84,3</b>	<b>33,3</b>	<b>51,0</b>	<b>16,0</b>	<b>84,0</b>	<b>37,0</b>	<b>47,0</b>
Austria	20,7	79,3	42,1	37,2	22,2	77,8	41,3	36,5	24,0	76,0	42,0	34,0
Denmark	33,4	66,6	0,0	66,6	45,9	54,1	0,0	54,1	47,0	53,0	5,0	48,0
France	46,8	53,2	44,1	9,0	47,5	52,5	43,6	8,9	46,0	54,0	43,0	11,0
Germany	18,8	81,2	23,9	57,3	22,5	77,5	22,8	54,7	24,0	76,0	24,0	52,0
Ireland	74,9	25,1	19,5	5,5	76,9	23,1	18,0	5,1	80,0	20,0	15,0	5,0
Netherlands	32,2	67,8	43,2	24,5	29,8	70,2	44,8	25,4	30,0	70,0	47,0	23,0
Spain	57,9	42,1	40,7	1,3	59,1	40,9	39,6	1,3	61,0	39,0	37,0	2,0
United Kingdom	48,8	51,2			42,3	57,7			43,0	57,0		
<b>Total EU</b>	<b>42,4</b>	<b>60,4</b>	<b>31,1</b>	<b>29,3</b>	<b>43,7</b>	<b>57,1</b>	<b>30,3</b>	<b>26,8</b>	<b>44,5</b>	<b>55,6</b>	<b>30,5</b>	<b>25,1</b>

\*CR 1989

 Source: *OECD, the CR 1998: Institute for Information on Education*
**CR 1998 18,0 82,0 42,0 40,0**

C.3 Proportion of Upper Secondary Education Graduates in the Population of Corresponding Age  
(1996)

	%								
	M+W	Total Men	Women	M+W	General Men	Women	M+W	Vocational Men	Women
<b>Czech Republic</b>	<b>83</b>	<b>81</b>	<b>85</b>	<b>11</b>	<b>9</b>	<b>14</b>	<b>71</b>	<b>72</b>	<b>70</b>
Hungary	86	m	m	25	18	33	59	m	m
Poland	94	m	m	25	m	m	69	m	m
Austria	86	88	84	15	13	18	71	76	66
Denmark	81	76	87	46	38	55	35	38	32
France	85	85	86	34	29	40	51	56	46
Germany	86	86	86	25	22	29	61	64	58
Ireland	79	75	83	77	72	82	2	2	2
Netherlands	81	m	m	33	m	m	48	m	m
Spain	73	65	81	44	m	m	27	25	29
United Kingdom	m	m	m	m	m	m	m	m	m
<b>Average OECD</b>	<b>85</b>	<b>86</b>	<b>88</b>	<b>40</b>	<b>39</b>	<b>45</b>	<b>46</b>	<b>49</b>	<b>43</b>
<b>Average EU</b>	<b>86</b>	<b>85</b>	<b>85</b>	<b>41</b>	<b>39</b>	<b>45</b>	<b>45</b>	<b>46</b>	<b>43</b>

Source: *Education at a Glance*, 1998

C.4 Participation in Tertiary Education in Terms of Age (1996)

Age	17-34			18-21			22-25			26-29		
	Non-university education	University Education	Total	Non-university education	University Education	Total	Non-university education	University Education	Total	Non-university education	University Education	Total
<b>Czech Republic</b>	<b>1,1</b>	<b>5,8</b>	<b>6,9</b>	<b>3,6</b>	<b>13,3</b>	<b>16,9</b>	<b>0,5</b>	<b>7,9</b>	<b>8,3</b>	<b>n</b>	<b>2,1</b>	<b>2,1</b>
Hungary	a	7,4	7,4	a	13,4	13,4	a	9,0	9,0	a	2,8	2,8
Poland	1,9	9,4	11,3	5,5	15,8	21,2	2,2	16,4	18,5	x	x	4,2
Austria	0,8	8,9	9,7	2,6	13,5	16,1	1,7	15,0	16,6	x	8,8	8,8
Denmark	1,1	10,0	11,1	1,0	7,5	8,5	2,2	21,2	23,5	1,2	10,8	12,1
France	x	x	13,9	x	x	36,0	x	x	18,6	x	x	4,4
Germany	1,3	8,1	9,4	2,9	7,9	10,8	1,7	15,5	17,2	1,9	9,8	11,8
Ireland	m	m	m	x	x	31,4	m	m	m	m	m	m
Netherlands	a	10,7	10,7	a	24,0	24,0	a	19,2	19,2	a	5,4	5,4
Spain	0,3	12,5	12,8	1,0	26,3	27,3	0,3	19,4	19,8	n	6,2	6,2
United Kingdom	2,0	7,3	9,4	4,7	22,2	26,9	2,2	7,2	9,4	1,4	3,4	4,8
<b>Average OECD</b>	<b>2,4</b>	<b>8,3</b>	<b>11,2</b>	<b>5,3</b>	<b>15,2</b>	<b>23,2</b>	<b>3,1</b>	<b>13,0</b>	<b>16,9</b>	<b>1,4</b>	<b>5,1</b>	<b>6,8</b>
<b>Average EU</b>	<b>2,3</b>	<b>9,2</b>	<b>11,3</b>	<b>5,8</b>	<b>17,4</b>	<b>23,9</b>	<b>3,2</b>	<b>15,0</b>	<b>17,7</b>	<b>1,5</b>	<b>6,5</b>	<b>7,3</b>

Source: *Education at a Glance*, 1998

## C.5 Proportion of Tertiary Education Graduates in the Population of Corresponding Age (1996)

	Non-university tertiary education			1 <sup>st</sup> stage of university education leading to a degree (e.g. Bachelor's degree)			University education leading to a degree			2 <sup>nd</sup> stage of university education leading to a degree (e.g. Master's degree)			Doctoral programmes			
	Men	Women	M+W	Men	Women	M+W	Men	Women	M+W	Men	Women	M+W	Men	Women	M+W	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
<b>Czech Republic</b>	6,0	4,0	8,0	3,0	3,0	3,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0
Hungary	a	a	a	x	x	x	22,0	18,0	26,0	2,5	2,8	2,2	2,2	0,1	0,2	0,1
Poland	10,0	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Austria	5,0	2,0	7,0	a	a	a	10,0	11,0	10,0	a	a	a	a	1,3	1,8	0,8
Denmark	8,0	10,0	6,0	20,0	15,0	26,0	8,0	8,0	7,0	4,4	4,4	4,3	4,3	0,6	0,9	0,4
France	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Germany	11,0	9,0	13,0	a	a	a	16,0	18,0	14,0	a	a	a	a	1,6	2,2	1,0
Ireland	16,0	17,0	15,0	14,0	12,0	16,0	11,0	12,0	10,0	4,5	4,6	4,4	4,4	0,6	0,8	0,5
Netherlands	a	a	a	x	x	x	20,0	18,0	21,0	10,0	10,4	9,5	10,4	1,9	2,3	1,5
Spain	2,0	3,0	2,0	11,0	9,0	14,0	15,0	13,0	17,0	x	x	x	x	0,9	1,1	0,8
United Kingdom	12,0	10,0	13,0	34,0	33,0	39,0	x	x	x	12,3	12,0	12,7	12,0	1,1	1,4	0,7
Average OECD	15,0	14,0	17,0	13,0	11,0	14,0	9,0	9,0	10,0	4,4	4,4	4,3	4,4	0,9	1,2	0,7
<b>Average EU</b>	9,9	8,6	11,3	13,0	11,1	15,5	13,0	12,5	13,5	4,7	4,6	4,8	4,6	1,1	1,4	0,8

Source: Education at a Glance, 1998.

## C.6 Development of Numbers of Graduates from Upper Secondary, Post-secondary and Higher Education in the CR (1993–2001) – full-time courses

Education	Gymnázia	SOŠ courses		SOU courses		Follow-up courses	"Post-matura" courses	Post-secondary education	Higher education	
		with MZ	without MZ	without MZ	with MZ				full-time	part-time
1993	24 603	37 360	1 253	77 757	8 909	797	4 307	15	14 896	2 617
1994	24 640	35 395	2 865	70 030	7 249	1 895	6 285	17	16 588	2 541
1995	19 150	37 927	2 795	76 069	6 297	2 985	6 868	336	16 603	2 198
1996	20 435	42 953	1 617	74 955	7 451	9 781	6 587	1 004	18 317	1 862
1997	23 862	48 118	1 572	62 257	7 816	16 085	3 655	1 648	20 804	2 447
1998	22 882	52 185	1 004	56 463	7 425	21 176	623	2 994	23 043	2 917
1999*	21 474	52 405	497	7 484	7 228	16 184	0	6 753	26 300	2 200
2000*	11 910	6 427	1 499	49 568	458	14 716	0	8 711	29 000	2 700
2001*	24 379	52 785	1 300	54 291	5 314	1 500	0	9 881	31 500	3 000

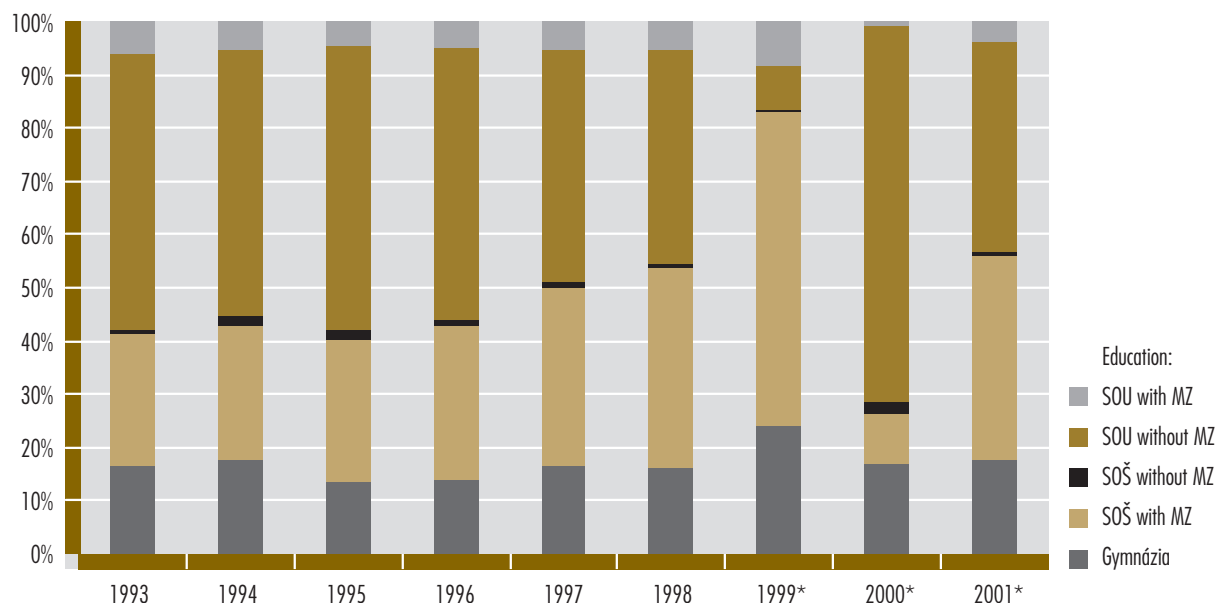
%

Education	Gymnázia	SOŠ courses		SOU courses		Follow-up courses	"Post-matura" courses	Post-secondary education**	Higher education	
		with MZ	without MZ	without MZ	with MZ				full-time	part-time
1993	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%		100,0%	100,0%
1994	100,2%	94,7%	228,7%	90,1%	81,4%	237,8%	145,9%		111,4%	97,1%
1995	77,8%	101,5%	223,1%	97,8%	70,7%	374,5%	159,5%		111,5%	84,0%
1996	83,1%	115,0%	129,1%	96,4%	83,6%	1227,2%	152,9%		123,0%	71,2%
1997	97,0%	128,8%	125,5%	80,1%	87,7%	2018,2%	84,9%		139,7%	93,5%
1998	93,0%	139,7%	80,1%	72,6%	83,3%	2657,0%	14,5%		154,7%	111,5%
1999*	87,3%	140,3%	39,7%	9,6%	81,1%	2030,6%	0,0%		176,6%	84,1%
2000*	48,4%	17,2%	119,6%	63,7%	5,1%	1846,4%	0,0%		194,7%	103,2%
2001*	99,1%	141,3%	103,8%	69,8%	59,6%	188,2%	0,0%		211,5%	114,6%

\*Projection with the exception of higher education and follow-up courses, the figures relate to students in lower classes

\*\* There is no point in expressing the relevant data as a percentage

## Development of the Proportions of Upper Secondary Education Graduates



Imbalances in 1999 and 2000 are the consequence of the introduction of compulsory 9th grade in basic education in 1996/97.

Source: Institute for Information on Education.



C.7 Development of the Numbers of SOU Graduates (1993–2001) – without MZ (full-time courses)

Groups of courses	1993		1994		1995		1996		1997		1998		1999*		2000*		2001*	
	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%
21 Mining	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
22 Metallurgy	119	0,2%	65	0,1%	25	0,0%	5	0,0%	4	0,0%	8	0,0%	0	0,0%	8	0,0%	25	0,0%
23 Mechanical engineering	21 933	28,2%	19 929	28,5%	16 228	21,3%	12 461	16,6%	9 739	15,6%	9 087	16,1%	1 085	14,5%	9 169	18,5%	10 094	18,6%
26 Electrical engineering	6 371	8,2%	5 314	7,6%	5 167	6,8%	4 955	6,6%	3 924	6,3%	4 186	7,4%	563	7,5%	3 604	7,3%	4 305	7,9%
27 Chemical engineering of silicates	1 001	1,3%	995	1,4%	984	1,3%	751	1,0%	635	1,0%	536	0,9%	51	0,7%	355	0,7%	564	1,0%
28 Other chemical engineering	988	1,3%	698	1,0%	530	0,7%	484	0,6%	225	0,4%	158	0,3%	54	0,7%	95	0,2%	126	0,2%
29 Food	2 530	3,3%	2 510	3,6%	3 647	4,8%	3 217	4,3%	2 660	4,3%	2 438	4,3%	162	2,2%	2 072	4,2%	2 525	4,7%
31 Textile and cloth-making	6 206	8,0%	5 807	8,3%	6 353	8,4%	5 955	7,9%	4 885	7,8%	3 731	6,6%	329	4,4%	2 153	4,3%	2 060	3,8%
32 Leather processing, footwear production	955	1,2%	1 074	1,5%	866	1,1%	609	0,8%	370	0,6%	277	0,5%	33	0,4%	111	0,2%	81	0,1%
33 Wood processing	3 252	4,2%	3 480	5,0%	4 364	5,7%	4 752	6,3%	4 329	7,0%	4 444	7,9%	420	5,6%	3 570	7,2%	3 893	7,2%
34 Polygraphy	53	0,1%	24	0,0%	168	0,2%	336	0,4%	257	0,4%	225	0,4%	93	1,2%	272	0,5%	298	0,5%
36 Construction	10 293	13,2%	10 069	14,4%	10 805	14,2%	9 991	13,3%	8 259	13,3%	6 769	12,0%	976	13,0%	4 796	9,7%	5 242	9,7%
37 Transport and posts	895	1,2%	664	0,9%	503	0,7%	373	0,5%	223	0,4%	142	0,3%	26	0,3%	135	0,3%	125	0,2%
45 Agriculture and forestry	4 899	6,3%	4 119	5,9%	4 491	5,9%	5 111	6,8%	3 918	6,3%	3 443	6,1%	385	5,1%	3 294	6,6%	3 833	7,1%
55 Health care	195	0,3%	101	0,1%	111	0,1%	167	0,2%	120	0,2%	101	0,2%	25	0,3%	63	0,1%	139	0,3%
64 Economics, trade, services	17 990	23,1%	15 019	21,4%	21 595	28,4%	24 719	33,0%	22 460	36,1%	20 637	36,5%	3 239	43,3%	19 585	39,5%	20 654	38,0%
82 Fine arts, applied arts	43	0,1%	150	0,2%	232	0,3%	318	0,4%	249	0,4%	281	0,5%	43	0,6%	286	0,6%	327	0,6%
<b>Total</b>	<b>77 757</b>	<b>100%</b>	<b>70 030</b>	<b>100%</b>	<b>76 069</b>	<b>100%</b>	<b>74 955</b>	<b>100%</b>	<b>62 257</b>	<b>100%</b>	<b>56 463</b>	<b>100%</b>	<b>7 484</b>	<b>100%</b>	<b>49 568</b>	<b>100%</b>	<b>54 291</b>	<b>100%</b>

 Notes: Including special school graduates and SOU graduates without *maturita*

\* Projection states numbers of students in lower classes.

The graph for the table is presented on page 172 above.

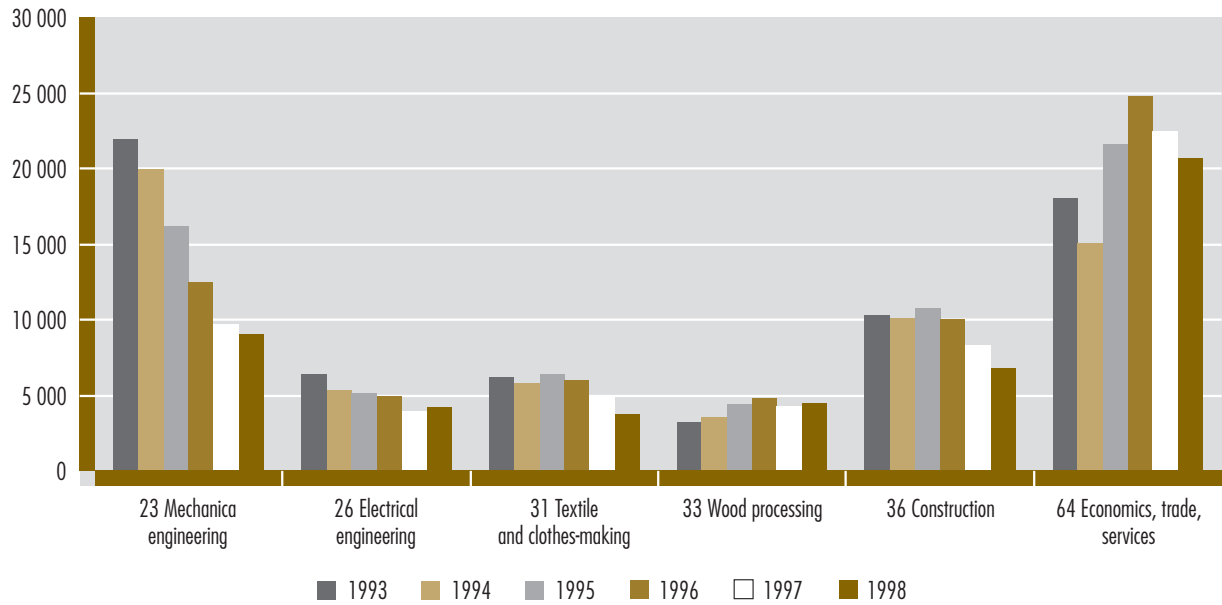
C.8-1 Development of the Numbers of SOU graduates with MZ (1993-2001) – full-time courses

Groups of courses	1993		1994		1995		1996		1997		1998		1999*		2000*		2001*	
	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%
21 Mining	20	0,2%	0	0,0%	10	0,2%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
22 Metallurgy	111	1,2%	41	0,6%	15	0,2%	22	0,3%	0	0,0%	20	0,3%	19	0,3%	0	0,0%	27	0,5%
23 Mechanical engineering	2 743	30,8%	2 097	28,9%	1 909	30,3%	1 580	21,2%	1 462	18,7%	1 193	16,1%	910	12,6%	123	26,9%	749	14,1%
26 Electrical engineering	2 366	26,6%	2 083	28,7%	2 086	33,1%	2 686	36,0%	2 419	30,9%	2 332	31,4%	2 414	33,4%	156	34,1%	2 701	50,8%
27 Chemical engineering of silicates	0	0,0%	0	0,0%	0	0,0%	11	0,1%	13	0,2%	6	0,1%	18	0,2%	0	0,0%	12	0,2%
28 Other chemical engineering	333	3,7%	213	2,9%	213	3,4%	259	3,5%	200	2,6%	145	2,0%	122	1,7%	0	0,0%	114	2,1%
29 Food	17	0,2%	12	0,2%	22	0,3%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	2 525	47,5%
31 Textile and cloth-making	156	1,8%	135	1,9%	179	2,8%	240	3,2%	283	3,6%	367	4,9%	310	4,3%	40	8,7%	185	3,5%
32 Leather processing, footwear production	158	1,8%	97	1,3%	47	0,7%	28	0,4%	26	0,3%	17	0,2%	0	0,0%	0	0,0%	0	0,0%
33 Wood processing	27	0,3%	34	0,5%	0	0,0%	13	0,2%	128	1,6%	76	1,0%	278	3,8%	0	0,0%	19	0,4%
34 Polygraphy	382	4,3%	302	4,2%	121	1,9%	50	0,7%	18	0,2%	0	0,0%	149	2,1%	0	0,0%	0	0,0%
36 Construction	227	2,5%	61	0,8%	72	1,1%	68	0,9%	82	1,0%	0	0,0%	40	0,6%	0	0,0%	0	0,0%
37 Transport and posts	488	5,5%	434	6,0%	344	5,5%	562	7,5%	543	6,9%	430	5,8%	520	7,2%	35	7,6%	432	8,1%
45 Agriculture and forestry	413	4,6%	359	5,0%	141	2,2%	246	3,3%	354	4,5%	237	3,2%	279	3,9%	20	4,4%	43	0,8%
55 Health care	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
64 Economics, trade, services	1 341	15,1%	1 252	17,3%	1 006	16,0%	1 578	21,2%	2 169	27,8%	2 441	32,9%	1 970	27,3%	58	12,7%	855	16,1%
82 Fine arts, applied arts	104	1,2%	129	1,8%	132	2,1%	108	1,4%	119	1,5%	161	2,2%	199	2,8%	26	5,7%	177	3,3%
<b>Total</b>	<b>8 909</b>	<b>100%</b>	<b>7 249</b>	<b>100%</b>	<b>6 297</b>	<b>100%</b>	<b>7 451</b>	<b>100%</b>	<b>7 816</b>	<b>100%</b>	<b>7 425</b>	<b>100%</b>	<b>7 228</b>	<b>100%</b>	<b>458</b>	<b>100%</b>	<b>5 314</b>	<b>100%</b>

\* Projection states numbers of students in lower classes

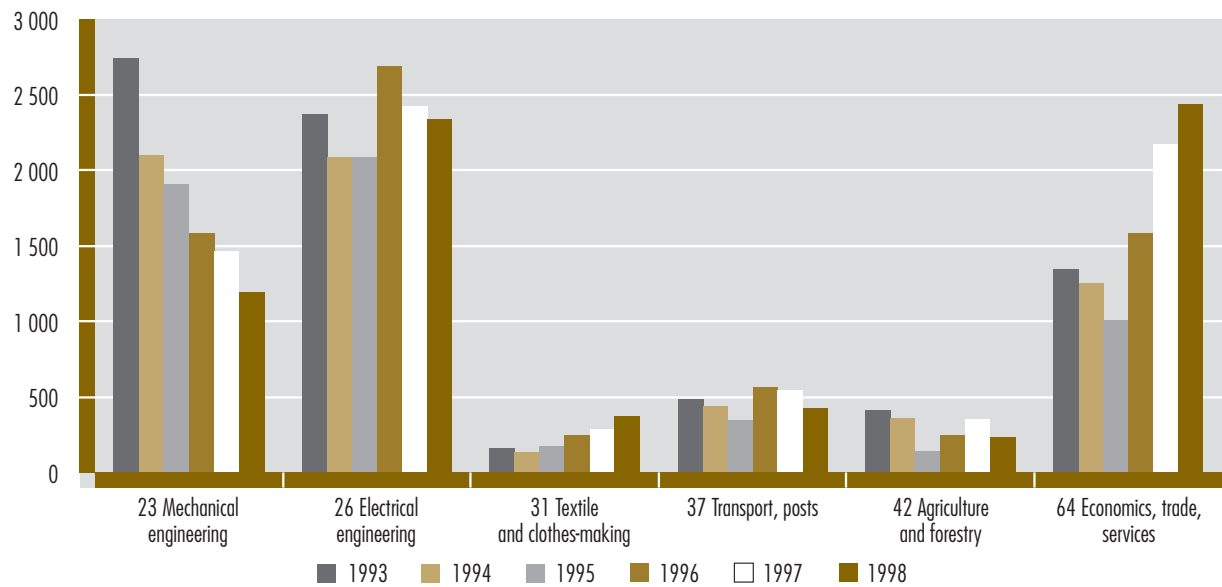
The graph for the table is presented on page 172 below.

Development of Student Numbers in Selected Groups of Courses at SOU – without MZ



Source: Institute for Information on Education.

Development of Student Numbers in Selected Groups of Courses Provided at SOU – with MZ



Source: Institute for Information on Education

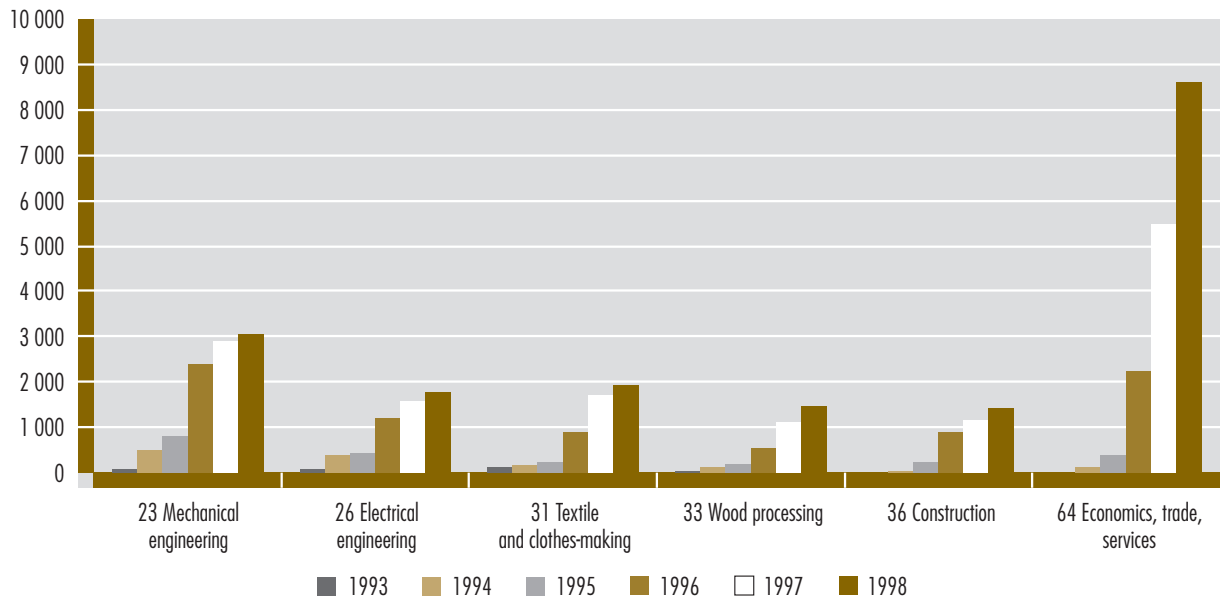
C.8-2 Development of Numbers of Graduates from Follow-Up Courses (1993-2000) – full-time courses

Groups of courses	1993		1994		1995		1996		1997		1998		1999*		2000*	
	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%
16 Environment			17	0,90%	7	0,23%	21	0,21%								
21 Mining									16	0,10%						
22 Metallurgy			521	27,49%	808	27,07%	2 407	24,61%	2 885	17,94%	3 054	14,42%	2 186	13,51%	2 033	13,81%
23 Mechanical engineering	72	9,03%	380	20,05%	412	13,80%	1 181	12,07%	1 569	9,75%	1 767	8,34%	1 167	7,21%	1 240	8,43%
26 Electrical engineering	62	7,78%					21	0,21%	129	0,80%	115	0,54%	125	0,77%	46	0,31%
27 Chemical engineering of silicates			59	3,11%			54	0,55%	60	0,37%	39	0,18%	37	0,23%	15	0,10%
28 Other chemical engineering			29	1,53%	149	4,99%	380	3,89%	690	4,29%	904	4,27%	646	3,99%	438	2,98%
29 Food			166	8,76%	229	7,67%	907	9,27%	1 711	10,64%	1 941	9,17%	1 275	7,88%	827	5,62%
31 Textile and clothes-making							82	0,84%	134	0,83%	105	0,50%	5	0,03%	7	0,05%
32 Leather processing, footwear production	37	4,64%	112	5,91%	189	6,33%	526	5,38%	1 103	6,86%	1 450	6,85%	1 047	6,47%	835	5,67%
33 Wood processing					20	0,67%	15	0,15%			149	0,70%	25	0,15%		
34 Polygraphy			51	2,69%	234	7,84%	882	9,02%	1 151	7,16%	1 420	6,71%	870	5,38%	688	4,68%
36 Construction			7	0,37%	58	1,94%	190	1,94%	150	0,93%	308	1,45%	159	0,98%	267	1,81%
37 Transport, posts	11	1,38%									51	0,24%	39	0,24%	295	2,00%
39 Special courses			397	20,95%	499	16,72%	732	7,48%	918	5,71%	1 071	5,06%	881	5,44%	781	5,31%
42 Agriculture and forestry	404	50,69%					24	0,25%	69	0,43%	38	0,18%				
61 Philology, theology	58	7,28%					2 222	22,72%	5 491	34,14%	8 625	40,73%	7 624	47,11%	7 058	47,96%
64 Economics, trade, services			116	6,12%	375	12,56%	38	0,39%			18	0,09%	37	0,23%	101	0,69%
68 Law			40	2,11%	1	0,03%	59	0,60%	9	0,06%	121	0,57%	61	0,38%	85	0,58%
82 Fine arts, applied arts			1 895	100%	2 985	100%	9 781	100%	16 085	100%	21 176	100%	16 184	100%	14 716	100%
<b>Total</b>	<b>797</b>	<b>100%</b>	<b>1 895</b>	<b>100%</b>	<b>2 985</b>	<b>100%</b>	<b>9 781</b>	<b>100%</b>	<b>16 085</b>	<b>100%</b>	<b>21 176</b>	<b>100%</b>	<b>16 184</b>	<b>100%</b>	<b>14 716</b>	<b>100%</b>

Notes:

Follow-up courses = courses provided by SOŠ and SOU to graduates from three-year courses without "maturita" examination

\* Projection states numbers of students in lower classes



Source: *Institute for Information on Education*

## C.9 Development of Numbers of SOŠ Graduates with MZ (1993–2001) – full-time courses

Groups of courses	1993		1994		1995		1996		1997		1998		1999*		2000*		2001*	
	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%
16 Environment	0	0,0%	0	0,0%	0	0,0%	32	0,1%	132	0,3%	141	0,3%	193	0,4%	35	0,5%	321	0,6%
21 Mining	199	0,5%	86	0,2%	79	0,2%	108	0,3%	70	0,1%	44	0,1%	70	0,1%	6	0,1%	60	0,1%
22 Metallurgy	297	0,8%	230	0,6%	179	0,5%	218	0,5%	171	0,4%	90	0,2%	86	0,2%	0	0,0%	67	0,1%
23 Mechanical engineering	5 090	13,6%	4 675	13,2%	4 104	10,8%	4 637	10,8%	5 270	11,0%	5 852	11,2%	5 510	10,5%	367	5,7%	5 357	10,1%
26 Electrical engineering	3 177	8,5%	3 060	8,6%	2 777	7,3%	3 504	8,2%	3 474	7,2%	4 227	8,1%	4 871	9,3%	355	5,5%	5 642	10,7%
27 Chemical engineering of silicates	148	0,4%	138	0,4%	131	0,3%	112	0,3%	121	0,3%	194	0,4%	194	0,4%	0	0,0%	176	0,3%
27 Other chemical engineering	620	1,7%	656	1,9%	508	1,3%	595	1,4%	520	1,1%	667	1,3%	637	1,2%	19	0,3%	568	1,1%
29 Food	451	1,2%	446	1,3%	430	1,1%	409	1,0%	417	0,9%	432	0,8%	361	0,7%	20	0,3%	395	0,7%
31 Textile and clothes-making	764	2,0%	842	2,4%	821	2,2%	871	2,0%	854	1,8%	1 243	2,4%	1 178	2,2%	225	3,5%	865	1,6%
32 Leather processing, footwear production	157	0,4%	187	0,5%	127	0,3%	115	0,3%	206	0,4%	212	0,4%	81	0,2%	16	0,2%	90	0,2%
33 Wood processing	219	0,6%	231	0,7%	249	0,7%	250	0,6%	251	0,5%	297	0,6%	328	0,6%	18	0,3%	297	0,6%
34 Polygraphy	72	0,2%	88	0,2%	83	0,2%	74	0,2%	82	0,2%	101	0,2%	113	0,2%	44	0,7%	165	0,3%
36 Construction	3 093	8,3%	2 976	8,4%	2 364	6,2%	2 135	5,0%	2 549	5,3%	2 136	4,1%	3 037	5,8%	152	2,4%	3 756	7,1%
37 Transport, posts	1 460	3,9%	1 321	3,7%	1 221	3,2%	1 141	2,7%	1 256	2,6%	1 698	3,3%	1 808	3,5%	258	4,0%	2 126	4,0%
39 Special courses	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	175	0,3%	208	0,4%	0	0,0%	253	0,5%
42 Agriculture and forestry	4 475	12,0%	4 354	12,3%	3 831	10,1%	3 393	7,9%	3 332	6,9%	3 263	6,3%	3 192	6,1%	325	5,1%	3 187	6,0%
43 Veterinary science	181	0,5%	210	0,6%	158	0,4%	177	0,4%	162	0,3%	183	0,4%	186	0,4%	17	0,3%	170	0,3%
53 Health care	5 726	15,3%	6 266	17,7%	5 109	13,5%	4 171	9,7%	3 912	8,1%	4 351	8,3%	4 075	7,8%	775	12,1%	4 127	7,8%
61 Philology, theology	0	0,0%	0	0,0%	0	0,0%	56	0,1%	70	0,1%	66	0,1%	0	0,0%	10	0,2%	0	0,0%
63 Economics, trade	9 123	24,4%	7 366	20,8%	14 175	37,4%	18 909	44,0%	23 089	48,0%	24 365	46,7%	23 613	45,1%	3 024	47,1%	22 112	41,9%
68 Law	0	0,0%	0	0,0%	0	0,0%	111	0,3%	256	0,5%	323	0,6%	347	0,7%	53	0,8%	322	0,6%
72 Librarianship	160	0,4%	179	0,5%	110	0,3%	139	0,3%	112	0,2%	130	0,2%	153	0,3%	22	0,3%	48	0,1%
76 Teacher training	1 544	4,1%	1 536	4,3%	882	2,3%	1 207	2,8%	1 061	2,2%	1 014	1,9%	1 034	2,0%	109	1,7%	1 389	2,6%
82 Fine arts, applied arts	404	1,1%	548	1,5%	589	1,6%	589	1,4%	751	1,6%	981	1,9%	1 130	2,2%	577	9,0%	1 292	2,4%
<b>Total</b>	<b>37 360</b>	<b>100%</b>	<b>35 395</b>	<b>100%</b>	<b>37 927</b>	<b>100%</b>	<b>42 953</b>	<b>100%</b>	<b>48 118</b>	<b>100%</b>	<b>52 185</b>	<b>100%</b>	<b>52 405</b>	<b>100%</b>	<b>6 427</b>	<b>100%</b>	<b>52 785</b>	<b>100%</b>

Notes: including special school graduates

\* Projection states numbers of students in lower classes

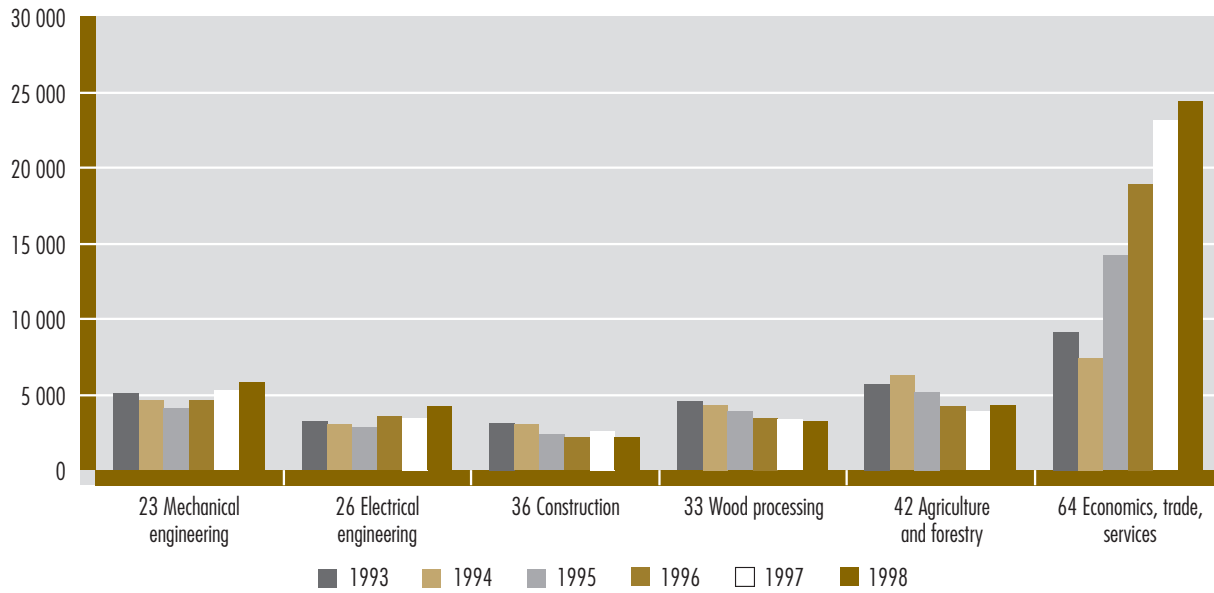
Graph for the table is presented on top of page 177.

C.10 Development of the Numbers of Graduates from Post-Secondary Technical Schools (1993–2001) – full-time courses

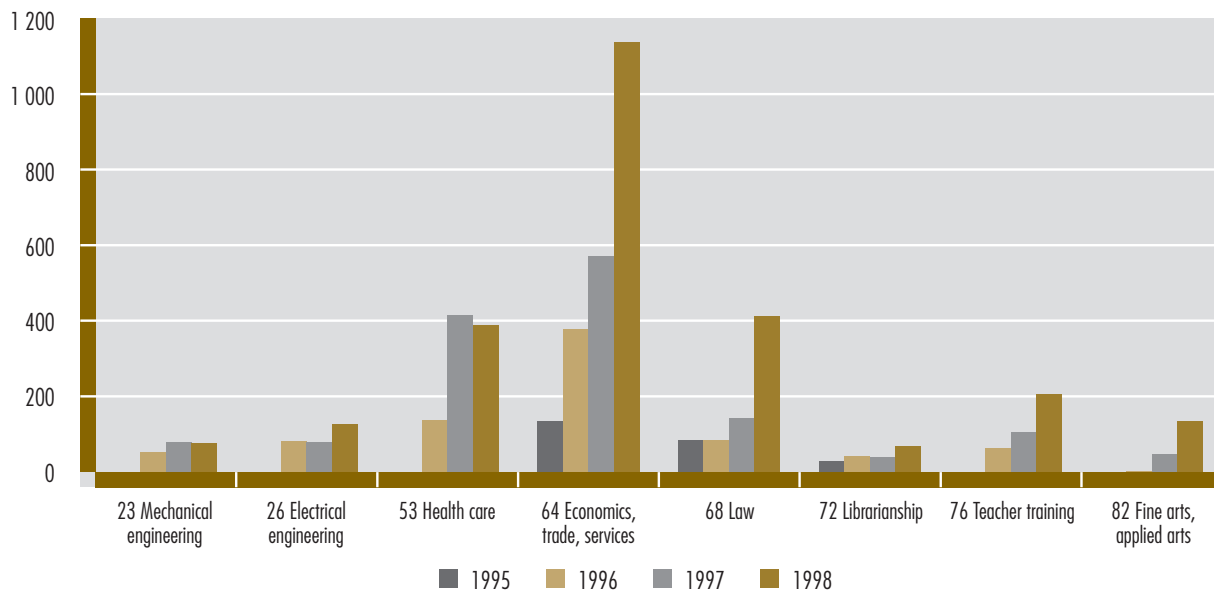
Group of courses	1993		1994		1995		1996		1997		1998		1999*		2000*		2001*		
	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%	
16 Environment																			
23 Mechanical engineering							51	5,1%	78	4,7%	50	1,7%	77	1,1%	104	1,2%	65	0,7%	
26 Electrical engineering							81	8,1%	77	4,7%	75	2,5%	114	1,7%	129	1,5%	265	2,7%	
27 Chemical engineering of silicates											125	4,2%	353	5,2%	536	6,2%	662	6,7%	
28 Other chemical engineering																	17	0,2%	
29 Food																			
31 Textile and clothes-making																			
32 Leather processing, footwear production																			
33 Wood processing																			
36 Construction							42	4,2%	53	3,2%	37	1,2%	72	1,1%	100	1,1%	187	1,9%	
37 Transport, posts							26	2,6%	29	1,8%	48	1,6%	94	1,4%	121	1,4%	207	2,1%	
39 Special courses																			
42 Agriculture, forestry							25	2,5%	21	1,3%	40	1,3%	115	1,7%	147	1,7%	170	1,7%	
53 Heath care							136	13,5%	415	25,2%	388	13,0%	1 345	19,9%	1 991	22,9%	2 269	23,0%	
61 Philology, theology									19	1,2%	38	1,3%	33	0,5%	40	0,5%	43	0,4%	
62 Business					94	28,0%					60	2,0%	118	1,7%	96	1,1%	213	2,2%	
63 Economics, trade					133	39,6%					1 136	37,9%	2 642	39,1%	3 119	35,8%	3 594	36,4%	
67 Political science							79	7,9%	571	34,6%			363	5,4%	463	5,3%	566	5,7%	
68 Law					82	24,4%			140	8,5%	411	13,7%	521	7,7%	724	8,3%	340	3,4%	
72 Librarianship					27	8,0%			39	2,4%	67	2,2%	104	1,5%	174	2,0%	310	3,1%	
75 Pedagogical science							41	4,1%	37	2,2%	41	1,4%	37	0,5%	50	0,6%	55	0,6%	
76 Teacher training							62	6,2%	105	6,4%	204	6,8%	269	4,0%	255	2,9%	214	2,2%	
82 Fine arts, applied arts	15	100%	17	100%	336	100%	1	0,1%	47	2,9%	133	4,4%	235	3,5%	257	3,0%	164	1,7%	
<b>Total</b>	<b>15</b>	<b>100%</b>	<b>17</b>	<b>100%</b>	<b>336</b>	<b>100%</b>	<b>1 004</b>	<b>100%</b>	<b>1 648</b>	<b>100%</b>	<b>2 994</b>	<b>100%</b>	<b>6 753</b>	<b>100%</b>	<b>8 711</b>	<b>100%</b>	<b>9 881</b>	<b>100%</b>	

\*Projection states the numbers of students in lower classes

Graph for the table is presented at the bottom of page 177.



Source: Institute for Information on Education



Source: Institute for Information on Education



*C.11 Development of Numbers of Graduates from Courses within Higher Education  
– full-time and part-time courses*

Group of courses	1989		1990		1991		1992		1993		1994		1995	
	number	%	number	%	number	%	number	%	number	%	number	%	number	%
11 Physics and mathematics	266	1,4%	182	1,2%	290	1,6%	263	1,4%	312	1,7%	519	2,8%	483	2,5%
12 Geology	73	0,4%	67	0,4%	61	0,3%	76	0,4%	55	0,3%	49	0,3%	37	0,2%
13 Geography	18	0,1%	8	0,1%	21	0,1%	20	0,1%	28	0,2%	27	0,1%	56	0,3%
14 Chemistry	90	0,5%	95	0,6%	88	0,5%	116	0,6%	147	0,8%	116	0,6%	158	0,8%
15 Biology	85	0,4%	108	0,7%	96	0,5%	122	0,7%	121	0,7%	179	1,0%	193	1,0%
16 Environment	15	0,1%	10	0,1%	11	0,1%	35	0,2%	44	0,2%	79	0,4%	175	0,9%
17 Natural science	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
21 Mining	339	1,8%	255	1,6%	192	1,0%	238	1,3%	220	1,2%	192	1,0%	101	0,5%
22 Metallurgy	205	1,1%	117	0,7%	208	1,1%	171	0,9%	174	1,0%	85	0,5%	111	0,6%
23 Mechanical engineering	2 688	14,1%	2 043	13,0%	2 269	12,4%	1 832	10,1%	1 944	10,7%	1 522	8,2%	1 091	5,7%
26 Electrical engineering	1 381	7,3%	1 413	9,0%	1 667	9,1%	1 473	8,1%	1 448	8,0%	1 450	7,8%	831	4,3%
27 Chemical engineering	434	2,3%	363	2,3%	421	2,3%	298	1,6%	413	2,3%	302	1,6%	344	1,8%
29 Food	167	0,9%	116	0,7%	118	0,6%	113	0,6%	149	0,8%	121	0,6%	95	0,5%
31 Textile and cloth-making	282	1,5%	140	0,9%	274	1,5%	309	1,7%	290	1,6%	217	1,2%	317	1,6%
32 Leather processing, footwear production	83	0,4%	99	0,6%	18	0,1%	80	0,4%	58	0,3%	61	0,3%	60	0,3%
33 Wood processing	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	32	0,2%
34 Polygraphy	0	0,0%	0	0,0%	0	0,0%	11	0,1%	0	0,0%	9	0,0%	6	0,0%
35 Architecture	80	0,4%	50	0,3%	88	0,5%	82	0,5%	117	0,6%	149	0,8%	124	0,6%
36 Construction	1 539	8,1%	1 113	7,1%	1 127	6,1%	1 184	6,5%	1 249	6,9%	1 346	7,2%	761	4,0%
37 Transport, posts	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	28	0,2%	103	0,5%
39 Special courses	111	0,6%	140	0,9%	108	0,6%	206	1,1%	217	1,2%	227	1,2%	293	1,5%
42 Agriculture and forestry	1862	9,8%	1316	8,4%	1 981	10,8%	1 620	8,9%	1 630	9,0%	1 279	6,9%	1 271	6,6%
43 Veterinary science	142	0,7%	136	0,9%	20	0,1%	154	0,8%	194	1,1%	168	0,9%	159	0,8%
51 Medicine	1 198	6,3%	1 114	7,1%	1 285	7,0%	1 316	7,2%	1 494	8,2%	1 587	8,5%	1 680	8,7%
52 Pharmacy	202	1,1%	202	1,3%	133	0,7%	124	0,7%	149	0,8%	182	1,0%	184	1,0%
53 Health care	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
60 Social sciences	0	0,0%	0	0,0%	0	0,0%	11	0,1%	0	0,0%	152	0,8%	95	0,5%
61 Philosophy, theology	47	0,2%	101	0,6%	133	0,7%	188	1,0%	159	0,9%	317	1,7%	392	2,0%
62 Economics	2 580	13,6%	1 673	10,7%	2 275	12,4%	2 770	15,3%	2 604	14,3%	2 536	13,6%	3 655	19,0%
67 Political science	9	0,0%	13	0,1%	0	0,0%	0	0,0%	0	0,0%	22	0,1%	48	0,2%
68 Law	623	3,3%	442	2,8%	633	3,4%	582	3,2%	773	4,2%	698	3,7%	879	4,6%
71 History	45	0,2%	6	0,0%	34	0,2%	50	0,3%	54	0,3%	81	0,4%	121	0,6%
72 Librarianship	146	0,8%	137	0,9%	156	0,8%	164	0,9%	94	0,5%	196	1,1%	162	0,8%
73 Philology	48	0,3%	45	0,3%	55	0,3%	125	0,7%	92	0,5%	108	0,6%	235	1,2%
74 Physical culture science	112	0,6%	50	0,3%	110	0,6%	105	0,6%	121	0,7%	135	0,7%	182	0,9%
76 Teacher training, pedagogical science	3 817	20,0%	3 780	24,1%	4 066	22,1%	3 860	21,3%	3 432	18,9%	4 001	21,4%	4 214	21,9%
77 Psychology	34	0,2%	41	0,3%	44	0,2%	98	0,5%	71	0,4%	74	0,4%	162	0,8%
81 Arts science	63	0,3%	62	0,4%	94	0,5%	50	0,3%	48	0,3%	54	0,3%	95	0,5%
82 Fine arts, applied arts	254	1,3%	256	1,6%	284	1,5%	314	1,7%	292	1,6%	393	2,1%	347	1,8%
<b>Total</b>	<b>19 038</b>	<b>100%</b>	<b>15 693</b>	<b>100%</b>	<b>18 360</b>	<b>100%</b>	<b>18 160</b>	<b>100%</b>	<b>18 193</b>	<b>100%</b>	<b>18 661</b>	<b>100%</b>	<b>19 252</b>	<b>100%</b>

Notes: only students with Czech citizenship

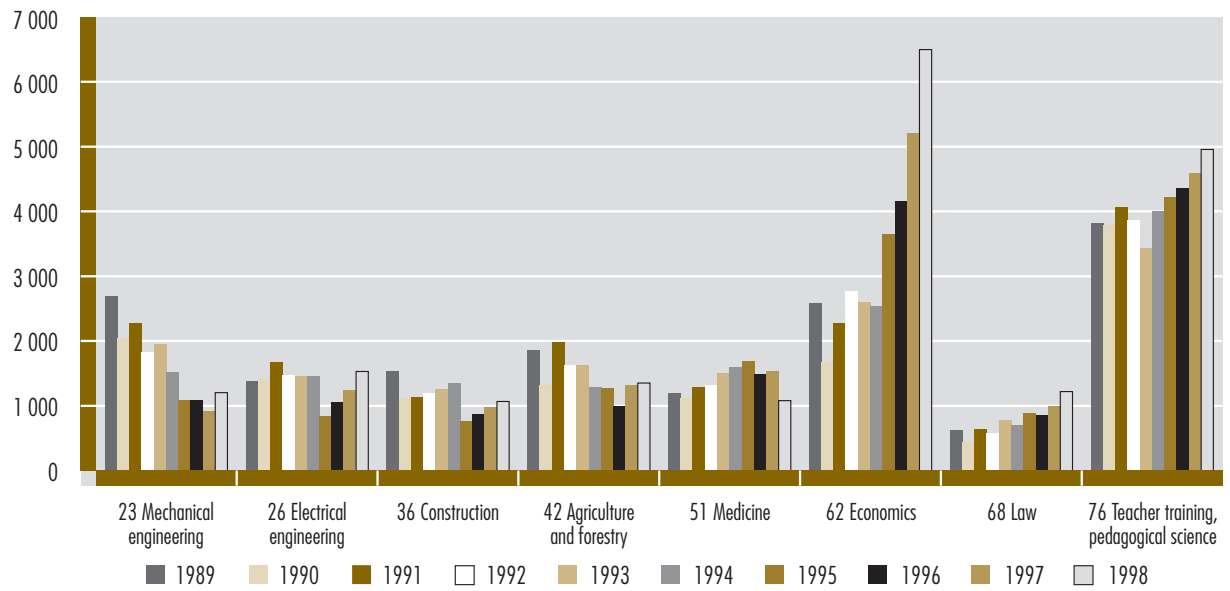
Continuation on the next page.

*C.11 Development of Numbers of Graduates from Courses within Higher Education  
– full-time and part-time courses*

Group of courses	1996		1997		1998		1999*		2000*		2001*	
	počet	%	počet	%	počet	%	počet	%	počet	%	počet	%
11 Physics and mathematics	405	2,0%	655	2,9%	626	2,4%	712	2,5%	823	2,6%	851	2,5%
12 Geology	46	0,2%	50	0,2%	47	0,2%	54	0,2%	54	0,2%	56	0,2%
13 Geography	101	0,5%	89	0,4%	114	0,4%	131	0,5%	137	0,4%	158	0,5%
14 Chemistry	105	0,5%	119	0,5%	174	0,7%	155	0,5%	189	0,6%	207	0,6%
15 Biology	192	1,0%	228	1,0%	308	1,2%	326	1,1%	384	1,2%	432	1,3%
16 Environment	188	0,9%	200	0,9%	316	1,2%	329	1,2%	393	1,2%	457	1,3%
17 Natural science	0	0,0%	0	0,0%	103	0,4%	103	0,4%	155	0,5%	206	0,6%
21 Mining	117	0,6%	85	0,4%	102	0,4%	94	0,3%	87	0,3%	91	0,3%
22 Metallurgy	112	0,6%	132	0,6%	102	0,4%	113	0,4%	108	0,3%	98	0,3%
23 Mechanical engineering	1 087	5,4%	914	4,0%	1 200	4,5%	1 112	3,9%	1 168	3,7%	1 267	3,7%
26 Electrical engineering	1 048	5,2%	1 233	5,4%	1 531	5,7%	1 732	6,1%	1 974	6,2%	2 223	6,4%
27 Chemical engineering	286	1,4%	296	1,3%	348	1,3%	324	1,1%	355	1,1%	369	1,1%
29 Food	91	0,5%	138	0,6%	136	0,5%	158	0,6%	180	0,6%	190	0,6%
31 Textile and cloth-making	273	1,4%	191	0,8%	210	0,8%	147	0,5%	116	0,4%	94	0,3%
32 Leather processing, footwear production	40	0,2%	52	0,2%	75	0,3%	71	0,2%	89	0,3%	98	0,3%
33 Wood processing	21	0,1%	40	0,2%	34	0,1%	38	0,1%	45	0,1%	44	0,1%
34 Polygraphy	13	0,1%	19	0,1%	26	0,1%	33	0,1%	39	0,1%	46	0,1%
35 Architecture	223	1,1%	336	1,5%	308	1,2%	414	1,5%	457	1,4%	496	1,4%
36 Construction	877	4,3%	967	4,2%	1 067	4,0%	1 170	4,1%	1 265	4,0%	1 367	4,0%
37 Transport, posts	101	0,5%	93	0,4%	263	1,0%	258	0,9%	339	1,1%	422	1,2%
39 Special courses	327	1,6%	351	1,5%	503	1,9%	532	1,9%	620	2,0%	711	2,1%
42 Agriculture and forestry	985	4,9%	1 315	5,7%	1 351	5,1%	1 373	4,8%	1 556	4,9%	1 585	4,6%
43 Veterinary science	90	0,4%	114	0,5%	133	0,5%	111	0,4%	132	0,4%	130	0,4%
51 Medicine	1 480	7,3%	1 536	6,7%	1 081	4,1%	1 009	3,5%	810	2,6%	546	1,6%
52 Pharmacy	201	1,0%	199	0,9%	220	0,8%	228	0,8%	237	0,7%	251	0,7%
53 Health care	85	0,4%	97	0,4%	366	1,4%	415	1,5%	555	1,8%	714	2,1%
60 Social sciences	128	0,6%	133	0,6%	230	0,9%	249	0,9%	300	0,9%	358	1,0%
61 Philosophy, theology	464	2,3%	467	2,0%	569	2,1%	607	2,1%	659	2,1%	729	2,1%
62 Economics	4 151	20,6%	5 203	22,7%	6 497	24,4%	7 271	25,5%	8 444	26,6%	9 478	27,5%
67 Political science	95	0,5%	198	0,9%	245	0,9%	320	1,1%	395	1,2%	456	1,3%
68 Law	851	4,2%	1 000	4,4%	1 221	4,6%	1 282	4,5%	1 467	4,6%	1 607	4,7%
71 History	181	0,9%	176	0,8%	205	0,8%	233	0,8%	245	0,8%	273	0,8%
72 Librarianship	158	0,8%	199	0,9%	237	0,9%	256	0,9%	295	0,9%	323	0,9%
73 Philology	322	1,6%	381	1,7%	536	2,0%	609	2,1%	716	2,3%	830	2,4%
74 Physical culture science	255	1,3%	376	1,6%	331	1,2%	428	1,5%	466	1,5%	492	1,4%
76 Teacher training, pedagogical science	4 362	21,6%	4 586	20,0%	4 955	18,6%	5 141	18,1%	5 438	17,2%	5 715	16,6%
77 Psychology	194	1,0%	151	0,7%	192	0,7%	187	0,7%	186	0,6%	203	0,6%
81 Arts science	93	0,5%	120	0,5%	146	0,5%	159	0,6%	185	0,6%	204	0,6%
82 Fine arts, applied arts	431	2,1%	495	2,2%	525	2,0%	599	2,1%	646	2,0%	698	2,0%
<b>Total</b>	<b>20 179</b>	<b>100%</b>	<b>22 934</b>	<b>100%</b>	<b>26 633</b>	<b>100%</b>	<b>28 474</b>	<b>100%</b>	<b>31 701</b>	<b>100%</b>	<b>34 471</b>	<b>100%</b>

Notes: only students with Czech citizenship

\*Projection



Source: Institute for Information on Education

C.12 Participation (in %) in continuing education (25–54 years), the length and duration of courses (in hours or days per employee) in the last year (in the mid-1990s)

	Average (from several surveys)			Average cost of labour
	Participation	Length (no. of hours)	Duration (no. of days)	Expenditure on continuing education in companies
<b>Czech Republic</b>	<b>22%</b>	<b>76</b>	<b>16</b>	<b>0,9%</b>
Hungary	13%	146	19	1,3%
Poland	16%	96	15	1,4%
Austria	30%	81	24	–
Denmark	41%	74	30	1,5%
France	39%	80	31	2,7%
Germany	25%	119	30	1,5%
Ireland	33%	83	27	1,8%
Netherlands	36%	101	36	1,9%
Spain	25%	105	27	1,1%
United Kingdom	43%	66	28	2,3%
<b>Total OECD</b>	<b>31%</b>	<b>89</b>	<b>26</b>	<b>1,6%</b>
<b>Total EU (EU 15)</b>	<b>31%</b>	<b>90</b>	<b>26</b>	<b>1,6%</b>

Zdroj: *Employer Provision of Continuing Training in OECD Countries, 1999.*

C.13 Participation in continuing education by age groups

Education of staff related to jobs they perform					
	25–34	35–44	45–54	55–64	25–64
<b>Czech Republic</b>	<b>24</b>	<b>22</b>	<b>24</b>	<b>9</b>	<b>21</b>
Poland	13	14	11	2	11
Germany	19	19	12	8	15
Ireland	22	18	13	5	16
Netherlands	32	29	21	6	24
United Kingdom	49	49	37	16	40
<b>OECD</b>	<b>33</b>	<b>31</b>	<b>26</b>	<b>13</b>	<b>27</b>
<b>EU</b>	<b>28</b>	<b>26</b>	<b>20</b>	<b>8</b>	<b>22</b>

Education as "interest" which is not directly linked to the existing or future job					
	25–34	35–44	45–54	55–64	25–64
<b>Czech Republic</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>2</b>	<b>6</b>
Poland	5	3	3	1	3
Germany	2	3	5	2	3
Ireland	6	7	7	4	6
Netherlands	14	12	11	10	12
United Kingdom	5	5	5	7	5
<b>OECD</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>8</b>
<b>EU</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>7</b>

Source: *IALS, 1994-95, SIALS, 1998.*

## C.14 Participation in Continuing Education by ISCED Levels of Education

Education of staff related to jobs they perform						
Level of education:	1	2	3	4	5/6	all
<b>Czech Republic</b>	<b>9</b>	<b>16</b>	<b>28</b>	<b>34</b>	<b>37</b>	<b>21</b>
Poland	2	7	17	20	27	11
Germany		11	17	23	28	15
Ireland	5	12	19	28	40	16
Netherlands	8	16	27		40	24
United Kingdom	8	30	48	60	70	40
<b>OECD</b>	<b>5</b>	<b>13</b>	<b>21</b>	<b>26</b>	<b>33</b>	<b>18</b>
<b>EU</b>	<b>6</b>	<b>15</b>	<b>24</b>	<b>29</b>	<b>38</b>	<b>20</b>

Education as "interest" which is not directly linked to existing or future job						
Level of education:	1	2	3	4	5/6	all
<b>Czech Republic</b>	<b>3</b>	<b>5</b>	<b>8</b>	<b>5</b>	<b>11</b>	<b>6</b>
Poland	1	2	4	13	10	3
Germany		2	2	5	10	3
Ireland	3	5	7	14	10	6
Netherlands	9	12	15		12	12
United Kingdom	4	5	6	6	5	5
<b>OECD</b>	<b>4</b>	<b>7</b>	<b>8</b>	<b>10</b>	<b>9</b>	<b>8</b>
<b>EU</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>10</b>	<b>7</b>

Source: IALS, 1994-95, SIALS, 1998.

## D.1 Work Status of Young People (1996)

	Age	Participation in %									
		Educational programmes	Employed	In education Unemploy- ed	Economically inactive	Partial sum	Employed	Outside education Unemploy- ed	Economically inactive	Partial sum	Total
Czech Republic	15-19	m	2,3	0,1	67,9	70,3	17,2	3,1	9,3	29,6	100,0
	20-24	m	0,8	0,1	13,7	14,6	72,4	3,0	10,0	85,4	100,0
	25-29	m	0,3	n	1,0	1,3	84,2	3,5	11,0	98,7	100,0
Austria	15-19	25,3	1,0	0,5	53,1	79,9	13,7	1,9	4,5	20,1	100,0
	20-24	3,3	5,9	0,7	20,6	30,5	58,9	3,7	6,9	69,5	100,0
	25-29	1,1	6,7	0,4	7,1	15,3	72,1	4,0	8,5	84,6	100,0
France	15-19	5,3	0,4	0,1	90,2	96,0	1,1	1,6	1,3	4,0	100,0
	20-24	4,8	3,1	0,7	42,4	51,0	31,5	12,6	4,9	49,0	100,0
	25-29	1,6	3,9	0,5	5,0	11,0	66,7	13,2	9,1	89,0	100,0
Germany	15-19	20,8	1,8	0,7	67,2	90,5	5,8	1,6	2,0	9,4	99,9
	20-24	8,9	3,6	0,2	19,4	32,1	52,9	6,8	8,2	67,9	100,0
	25-29	1,1	3,9	0,2	8,5	13,7	68,7	6,6	11,0	86,3	100,0
Spain	15-19	0,2	1,6	2,7	69,0	73,5	13,0	9,1	4,4	26,5	100,0
	20-24	0,1	4,3	5,5	34,0	43,9	33,4	17,6	5,0	56,0	100,0
	25-29	n	4,9	4,4	6,9	16,2	53,0	19,3	11,5	83,8	100,0
United Kingdom	15-19	8,1	25,3	3,9	32,6	69,9	17,9	7,2	5,0	30,1	100,0
	20-24	2,7	11,4	1,2	12,3	27,6	53,8	8,5	10,1	72,4	100,0
	25-29	1,1	8,7	0,8	3,0	13,6	65,6	6,9	13,9	86,4	100,0
Average of selected countries*	15-19	10,4	10,0	2,9	62,4	81,5	9,9	35,8	4,8	18,5	100,0
	20-24	3,3	8,7	2,2	22,9	35,8	46,1	9,4	8,6	64,1	100,0
	25-29	0,7	6,7	1,1	5,3	13,5	66,4	8,5	11,6	86,5	100,0

\* Countries in the table plus Australia, Belgium, Canada, Finland, Greece, Italy, Sweden, Switzerland, the US.

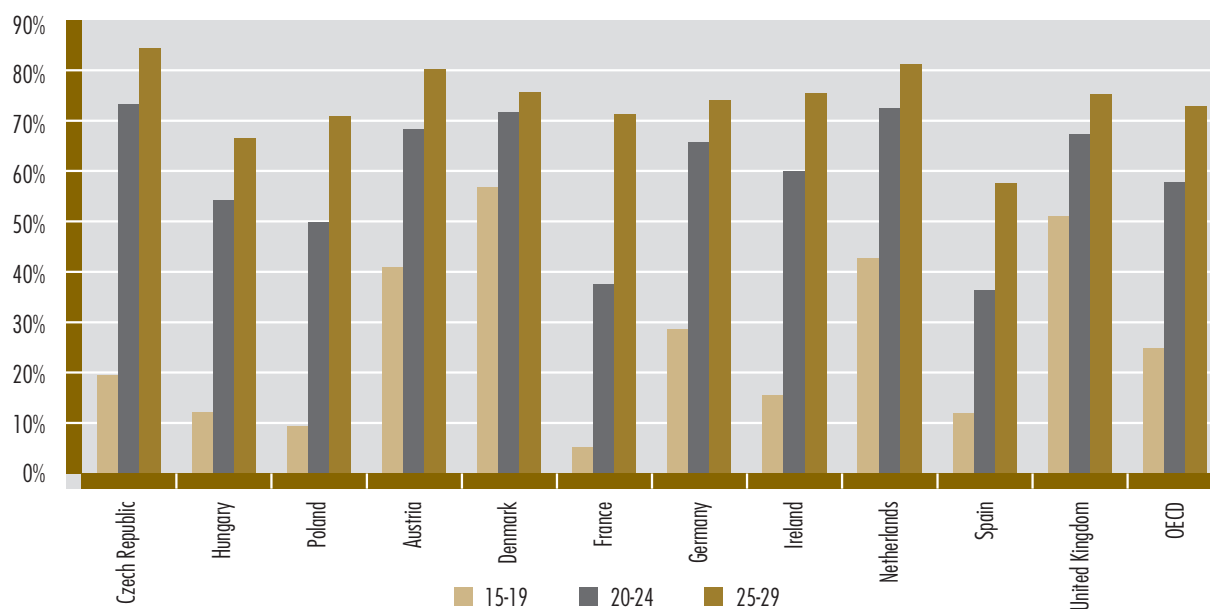
Source: *Education at a Glance*, 1998.

D.2 Employed Young People in Terms of Education and Age (1996)

Proportion of the employed in the population in the relevant age group – %

Level of education Age	Lower than secondary			Secondary			Non-university – tertiary		University		Total		
	15–19	20–24	25–29	15–19	20–24	25–29	20–24	25–29	20–24	25–29	15–19	20–24	25–29
Czech Republic	6,0	52,4	56,2	49,8	74,8	85,9	x	x	77,5	91,9	19,5	73,2	84,4
Hungary	3,7	43,1	48,6	35,4	55,8	69,5	x	x	79,1	78,3	12,2	54,2	66,6
Poland	4,6	43,5	53,4	30,5	49,9	71,0	62,0	78,8	72,7	86,6	9,4	49,8	70,9
Austria	34,8	60,5	69,8	65,4	70,1	82,3	75,2	88,8	52,8	80,1	41,0	68,3	80,2
Denmark	57,5	65,9	63,2	70,9	78,1	83,0	82,4	87,8	69,2	84,6	56,8	71,7	75,7
France	5,1	41,4	59,1	6,4	36,8	74,7	39,5	81,7	26,6	67,7	5,3	37,5	71,2
Germany	26,1	54,2	55,3	64,5	68,9	75,4	79,3	88,5	52,2	52,1	28,7	65,7	74,0
Ireland	9,4	56,2	57,8	31,0	54,4	80,1	77,6	88,6	67,1	85,7	15,6	59,9	75,4
Netherlands	40,0	68,4	68,7	56,8	76,5	85,6	x	x	65,6	86,0	42,7	72,4	81,2
Spain	15,8	52,5	54,7	5,6	22,6	61,3	48,6	68,4	20,5	54,3	12,0	36,4	57,5
United Kingdom	33,5	47,6	49,7	56,2	68,3	75,5	77,4	89,5	74,1	88,1	51,0	67,3	75,3
OECD	21,2	53,6	60,6	37,6	55,3	74,4	67,5	81,6	61,6	80,3	24,9	57,8	72,9

Proportion of the employed young people in the population of the relevant age (1996)



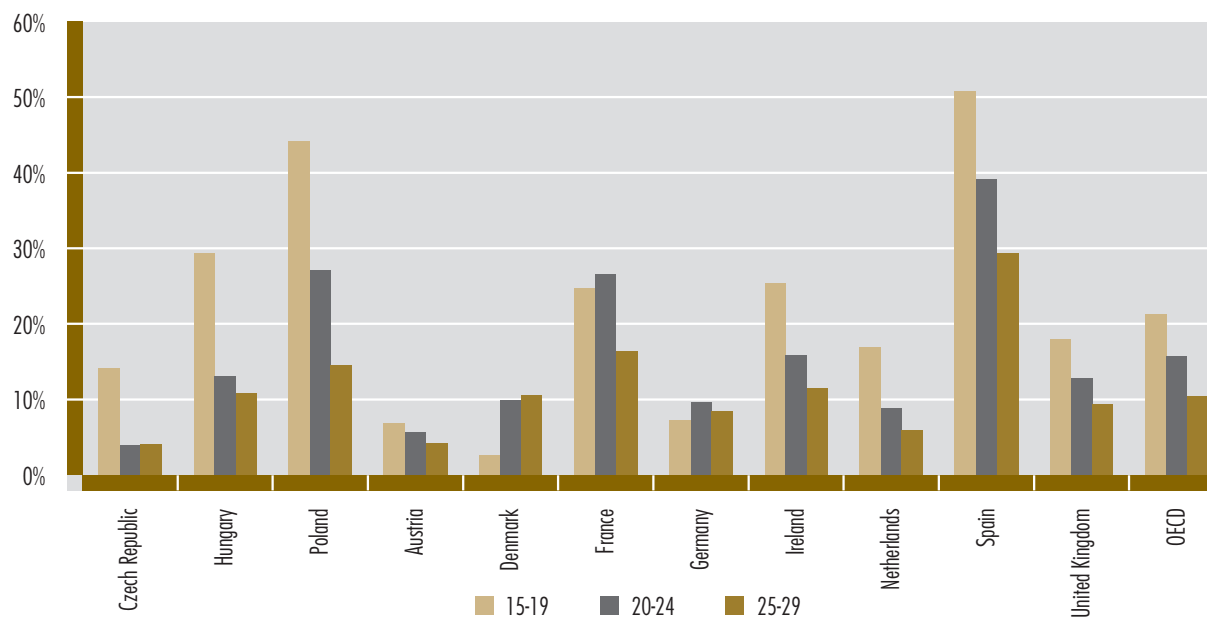
Source: *Education at a Glance*, 1998.

## D.3 Unemployed Young People by Education and Age (1996)

Level of education Age	Lower than secondary			Secondary			Non-university – tertiary		University		Total		
	15–19	20–24	25–29	15–19	20–24	25–29	20–24	25–29	20–24	25–29	15–19	20–24	25–29
Czech Republic	22,3	12,6	17,9	11,6	3,4	3,6	x	x	7,1	1,1	14,1	4,0	4,1
Hungary	42,3	22,3	20,8	24,6	11,7	10,0	x	x	3,4	4,1	29,4	13,1	10,9
Poland	30,6	32,0	26,1	50,8	26,7	14,4	26,0	8,8	17,2	7,4	44,2	27,1	14,5
Austria	7,4	10,4	8,6	5,7	4,6	3,2	14,2	4,4	3,9	6,5	6,8	5,7	4,2
Denmark	2,4	14,7	18,9	5,2	7,0	7,4	11,1	6,0	6,8	6,3	2,6	9,9	10,5
France	24,3	37,0	25,5	26,5	23,5	15,0	19,0	10,1	18,2	14,4	24,7	26,6	16,4
Germany	6,8	15,4	17,4	8,4	8,4	7,5	7,2	4,9	**	6,5	7,3	9,6	8,4
Ireland	32,3	30,6	24,7	19,4	13,1	7,9	8,4	5,2	6,5	4,9	25,4	15,9	11,5
Netherlands	18,9	11,8	8,6	8,8	6,6	4,5	x	x	11,6	6,6	16,9	8,8	6,0
Spain	50,3	37,0	31,7	51,7	40,7	24,8	36,8	24,9	52,1	31,2	50,8	39,2	29,3
United Kingdom	31,4	28,0	21,7	14,9	11,6	9,5	8,0	2,9	11,3	4,9	17,9	12,8	9,3
OECD	22,0	21,5	16,7	23,3	15,4	9,6	14,6	7,9	15,6	8,8	21,3	15,8	10,4

\*\* data not available

## Proportion of unemployed young people in the population in the relevant age group (1996)

Source: *Education at a Glance*, 1998.



D.4 Development of Employment and Unemployment of Graduates in the CR  
by Level of Education (1994, 1998)

In thousand, %

Education	1994		1998		1994		1998	
	EAP	Rate of unemployment	Grad.	Rate of unemployment	EAP	Rate of unemployment	Grad.	Rate of unemployment
Basic	689,7	9,1%	75,3	21,4%	531,6	15,2%	36,2	29,0%
SOU without MZ	2 009,2	4,1%	363,7	7,4%	2 087,2	5,7%	312,1	9,9%
SOŠ without MZ	316,2	3,9%	48,9	7,4%	284,1	5,8%	43,4	11,8%
SOU with MZ	74,3	5,4%	29,7	10,1%	92,1	5,2%	30,7	8,8%
SOŠ with MZ	1 314,5	3,0%	192,3	6,6%	1 427,5	4,4%	232,8	9,3%
ÚSV (G)	201,0	5,1%	47,1	10,8%	208,4	6,5%	43,2	12,5%
VŠ	509,6	1,7%	65,0	2,3%	545,1	2,1%	57,2	2,8%
No education	3,4	8,8%	0,5	20,0%	19,0	18,4%	0,8	12,5%
<b>Total</b>	<b>5 117,9</b>	<b>4,3%</b>	<b>822,4</b>	<b>8,4%</b>	<b>5 195,1</b>	<b>6,0%</b>	<b>756,4</b>	<b>10,3%</b>

EAP economically active population

Grad. graduates who were already employed within 6-7 years of graduation

Source: Labour force surveys, Czech Statistical Office, OKEČ and KZAM tables for 1997 and 1998, average for 4Q 97 and 1-3Q 98.

## D.5 Development of Employment and Rates of Unemployment in the CR in Terms of Major Occupational Categories

Education	In thousands										%							
	Graduates – number of economically active graduates										Graduates – rate of unemployment							
	Total	Basic	SOU without MZ	SOU without MZ	SOU with MZ	SOU with MZ	USV (G)	USV	No education	Total	Basic	SOU without MZ	SOU without MZ	SOU with MZ	SOU with MZ	USV (G)	USV	No education
<b>Total</b>	<b>822,4</b>	<b>75,3</b>	<b>363,7</b>	<b>48,9</b>	<b>29,7</b>	<b>192,3</b>	<b>47,1</b>	<b>65,0</b>	<b>0,5</b>	<b>8,4%</b>	<b>21,4%</b>	<b>7,4%</b>	<b>7,4%</b>	<b>10,1%</b>	<b>6,6%</b>	<b>10,8%</b>	<b>2,3%</b>	<b>20,0%</b>
Legislators, senior officials and managers	16,1	0,0	1,5	0,4	0,5	3,1	1,2	9,4	–	0,6%	–	–	20,0%	0,0%	0,0%	–	–	–
Scientists and professionals (including teachers)	49,8	0,2	0,9	0,1	0,4	11,9	4,0	32,4	–	3,2%	–	–	25,0%	4,2%	2,5%	2,8%	–	–
Technicians, health care personnel and teachers (including economists)	128,2	1,6	9,8	4,2	4,5	74,6	15,6	17,9	0,1	2,7%	0,0%	1,0%	9,5%	2,2%	2,8%	3,8%	1,1%	–
Lower administrative staff (clerks)	60,7	2,3	9,3	2,8	2,4	32,2	10,3	1,4	–	4,9%	8,7%	5,4%	7,1%	8,3%	5,0%	2,9%	–	–
Service workers and shop and market sales workers	140,9	13,2	83,3	10,4	4,9	21,2	6,0	1,9	–	6,4%	4,5%	6,2%	10,6%	6,1%	6,1%	8,3%	–	–
Skilled agricultural and forestry workers	14,6	2,3	7,0	2,0	0,3	2,1	0,5	0,1	0,1	5,5%	4,3%	7,1%	0,0%	–	4,8%	20,0%	–	–
Craft and related trades workers	241,8	27,1	163,4	16,2	8,4	23,5	2,0	0,9	0,2	4,0%	3,3%	4,0%	3,7%	8,3%	3,4%	10,0%	–	–
Plant and machine operators	86,7	4,6	52,9	8,5	5,8	13,0	1,9	0,1	–	4,8%	15,2%	5,1%	2,4%	1,7%	3,1%	10,5%	–	–
Semi- and unskilled workers	51,0	12,9	26,2	3,3	1,0	5,4	2,1	0,2	0,0	12,9%	22,5%	9,2%	6,1%	10,0%	14,8%	9,5%	–	–

Education	In thousands										%							
	Graduates – number of economically active graduates										Graduates – rate of unemployment							
	Total	Basic	SOU without MZ	SOU without MZ	SOU with MZ	SOU with MZ	USV (G)	USV	No education	Total	Basic	SOU without MZ	SOU without MZ	SOU with MZ	SOU with MZ	USV (G)	USV	No education
<b>Total</b>	<b>756,4</b>	<b>36,2</b>	<b>312,1</b>	<b>43,4</b>	<b>30,7</b>	<b>232,8</b>	<b>43,2</b>	<b>57,2</b>	<b>0,8</b>	<b>10,3%</b>	<b>29,0%</b>	<b>9,9%</b>	<b>11,8%</b>	<b>8,8%</b>	<b>9,3%</b>	<b>12,5%</b>	<b>2,8%</b>	<b>12,5%</b>
Legislators, senior officials and managers	15,4	–	2,1	0,4	0,4	5,6	1,1	5,7	–	0,6%	–	0,0%	25,0%	0,0%	0,0%	0,0%	–	–
Scientists and professionals (including teachers)	57,3	0,2	1,4	0,9	0,9	16,0	4,3	33,6	0,0	1,4%	0,0%	7,1%	0,0%	0,0%	1,3%	2,3%	1,2%	–
Technicians, health care personnel and teachers (including economists)	126,4	1,0	8,3	3,2	5,1	81,3	14,2	13,3	–	3,6%	0,0%	2,4%	6,3%	3,9%	3,9%	2,1%	1,5%	–
Lower administrative staff (clerks)	67,6	0,4	8,3	3,2	3,5	41,2	9,6	1,4	–	5,3%	0,0%	2,4%	12,5%	5,7%	5,8%	4,2%	7,1%	–
Service workers and shop and market sales workers	124,2	8,3	67,2	9,7	4,8	28,2	5,3	0,5	0,2	9,0%	12,0%	7,7%	12,4%	4,2%	10,6%	9,4%	20,0%	0,0%
Skilled agricultural and forestry workers	9,7	1,0	4,9	0,8	0,1	2,4	–	0,4	0,1	3,1%	10,0%	4,1%	12,5%	0,0%	0,0%	–	0,0%	0,0%
Craft and related trades workers	172,9	7,5	119,8	12,9	8,3	22,4	1,4	0,3	0,3	5,6%	5,3%	6,0%	7,0%	2,4%	3,6%	7,1%	0,0%	0,0%
Plant and machine operators	70,9	2,6	46,8	6,7	3,1	10,3	1,1	0,2	0,0	6,3%	15,4%	6,4%	7,5%	0,0%	3,9%	18,2%	0,0%	–
Semi- and unskilled workers	38,7	7,3	21,6	1,9	1,1	5,4	1,2	0,1	0,0	14,5%	28,8%	13,0%	5,3%	18,2%	3,7%	8,3%	0,0%	–

Graduates who had already been employed within 6-7 years of graduation

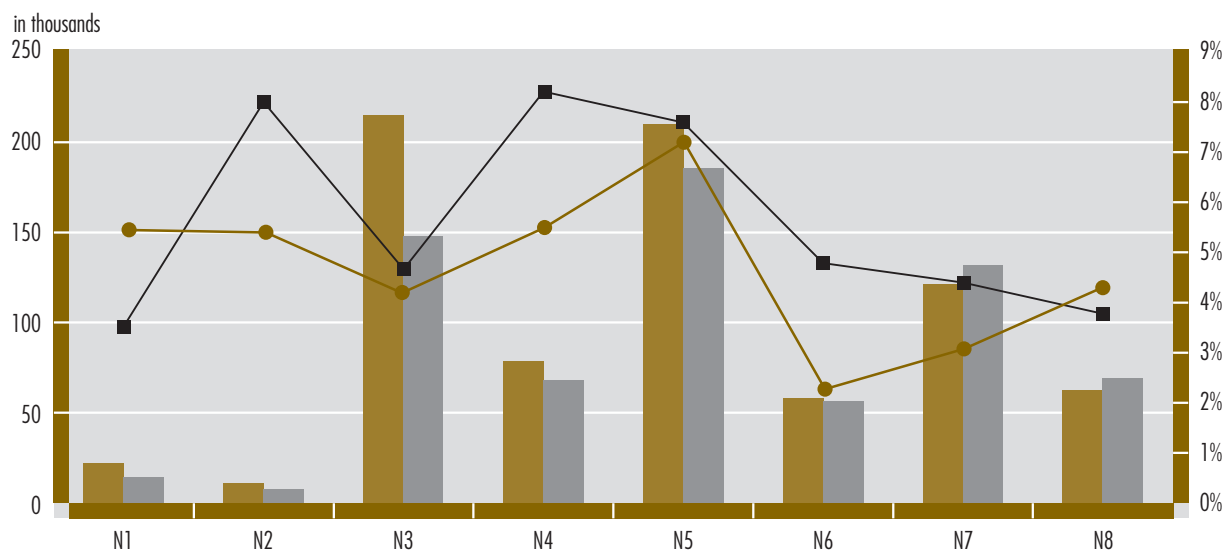
Source: Labour force surveys. Czech Statistical Office, OKEČ and KZAM tables for 1997 and 1998, average for 4Q 97 and 1-3Q 98

D.6 Development of Economically Active Graduates and Unemployment Rates in Individual Occupational Categories (1994, 1998)

Occupational Category	Graduates (in thousands)			Rate of unemployment		
	1994	1998	98/94	1994	1998	98/94
N1 Agricultural, forestry and fisheries workers	22,0	14,2	0,6	5,5%	3,5%	0,6
N2 Workers concerned with exploitation and treatment of raw materials in mining, energy and water management	11,1	7,5	0,7	5,4%	8,0%	1,5
N3 Workers-processors (producers, repair and maintenance personnel)	215,1	147,9	0,7	4,2%	4,7%	1,1
N4 Construction workers	78,5	68,2	0,9	5,5%	8,2%	1,5
N5 Operators and service workers	209,8	185,7	0,9	7,2%	7,6%	1,1
N6 Technicians	57,9	56,4	1,0	2,2%	4,8%	2,1
N7 Managers and administrators	121,0	131,8	1,1	3,1%	4,4%	1,4
N8 Workers in education, culture, health care, science, research and other non-production workers	62,7	68,9	1,1	4,3%	3,8%	0,9
TOTAL – workers, operators and other staff	778,1	680,6	0,9	4,9%	5,7%	1,2

Graduates who had already been employed within 6-7 years of graduation

Development of Graduate Numbers in Major Occupational Categories (columns)  
Rate of Their Unemployment (points)

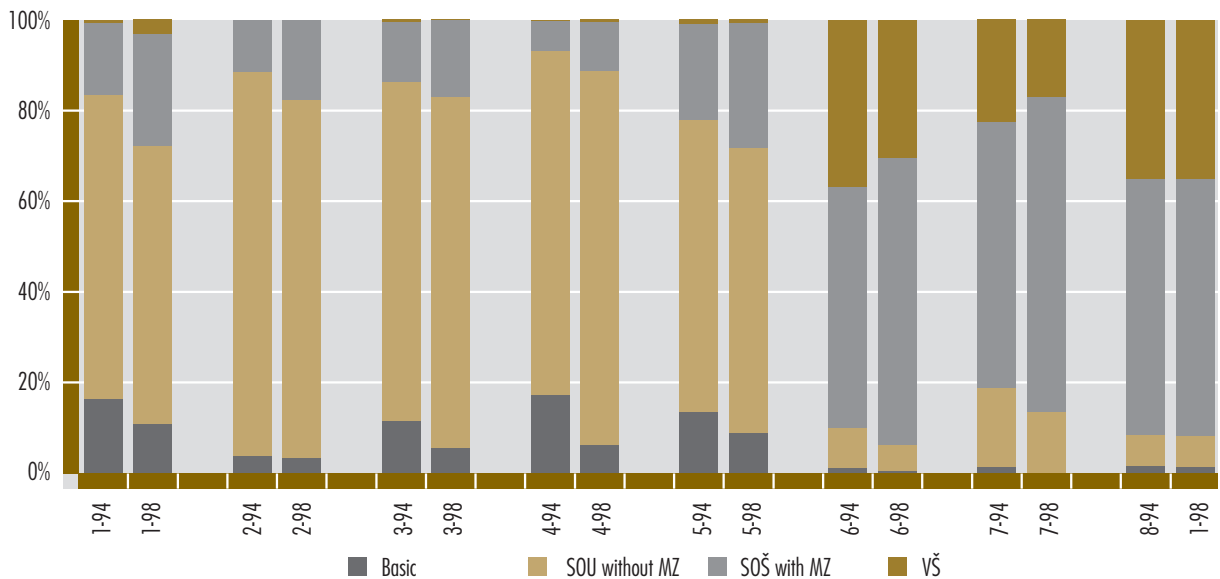
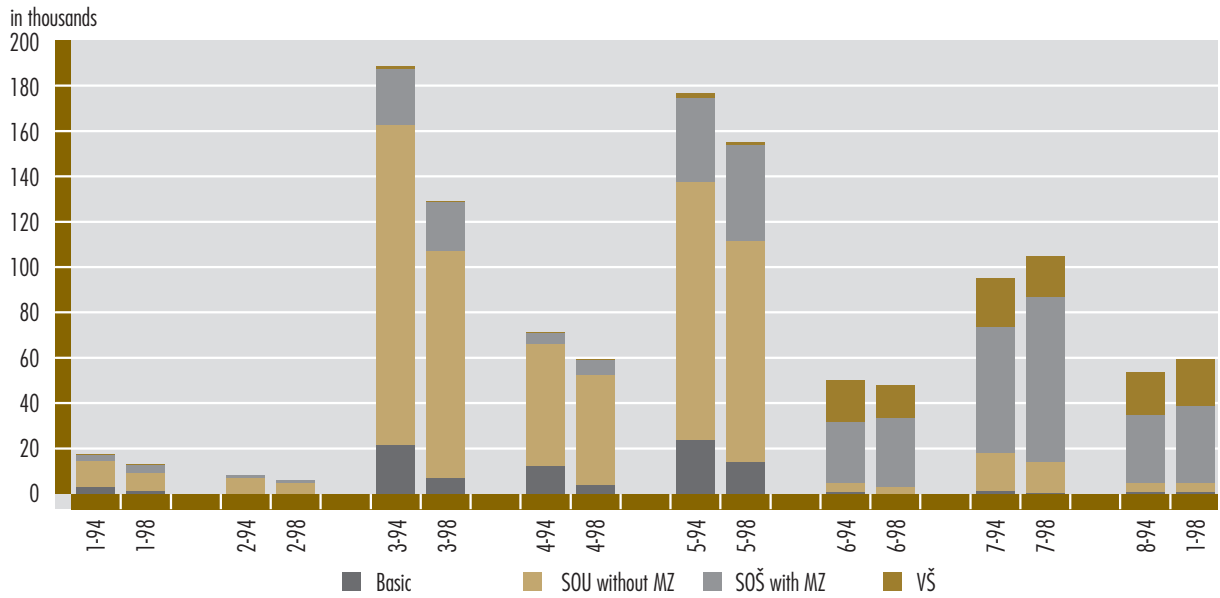


Source: Labour force surveys, Czech Statistical Office, OKEČ and KZAM tables for 1997 and 1998, average for 4Q 97 and 1-3Q 98

D.7 Development of Economically Active Graduates in Major Occupational Categories by Education  
(1994, 1998)

1994		In thousands													
Education		Basic	SOU without MZ	SOŠ without MZ	SOŠ with MZ	ÚSV (G)	VŠ	Total	Basic	SOU without MZ	SOŠ without MZ	SOŠ with MZ	ÚSV (G)	VŠ	
N1	Agricultural, forestry and fisheries workers	2,9	11,7	0,6	2,8	0,6	0,1	22,0	13,2%	53,2%	2,7%	12,7%	2,7%	0,5%	
N2	Workers concerned with exploitation and treatment of raw materials in mining, energy and water management	0,3	6,7	1,8	0,9	0,4	0,0	11,1	2,7%	60,4%	16,2%	8,1%	3,6%	0,0%	
N3	Workers-processors (producers, repair and maintenance personnel)	21,7	140,9	9,0	25,0	2,1	0,8	215,1	10,1%	65,5%	4,2%	11,6%	1,0%	0,4%	
N4	Construction workers	12,2	54,1	1,5	4,7	0,2	0,1	78,5	15,5%	68,9%	1,9%	6,0%	0,3%	0,1%	
N5	Operators and service workers	23,9	113,8	7,1	37,2	11,0	1,7	209,8	11,4%	54,2%	3,4%	17,7%	5,2%	0,8%	
N6	Technicians	0,6	4,4	2,7	26,6	3,6	18,3	57,9	1,0%	7,6%	4,7%	45,9%	6,2%	31,6%	
N7	Managers and administrators	1,3	16,6	3,0	55,6	17,3	21,4	121,0	1,1%	13,7%	2,5%	46,0%	14,3%	17,7%	
N8	Workers in education, culture, health care, science, research and other non-production workers	0,9	3,7	1,0	30,4	6,5	18,9	62,7	1,4%	5,9%	1,6%	48,5%	10,4%	30,1%	
TOTAL – workers, operators and other staff		63,8	351,9	26,7	183,2	41,7	61,3	778,1	8,2%	45,2%	3,4%	23,5%	5,4%	7,9%	
1998		In thousands													
N1	Agricultural, forestry and fisheries workers	1,4	8,0	0,1	3,2	0,0	0,4	14,2	9,9%	56,3%	0,7%	22,5%	0,0%	2,8%	
N2	Workers concerned with exploitation and treatment of raw materials in mining, energy and water management	0,2	4,5	0,6	1,0	0,5	0,0	7,5	2,7%	60,0%	8,0%	13,3%	6,7%	0,0%	
N3	Workers-processors (producers, repair and maintenance personnel)	7,1	100,2	7,3	21,7	1,0	0,1	147,9	4,8%	67,7%	4,9%	14,7%	0,7%	0,1%	
N4	Construction workers	3,8	48,9	2,1	6,4	0,8	0,3	68,2	5,6%	71,7%	3,1%	9,4%	1,2%	0,4%	
N5	Operators and service workers	14,0	97,5	8,1	42,4	8,1	1,1	185,7	7,5%	52,5%	4,4%	22,8%	4,4%	0,6%	
N6	Technicians	0,3	2,7	3,4	30,3	3,4	14,5	56,4	0,5%	4,8%	6,0%	53,7%	6,0%	25,7%	
N7	Managers and administrators	0,2	14,0	4,0	72,8	18,2	17,8	131,8	0,2%	10,6%	3,0%	55,2%	13,8%	13,5%	
N8	Workers in education, culture, health care, science, research and other non-production workers	0,9	4,0	1,4	33,8	5,8	20,8	68,9	1,3%	5,8%	2,0%	49,1%	8,4%	30,2%	
TOTAL – workers, operators and other staff		27,9	279,8	27,0	211,6	37,8	55,0	680,6	4,1%	41,1%	4,0%	31,1%	5,6%	8,1%	

Source: Labour force surveys, Czech Statistical Office, 1993 - 1998, average for 4Q 97 and 1-3Q 98



- 1 Agricultural, forestry and fisheries workers
- 2 Workers concerned with exploitation and treatment of raw materials in mining, energy and water management
- 3 Workers-processors (producers, repair and maintenance personnel)
- 4 Construction workers
- 5 Operators and service workers
- 6 Technicians
- 7 Managers and administrators
- 8 Workers in education, culture, health care, science, research and other non-production workers

Source: Labour force surveys, Czech Statistical Office, 1993 - 1998, average for 4Q 97 and 1-3Q 98

*D.8 Comparison of Relative Unemployment of Graduates  
and the Whole Economically Active Population (EAP) (1994, 1998)  
Relative unemployment of total EAP, of graduates = those who had been employed  
within 6–7 years of graduation*

All	94 Total	94 Grad- uates	Grad./ /Total	98 Total	98 Grad- uates	Grad./ /Total	98/94 Total	98/94 Graduates	xxx
Total	4,3%	8,4%	1,93	6,0%	10,3%	1,72	1,38	1,23	0,89
Natural Science									
Total	2,0%	12,5%	6,41	2,2%	4,7%	2,09	1,14	0,37	0,33
ÚSO	5,9%	22,2%	3,74	4,3%	0,0%	0,00	0,73	0,00	0,00
VŠ	0,7%	9,5%	13,33	1,0%	4,5%	4,45	1,43	0,48	0,33
Machinery operation and servicing									
Total	4,4%	5,1%	1,15	3,8%	5,7%	1,51	0,85	1,12	1,31
SOU without MZ	4,5%	5,4%	1,20	3,9%	6,3%	1,61	0,87	1,16	1,34
SOU with MZ	3,2%	0,0%	0,00	0,0%	0,0%	–	0,00	–	–
Mechanical engineering, metallurgy									
Total	3,1%	6,6%	2,11	3,7%	7,6%	2,09	1,17	1,16	0,99
SOU without MZ	3,1%	6,3%	2,00	3,8%	7,5%	2,00	1,20	1,20	1,00
SOŠ without MZ	3,0%	5,0%	1,70	3,6%	7,5%	2,11	1,20	1,49	1,24
SOŠ with MZ	5,2%	8,5%	1,64	5,1%	7,3%	1,43	0,99	0,86	0,87
ÚSO	3,2%	9,2%	2,82	3,8%	9,5%	2,51	1,16	1,03	0,89
VŠ	2,2%	0,0%	0,00	1,7%	1,7%	0,99	0,77	–	–
Electrical engineering, transport, communications									
Total	2,8%	6,2%	2,24	3,4%	6,0%	1,73	1,24	0,95	0,77
SOU without MZ	3,5%	7,8%	2,21	4,1%	7,0%	1,72	1,17	0,91	0,78
SOŠ without MZ	3,1%	3,8%	1,20	4,6%	3,6%	0,77	1,47	0,95	0,64
SOU with MZ	5,5%	12,7%	2,32	3,2%	7,4%	2,33	0,58	0,58	1,00
SOŠ with MZ	1,3%	2,7%	2,06	2,8%	5,6%	2,04	2,11	2,08	0,99
VŠ	1,5%	0,0%	0,00	1,8%	0,0%	0,00	1,20	–	–
Construction									
Total	3,3%	6,2%	1,89	4,6%	10,1%	2,21	1,40	1,64	1,17
SOU without MZ	3,7%	6,9%	1,87	5,5%	11,0%	2,01	1,48	1,59	1,08
SOŠ without MZ	3,1%	4,1%	1,32	2,9%	2,3%	0,79	0,95	0,57	0,60
SOU with MZ	10,0%	18,2%	1,82	2,0%	0,0%	0,00	0,20	0,00	0,00
SOŠ with MZ	2,0%	5,4%	2,62	3,5%	12,3%	3,54	1,70	2,30	1,35
VŠ	2,4%	0,0%	0,00	1,0%	0,0%	0,00	0,43	–	–
Chemistry, food									
Total	4,0%	6,9%	1,74	8,4%	11,8%	1,41	2,11	1,71	0,81
SOU without MZ	3,9%	6,2%	1,61	8,4%	11,4%	1,37	2,16	1,84	0,85
SOU with MZ	6,8%	14,3%	2,10	8,8%	13,5%	1,54	1,28	0,95	0,74
Textile, clothes-making									
Total	5,6%	9,6%	1,71	7,3%	10,2%	1,41	1,30	1,07	0,82
SOU without MZ	5,6%	9,3%	1,66	7,3%	10,4%	1,41	1,32	1,12	0,85
SOU with MZ	6,9%	16,7%	2,42	4,2%	14,3%	3,43	0,60	0,86	1,42
Wood processing, footwear production									
Total	3,6%	7,4%	2,09	5,7%	11,3%	1,99	1,60	1,52	0,95
SOU without MZ	3,6%	8,0%	2,25	5,8%	11,5%	1,97	1,63	1,43	0,87
SOU with MZ	3,4%	0,0%	0,00	5,0%	8,3%	1,67	1,45	–	–
Other engineering fields									
Total	3,1%	6,2%	1,96	4,0%	9,3%	2,32	1,28	1,51	1,18
SOŠ without MZ	6,4%	11,3%	1,77	7,6%	21,1%	2,76	1,20	1,86	1,56
SOŠ with MZ	2,5%	6,5%	2,61	4,0%	8,2%	2,04	1,61	1,26	0,78
VŠ	2,2%	0,0%	0,00	1,8%	4,8%	2,69	0,79	–	–

All	94 Total	94 Grad- uates	Grad./ /Total	98 Total	98 Grad- uates	Grad./ /Total	98/94 Total	98/94 Graduates	xxx
<b>Agriculture and forestry</b>									
Total	4,1%	8,9%	2,18	5,3%	8,9%	1,70	1,29	1,00	0,78
SOU without MZ	5,0%	11,0%	2,22	5,8%	9,8%	1,70	1,16	0,89	0,77
SOŠ without MZ	3,1%	2,6%	0,85	5,3%	3,8%	0,73	1,69	1,46	0,86
SOU with MZ	0,0%	0,0%	–	7,7%	12,0%	1,56	–	–	–
SOŠ with MZ	4,5%	11,3%	2,53	5,0%	9,5%	1,90	1,12	0,84	0,75
VŠ	0,8%	0,0%	0,00	3,5%	5,4%	1,56	4,23	–	–
<b>Health care</b>									
Total	2,5%	5,5%	2,17	3,1%	6,4%	2,07	1,22	1,16	0,96
SOŠ without MZ	3,9%	3,8%	0,98	8,5%	15,2%	1,77	2,17	3,94	1,81
SOŠ with MZ	2,6%	5,0%	1,95	3,1%	6,1%	1,98	1,20	1,22	1,02
VŠ	2,0%	6,4%	3,23	1,1%	4,4%	4,16	0,54	0,69	1,29
<b>Economics, trade, services</b>									
Total	4,3%	6,6%	1,52	6,3%	10,6%	1,69	1,46	1,62	1,11
SOU without MZ	5,6%	7,3%	1,31	7,5%	11,3%	1,50	1,34	1,55	1,15
SOŠ without MZ	4,3%	11,8%	2,72	7,1%	15,4%	2,17	1,64	1,31	0,80
SOU with MZ	4,6%	10,3%	2,25	5,9%	7,5%	1,28	1,28	0,73	0,57
SOŠ with MZ	3,5%	4,8%	1,37	5,5%	10,4%	1,89	1,59	2,19	1,38
VŠ	1,2%	3,2%	2,59	3,1%	2,2%	0,71	2,47	0,68	0,28
<b>Law</b>									
Total	3,1%	8,9%	2,87	4,7%	9,3%	1,98	1,52	1,05	0,69
SOŠ without MZ	6,0%	9,5%	1,59	6,5%	9,1%	1,39	1,09	0,95	0,88
SOŠ with MZ	4,3%	20,0%	4,65	8,4%	16,7%	1,98	1,95	0,83	0,43
VŠ	0,5%	0,0%	0,00	1,7%	0,0%	0,00	3,49	–	–
<b>Teacher training</b>									
Total	2,3%	7,6%	3,29	2,8%	5,8%	2,07	1,21	0,76	0,63
SOŠ without MZ	3,5%	16,7%	4,75	12,8%	50,0%	3,90	3,65	3,00	0,82
SOŠ with MZ	2,9%	7,8%	2,72	4,4%	6,0%	1,37	1,53	0,77	0,50
VŠ	1,9%	7,0%	3,65	1,6%	2,5%	1,58	0,82	0,35	0,43
<b>Other "social" courses</b>									
Total	3,0%	5,4%	1,79	5,5%	15,3%	2,79	1,81	2,82	1,56
SOŠ without MZ	4,2%	0,0%	0,00	7,9%	14,3%	1,81	1,89	–	–
SOŠ with MZ	4,2%	8,8%	2,11	6,1%	15,4%	2,52	1,46	1,75	1,20
VŠ	1,8%	0,0%	0,00	4,3%	12,0%	2,81	2,33	–	–
<b>Other sciences and teaching</b>									
Total	4,0%	6,0%	1,52	7,1%	12,4%	1,75	1,79	2,07	1,16
SOU without MZ	4,5%	7,1%	1,57	8,3%	14,6%	1,76	1,83	2,05	1,12
SOŠ without MZ	6,1%	11,1%	1,83	5,9%	0,0%	0,00	0,97	0,00	0,00
SOU with MZ	11,4%	9,1%	0,80	7,8%	18,2%	2,32	0,69	2,00	2,91
SOŠ with MZ	1,7%	3,7%	2,21	6,6%	8,6%	1,31	3,92	2,31	0,59
VŠ	2,1%	0,0%	0,00	2,9%	0,0%	0,00	1,41	–	–

xxx increase (decrease) in the ratio of relative rates of unemployment among graduates to those among all EAPs between 1984 and 1988

A figure below 1 means that the ratio of relative unemployment of graduates to total relative unemployment was lower in 1988 than it was in 1984 (i. e. unemployment among graduates is declining in relative terms).

Source: Czech Statistical Office

D.9 Development of Numbers of School Graduates Registered at Labour Offices (April surveys)  
(1994–1999)

<i>SOU</i> without <i>MZ</i>	Number of the unemployed						Rate of unemployment *					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
Mechanical engineering	1 676	1 346	1 234	1 488	2 183	4 094	3,8%	3,2%	3,4%	5,2%	9,8%	21,7%
Electrical engineering	518	439	377	418	677	1 535	4,1%	3,8%	3,6%	4,1%	7,6%	18,9%
Construction	737	772	1 036	1 337	1 918	3 657	3,6%	3,8%	5,0%	6,4%	10,5%	24,3%
Agriculture and forestry	664	572	608	715	974	1 612	6,8%	6,3%	7,1%	7,4%	10,8%	21,9%
Economics, trade, services	1 400	1 341	1 630	2 400	3 951	7 646	3,9%	4,1%	4,5%	5,2%	8,4%	17,7%
<b><i>SOU</i> without <i>MZ</i> – total</b>	<b>6 655</b>	<b>5 926</b>	<b>6 338</b>	<b>8 072</b>	<b>12 124</b>	<b>23 142</b>	<b>4,3%</b>	<b>4,0%</b>	<b>4,3%</b>	<b>5,3%</b>	<b>8,8%</b>	<b>19,5%</b>

<i>SOU</i> with <i>MZ</i>	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
Mechanical engineering	164	174	190	312	524	1 134	3,0%	3,3%	3,6%	4,7%	6,4%	13,2%
Electrical engineering	98	101	115	243	436	1 148	2,1%	2,1%	2,3%	3,8%	5,6%	14,2%
Construction	14	17	33	46	95	387	3,1%	5,4%	7,9%	3,7%	4,4%	14,6%
Agriculture and forestry	55	62	72	98	141	332	3,4%	4,2%	5,2%	6,2%	6,6%	12,4%
Economics, trade, services	113	108	220	433	871	2 907	4,2%	4,0%	8,0%	8,4%	7,9%	15,5%
<b><i>SOU</i> with <i>MZ</i> – total</b>	<b>562</b>	<b>553</b>	<b>763</b>	<b>1 350</b>	<b>2 497</b>	<b>6 967</b>	<b>2,9%</b>	<b>3,0%</b>	<b>4,1%</b>	<b>5,1%</b>	<b>6,3%</b>	<b>13,3%</b>

	1994	1995	1996	1997	1998	1999
<i>SOU</i> without <i>MZ</i>	4,28%	4,01%	4,34%	5,34%	8,84%	19,50%
<i>SOU</i> with <i>MZ</i>	2,90%	3,02%	4,14%	5,09%	6,26%	13,30%
<i>SOŠ</i> with <i>MZ</i>	2,13%	3,52%	3,69%	5,72%	8,79%	15,40%
<i>VŠ</i>	1,87%	1,42%	1,51%	1,98%	3,04%	4,80%

<i>SOŠ</i> with <i>MZ</i>	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
Mechanical engineering	472	349	417	582	1 031	2 102	4,6%	3,6%	4,7%	6,7%	10,2%	18,8%
Electrical engineering	185	132	143	276	413	1 111	2,9%	2,1%	2,4%	4,4%	5,7%	14,2%
Construction	205	199	182	258	359	779	3,3%	3,3%	3,4%	5,7%	7,6%	16,6%
Agriculture and forestry	448	349	382	531	728	1 220	5,0%	4,0%	4,7%	7,2%	10,1%	18,4%
Health care	152	153	170	235	334	396	1,3%	1,3%	1,5%	2,5%	3,6%	3,9%
Economics, trade, services	396	305	843	1 870	4 281	7 315	2,2%	1,8%	3,9%	5,7%	9,7%	14,9%
<b><i>SOŠ</i> – total</b>	<b>2 392</b>	<b>2 564</b>	<b>2 706</b>	<b>4 625</b>	<b>8 439</b>	<b>16 141</b>	<b>2,1%</b>	<b>3,5%</b>	<b>3,7%</b>	<b>5,7%</b>	<b>8,8%</b>	<b>15,4%</b>
<b><i>Gymnázium</i></b>	<b>1 593</b>	<b>845</b>	<b>1 240</b>	<b>1 740</b>	<b>2 552</b>	<b>3 669</b>	<b>3,2%</b>	<b>1,7%</b>	<b>2,8%</b>	<b>4,4%</b>	<b>5,8%</b>	<b>7,8%</b>

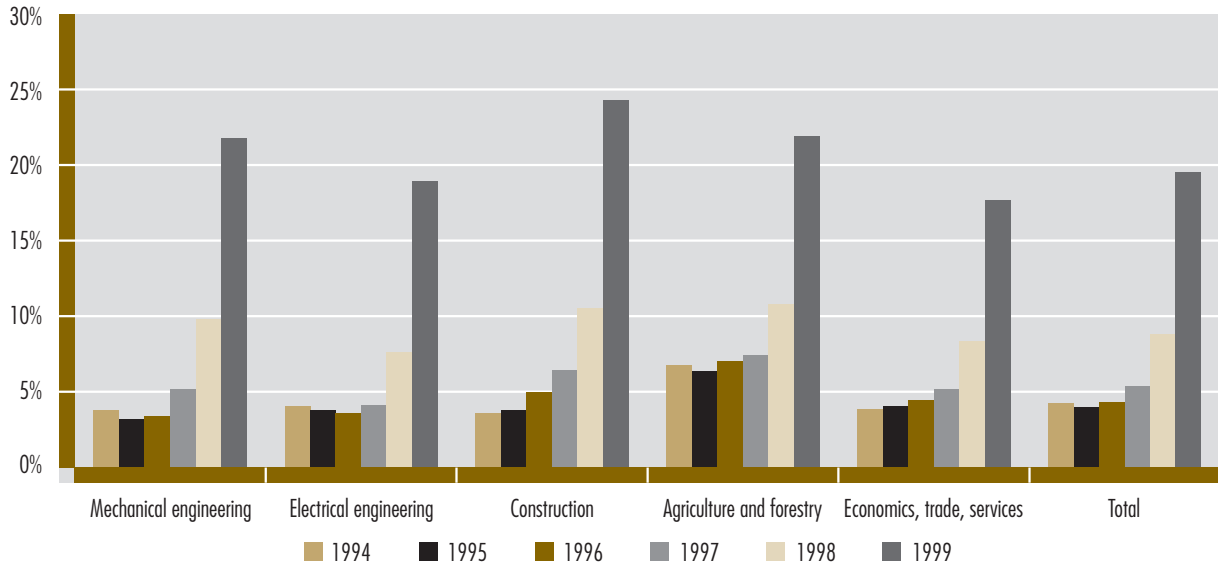
  

<i>HE</i> graduates	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
Mechanical engineering	56	36	36	52	74	160	1,6%	1,1%	1,5%	2,5%	3,7%	7,5%
Electrical engineering	29	17	19	35	56	123	1,1%	0,7%	0,9%	2,0%	2,5%	4,5%
Construction	37	26	18	35	57	141	1,7%	1,2%	0,9%	1,8%	2,4%	7,0%
Agriculture and forestry	88	85	71	87	133	160	3,1%	3,3%	3,0%	3,9%	5,4%	6,2%
Health care	71	42	85	70	84	100	2,4%	1,3%	2,4%	2,0%	2,4%	3,0%
Economics, trade, services	47	51	66	119	208	420	1,2%	1,0%	1,0%	1,6%	2,3%	3,9%
<b><i>He</i> graduates – total</b>	<b>557</b>	<b>447</b>	<b>503</b>	<b>693</b>	<b>1 195</b>	<b>2 114</b>	<b>1,9%</b>	<b>1,4%</b>	<b>1,5%</b>	<b>2,0%</b>	<b>3,0%</b>	<b>4,8%</b>

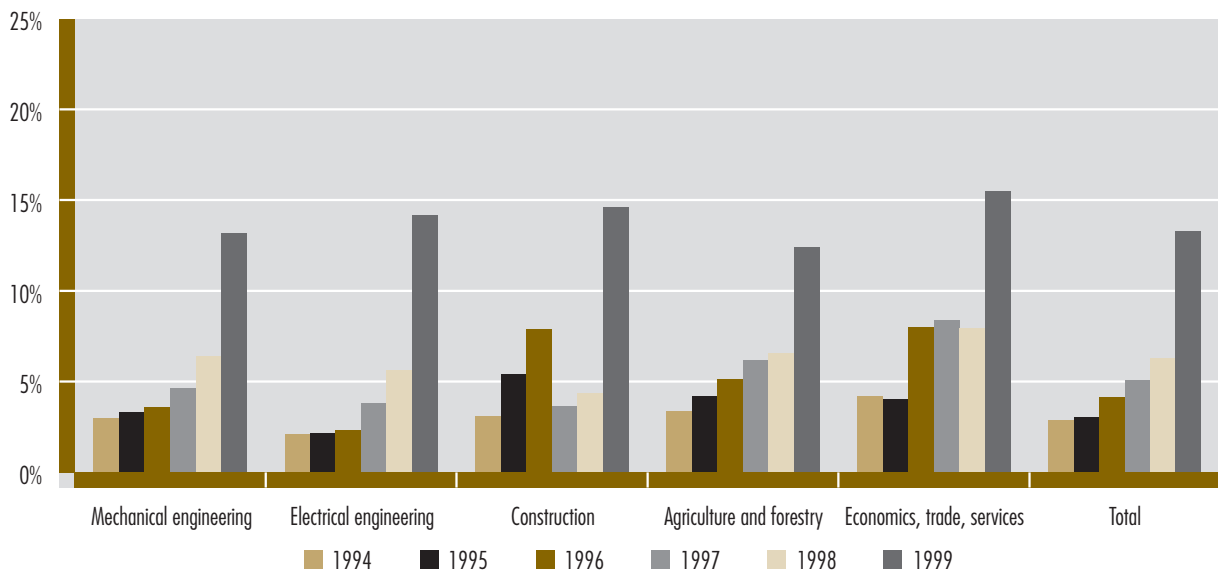
\* Rate of unemployment – this has been simplified: the basis of the calculation is the total number of graduates in the last two years, even though some of them are continuing their studies. The number of graduates entering the labour market is some 25% lower in the case of *SOU* graduates, and approximately 30% in the case of *SOŠ* graduates due to these continuing studies. An overwhelming majority of *SOU* graduates with *MZ* and university graduates, however, are entering the labour market. As regards graduates from grammar schools, almost 80% continue studies. Since the above-stated rates of unemployment are calculated from the total number of graduates, the actual rates of unemployment are significantly higher.



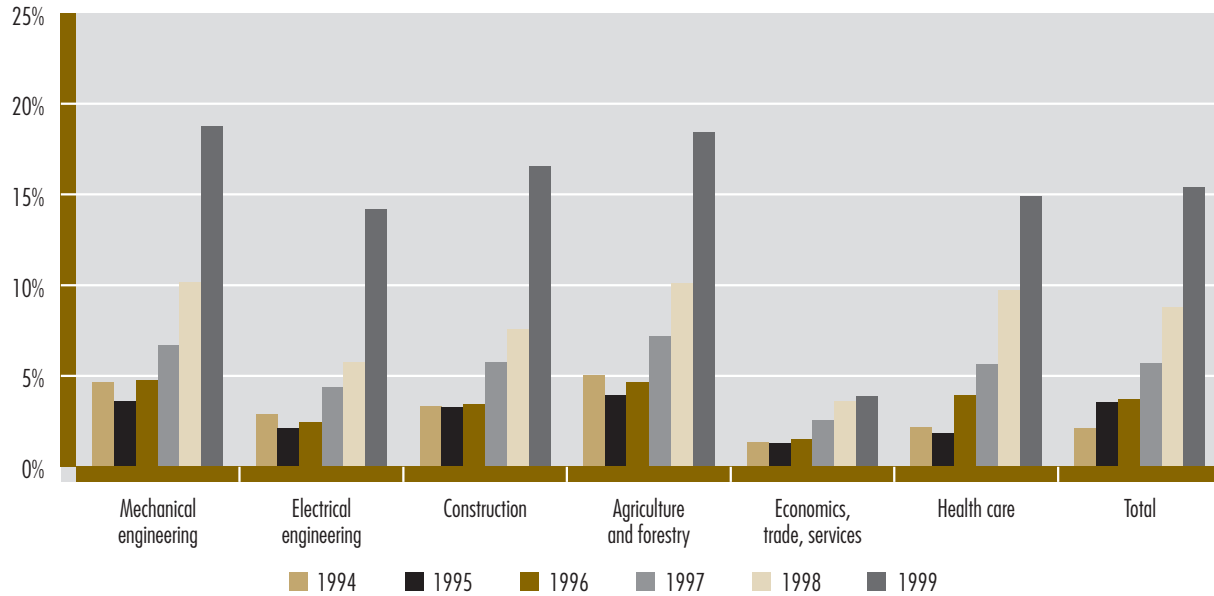
Development of Numbers of School Graduates Registered at Labour Offices (April surveys) – graph  
SOU without MZ



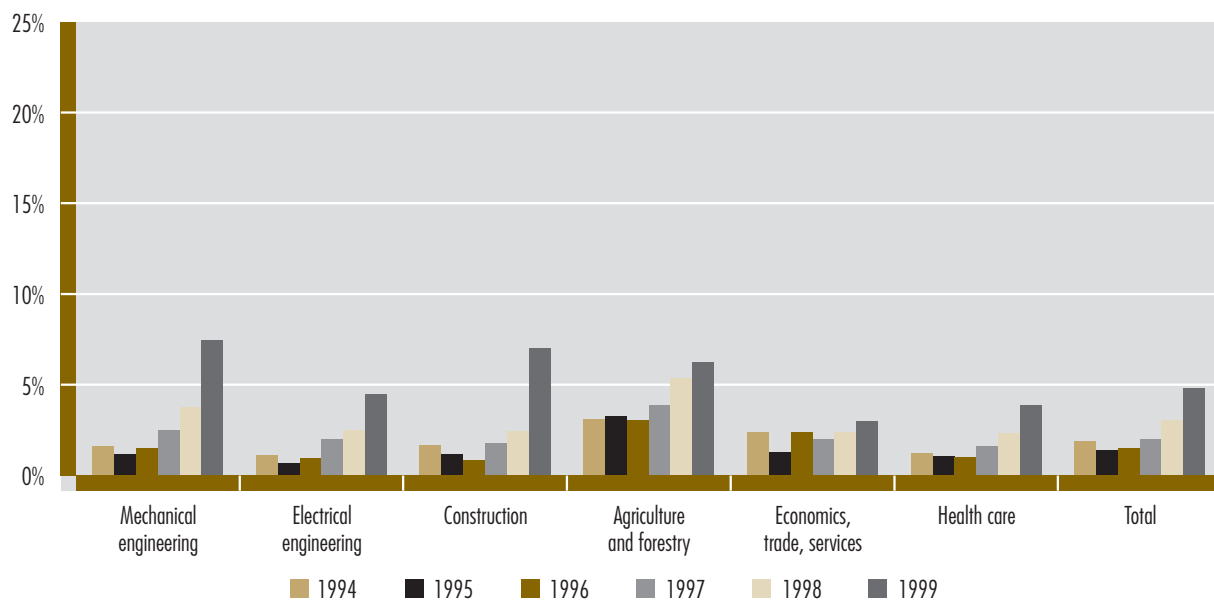
SOU with MZ



Development of Numbers of School Graduates Registered by Labour Offices (April surveys)  
SOŠ with MZ



Higher education



Source: Ministry of Labour and Social Affairs, Institute for Information on Education

D.10 Development of Unemployment of the Economically Active Population  
and School Graduates by Level of Education (1994–1998)

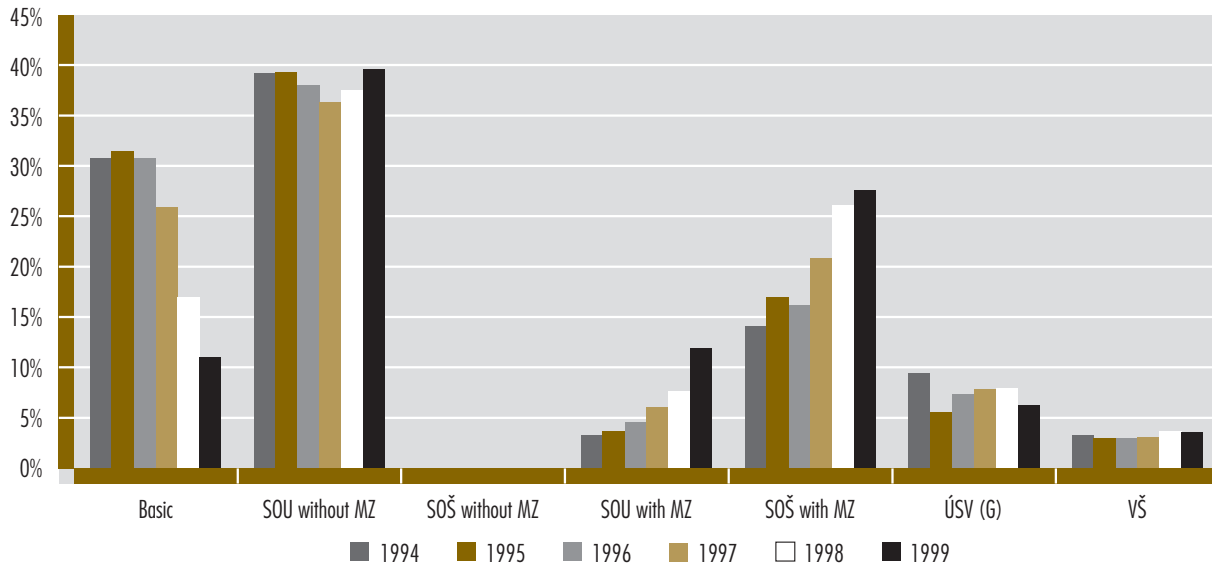
Education	Structure of the economically active unemployed					Structure of unemployed graduates (April, labour offices)					
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998	1999
	%										
Basic	28,7	36,6	38,1	34,5	25,8	30,8	31,5	30,8	25,9	17,0	11,0
SOU without MZ	39,9	37,3	37,5	36,6	37,9	39,2	39,3	38,0	36,3	37,5	39,6
SOŠ without MZ	5,3	5,7	4,6	4,5	5,7	–	–	–	–	–	–
SOU with MZ	1,5	0,4	0,8	0,9	1,6	3,3	3,7	4,6	6,1	7,7	11,9
SOŠ with MZ	17,0	13,7	14,3	16,6	19,9	14,1	17,0	16,2	20,8	26,1	27,6
ÚSV (G)	3,8	3,2	2,6	3,8	4,4	9,4	5,6	7,4	7,8	7,9	6,2
VŠ	3,8	3,1	1,5	3,0	3,5	3,3	3,0	3,0	3,1	3,7	3,6
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

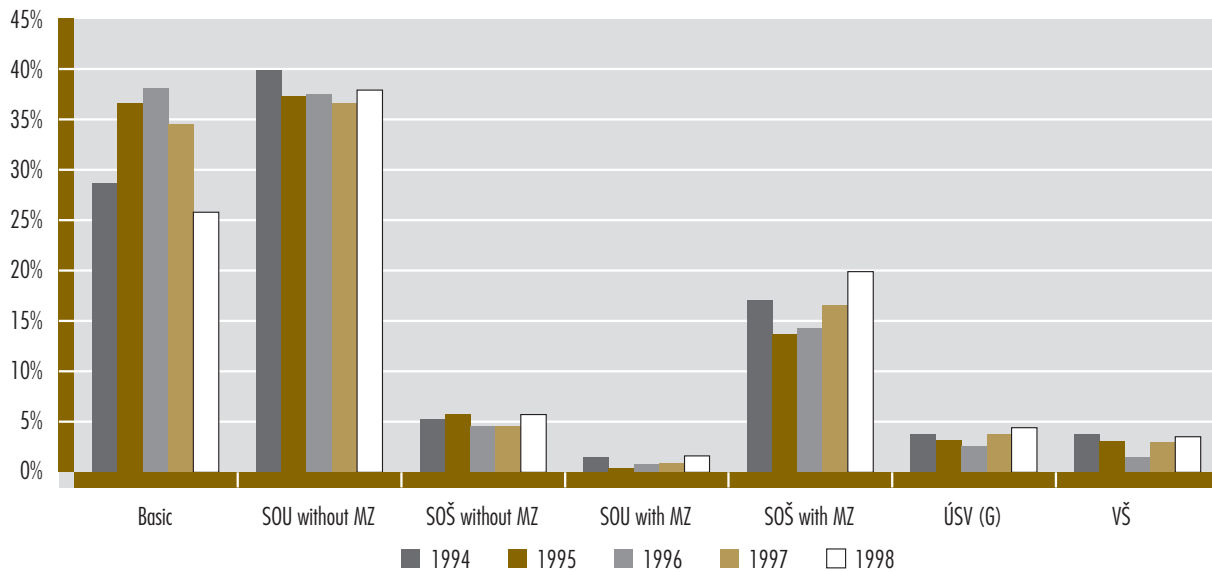
Education	Rate of unemployment among the economically active population					Rate of unemployment among graduates					
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998	1999
	%										
Basic	8,1	9,8	10,6	13,4	15,0	–	–	–	–	–	–
SOU without MZ	3,8	3,3	3,0	3,9	5,6	4,3	4,0	4,3	5,3	8,8	19,5
SOŠ without MZ	3,2	3,4	2,7	3,7	5,9	–	–	–	–	–	–
SOU with MZ	4,0	0,9	2,1	2,5	5,0	2,9	3,0	4,1	5,0	6,3	13,3
SOŠ with MZ	2,4	1,8	1,7	2,6	4,2	2,1	3,5	3,7	5,7	8,8	15,4
ÚSV (G)	3,5	2,7	2,0	3,9	6,5	3,2	1,7	2,8	4,4	5,8	7,8
VŠ	1,4	1,0	0,5	1,2	2,0	1,9	1,4	1,5	2,0	3,0	4,8

Source: Position of School Graduates in the Labour Market, Ministry of Education, Youth and Sports 1999, Ministry of Labour and Social Affairs, 1999 – personal calculation

*Development of Proportions of Unemployed Graduates by Education*



*Development of Proportions of the Economically Active Unemployed by Education*



*E.1 Development of Expenditure from Public Budgets on Individual Levels and Types of Education  
(bil. CZK current prices)*

	1989	1990	1991	1992	1993	1994	1995	1996	1997	Index 97/89 (%)
Total public expenditure on education	21,7	24,2	31,9	39,2	53,6	63,2	71,9	81,7	78,1	359,0
Kindergartens	1,9	2,0	2,6	3,3	4,8	5,5	6,5	7,6	7,4	378,0
Basic schools and out-of-school centres	6,1	6,4	7,9	10,4	15,5	18,2	20,9	25,4	24,2	400,0
<i>Gymnázia</i>	0,7	0,8	1,1	1,3	2,2	3,1	3,9	4,2	3,5	506,0
Secondary and post-secondary technical schools	1,2	1,3	2,2	2,7	4,6	6,1	6,8	7,2	7,1	599,0
Secondary vocational schools	0,9	1,5	2,8	3,7	6,6	7,7	8,6	9,1	7,3	840,0
Special schools	0,6	0,7	0,9	1,1	2,0	2,4	3,0	3,4	3,5	550,0
School meals and youth homes*	3,6	3,8	4,6	4,7	5,4	5,7	6,1	6,7	6,9	194,0
HE institutions	3,5	3,9	4,5	4,7	6,5	8,3	9,5	11,0	11,1	320,0

\* Establishments which provide accommodation, meals and leisure time activities for upper secondary school pupils living at a distance from the school they attend.

Source: *Institute for Information on Education*.

*E.2 Direct Public Expenditure on Educational Institutions as Proportion of GDP and Expenditure per Student in relation to GDP per capita – by Level of Education (1995)*

	Direct public expenditure on educational institutions as proportion of GDP	of this: primary and secondary	Expenditure per student in relation to GDP per capita				
			Tertiary	Pre-school	Primary	Secondary	Tertiary
Czech Republic	4,8	3,4	0,7	20	19	27	66
Hungary	4,9	3,3	0,8	20	22	23	70
Poland	5,2	3,3	0,8	–	–	–	–
Austria	5,3	3,8	0,9	24	27	35	39
Denmark	6,5	4,2	1,3	23	27	29	38
France	5,8	4,1	1,0	16	17	31	33
Germany	4,5	2,9	1,0	21	16		43
Ireland	4,7	3,3	0,9	12	12	20	42
Netherlands	4,6	3,0	1,1	15	16	22	45
Spain	4,8	3,5	0,8	18	18	24	35
United Kingdom	4,6	3,8	0,7	28	19	24	40
Average OECD	4,9	3,5	0,9	18	19	27	46

Source: *Education at a Glance*, 1998.

*E.3 Development of Expenditure from the National Budget on Employment Policy in the CR  
(1991–1998)*

	1991	1992	1993	1994	1995	1996	1997	1998
<b>Expenditure on SPZ (thousand CZK)</b>	2 450 270	3 145 028	2 166 077	2 562 588	2 416 637	2 664 493	3 972 035	5 096 712
<i>Out of this:</i>								
<i>PPZ (thousand CZK)</i>	1 677 270	1 423 352	1 416 669	1 844 265	1 781 846	2 106 406	3 420 038	4 193 698
<i>APZ (thousand CZK)</i>	773 000	1 721 676	749 408	718 323	634 791	558 087	551 995	903 014
<b>APZ – out of this:</b>								
<b>Graduate placements</b>								
Jobs created	18 994	25 996	8 178	7 025	5 502	5 094	3 757	9 464
Applicants placed	14 398	21 907	7 380	6 853	5 292	4 971	3 515	9 232
Expenditure as of 31. 12. (thousand CZK)	47 740	325 528	245 190	127 053	117 754	100 334	101 759	117 777
<b>SÚPM</b>								
Jobs created	42 006	67 793	9 547	9 436	5 963	3 612	2 626	8 805
Applicants placed	33 868	60 370	12 250	9 874	6 603	4 025	2 931	8 178
Expenditure as of 31. 12. (thousand CZK)	496 800	968 620	217 855	241 482	163 636	102 427	66 193	201 514
<b>VPP</b>								
Jobs created	7 721	29 028	12 095	13 432	11 446	9 838	11 760	11 024
Applicants placed	6 165	25 503	11 760	12 927	10 821	10 259	11 888	11 905
Expenditure as of 31. 12. (thousand CZK)	78 390	223 027	159 605	183 741	189 470	199 069	224 926	280 828
<b>Re-training</b>								
Newly placed	7 967	17 590	12 095	14 814	13 454	12 107	11 448	16 427
Drop-outs	3 662	18 435	12 521	15 167	14 034	12 133	11 918	15 479
Expenditure as of 31. 12. (thousand CZK)	40 000	97 602	73 359	103 248	100 091	91 727	90 418	147 325
<b>ZPS</b>								
Jobs created	x	1 415	1 005	851	824	622	533	920
Applicants placed	x	1 308	947	748	724	562	493	853
Expenditure as of 31. 12. (thousand CZK)	7 088	55 699 *)	48 667 *)	61 630 *)	26 510	17 683	15 881	50 505
Operating costs (in thousand CZK)	x	x	x	x	33 351	39 749	44 005	76 533
Other (in thousand CZK)	102 656	51 200	4 732	1 169	3 979	7 099	8 814	28 492

\*) the costs also include resources for the operation of sheltered workshops for the disabled

*SÚPM* socially purposeful jobs

*VPP* publicly useful jobs

*ZPS* the disabled

*SPZ* national employment policy

*PPZ* passive employment policy (includes material provisions for job seekers)

*APZ* active employment policy (includes SUPM, VPP placements, jobs for graduates, jobs for the disabled, re-training, sheltered workshops...)

Source: Ministry of Labour and Social Affairs

E.4 Development of National Budget Expenditure on Employment Policy in the CR as % of GDP (1991–1997)

	1991	1992	1993	1994	1995	1996	1997
<b>Expenditure on SPZ (% of GDP)</b>	0,33	0,37	0,22	0,22	0,18	0,17	0,24
<i>Out of this: PPZ (% of GDP)</i>	0,22	0,17	0,14	0,16	0,13	0,14	0,21
<i>APZ (% of GDP)</i>	0,10	0,20	0,07	0,06	0,05	0,04	0,03
<b>APZ – out of this:</b>							
<b>Graduate placements</b>							
Costs (% of GDP)	0,01	0,04	0,02	0,01	0,01	0,01	0,01
<b>SÚPM</b>							
Costs (% of GDP)	0,07	0,11	0,02	0,02	0,01	0,01	0,00
<b>VPP</b>							
Costs (% of GDP)	0,01	0,03	0,02	0,02	0,01	0,01	0,01
<b>Re-training</b>							
Costs (% of GDP)	0,01	0,01	0,01	0,01	0,01	0,01	0,01
<b>ZPS</b>							
Jobs created (% of GDP)	0,00	0,01 *)	0,00 *)	0,01 *)	0,00	0,00	0,00
Operating costs (% of GDP)	x	x	x	x	0,00	0,00	0,00
Other (% of GDP)	0,01	0,01	0,00	0,00	0,00	0,00	0,00
<b>Employment services</b>							
operating costs (% of GDP)	0,08	0,08	0,09	0,10	0,10	0,09	0,08

\*) the costs also include resources for the operation of sheltered workshops for the disabled

SÚPM socially purposeful jobs

VPP publicly useful jobs

ZPS the disabled

SPZ national employment policy

PPZ passive employment policy (includes material provisions for job seekers)

APZ active employment policy (includes SUPM, VPP placements, jobs for graduates, jobs for the disabled, re-training, sheltered workshops...)

Source: Ministry of Labour and Social Affairs

E.5 International Comparison of Expenditure on Passive and Active Employment Policy as a Proportion of GDP

	Year	Total	Passive	Active	Of this: Public labour offices	Re-training	Measures for young people	Job creation	Measures for the disadvantaged
Czech Republic	1998	0,37	0,24	0,13	0,08	0,01	0,01	0,03	0,01
Hungary	1997	1,08	0,63	0,45	0,13	0,09		0,23	
Poland	1996	2,14	1,82	0,32	0,02	0,02	0,10	0,16	0,01
Austria	1998	1,66	1,22	0,44	0,13	0,15	0,04	0,07	0,05
Denmark	1998	5,63	3,74	1,89	0,14	1,07	0,08	0,30	0,30
France	1997	3,22	1,85	1,37	0,16	0,35	0,26	0,52	0,08
Germany	1998	3,56	2,29	1,27	0,23	0,34	0,07	0,39	0,25
Ireland	1996	4,08	2,42	1,66	0,24	0,21	0,24	0,88	0,08
Netherlands	1998	4,90	3,14	1,76	0,40	0,22	0,05	0,50	0,58
Spain	1998	2,36	1,64	0,72	0,07	0,21	0,07	0,35	0,02

Source: OECD Employment Outlook, 1999.

F.1 Development of Average Monthly Wages of Employees in the National Economy by Sector  
(1990–1997)

Sector	Kč							
	1990	1991	1992	1993	1994	1995	1996	1997
Agriculture and game-keeping, forestry	3 603	3 706	4 264	5 100	5 865	6 878	7 808	8 503
– agriculture, game-keeping and related services	3 632	3 648	4 227	5 058	5 841	6 882	7 829	8 494
Fishing, fish-farming	4 360	4 621	5 669	6 040	7 247	–	–	–
Industry	3 410	3 972	4 805	5 893	6 888	8 148	9 587	10 733
Construction	3 612	4 041	5 024	6 529	7 622	8 837	10 166	11 225
Trade and repairs of motor vehicles and consumer goods	2 818	3 259	4 165	5 131	6 315	7 201	8 499	10 519
Catering and accommodation	2 671	3 318	4 279	5 296	6 034	7 352	8 487	8 322
Transport, storage, posts, communications	3 438	3 914	4 602	5 672	6 807	8 241	9 853	11 320
Finance and insurance	3 351	5 192	7 877	10 336	12 081	14 017	16 407	18 658
Property, renting of movable property, corporate services, research and development	3 179	3 536	4 585	6 032	7 404	8 896	10 494	11 734
Civil service, defence, social security	3 299	3 994	5 324	6 914	8 321	9 608	11 460	11 788
Education	2 894	3 423	4 206	5 249	6 325	7 426	8 994	9 422
Health care, veterinary and social work	3 043	3 663	4 387	5 525	6 475	7 529	9 068	9 626
Other public, social and other services	2 543	3 127	3 950	5 023	5 806	6 720	8 097	9 266
<b>Total</b>	<b>3 286</b>	<b>3 792</b>	<b>4 644</b>	<b>5 817</b>	<b>6 894</b>	<b>8 172</b>	<b>9 676</b>	<b>10 696</b>

Source: Time Series – Labour Statistics Basic Indicators – the Czech Statistical Office, Statistical Yearbooks of the CSO.



## F.2 Numbers of Employees and their Average Monthly Pay according to Age and Education (1997)

CZK

Total		Average gross monthly pay by type of education										
Age	Total	Uncomplet- ed basic	Basic	SOU without MZ	SOŠ without MZ	SOU with MZ	ÚSV (G)	SOŠ with MZ	Post-second- ary and "post-maturi- ta" education	VŠ	Research training	Not stated
Up to 19 years	4 658	2 367	3 734	5 056	4 687	4 220	4 051	4 606				4 430
20 to 24 years	8 568	6 367	6 828	8 216	7 694	8 963	9 483	9 278	7 793	7 637	8 456	8 908
25 to 29 years	10 561	6 399	7 222	9 147	8 523	10 730	11 396	10 852	10 529	14 423	14 817	10 614
30 to 34 years	11 201	6 348	7 137	9 523	8 727	10 676	11 397	11 240	10 912	17 210	16 184	10 876
35 to 39 years	11 517	6 687	7 223	9 664	9 079	10 649	11 650	11 946	11 566	18 208	17 153	10 865
40 to 44 years	11 634	6 975	7 559	9 933	9 097	10 831	12 262	12 836	12 939	19 735	19 755	10 768
45 to 49 years	11 665	6 824	7 613	9 973	9 531	11 021	12 595	13 355	14 360	20 717	20 828	11 081
50 to 54 years	11 941	7 091	7 617	10 020	9 713	10 970	12 851	13 548	14 518	19 364	20 788	11 415
55 to 59 years	12 382	5 934	7 469	10 353	10 046	10 129	13 874	14 413	14 329	19 495	19 936	12 018
60 to 64 years	9 742	4 113	4 905	6 509	6 498	7 002	10 880	11 490	9 780	16 974	18 430	9 377
65 and more	6 912	4 267	4 475	5 515	4 974	5 438	7 104	7 622	7 344	11 470	12 805	6 993
- older pensioners	6 520	4 100	4 517	5 543	5 389	5 850	7 676	7 959	6 866	10 249	11 209	6 627
<b>Total</b>	<b>11 017</b>	<b>6 340</b>	<b>7 209</b>	<b>9 383</b>	<b>8 751</b>	<b>10 056</b>	<b>11 739</b>	<b>12 047</b>	<b>11 907</b>	<b>17 954</b>	<b>18 714</b>	<b>10 701</b>
Average age	40,32	41,82	44,43	39,16	40,84	35,05	39,30	39,74	41,08	41,64	50,21	41,87

CZK

Men		Average gross monthly pay by type of education										
Age	Total	Uncomplet- ed basic	Basic	SOU without MZ	SOŠ without MZ	SOU with MZ	ÚSV (G)	SOŠ with MZ	Post-second- ary and "post-maturi- ta" education	VŠ	Research training	Not stated
to 19 years	4 804	2 767	4 039	5 126	4 834	4 420	3 667	4 430				4 303
20 to 24 years	9 275	7 620	7 390	8 879	8 402	10 042	10 705	10 470	9 161	8 706	10 024	9 651
25 to 29 years	12 061	8 254	8 632	10 368	9 935	12 327	13 935	13 314	13 167	16 637	150 778	12 042
30 to 34 years	13 378	8 883	8 855	11 007	10 129	12 710	14 800	14 317	12 652	20 624	17 718	13 204
35 to 39 years	13 637	8 895	9 081	11 179	10 932	12 499	15 031	14 646	13 262	21 771	18 390	13 185
40 to 44 years	13 729	9 231	9 590	11 297	10 789	12 908	15 466	15 234	15 667	23 042	20 151	13 126
45 to 49 years	13 632	8 460	9 429	11 276	10 912	13 008	15 781	15 695	18 348	24 240	22 285	13 344
50 to 54 years	13 609	8 889	9 267	11 005	10 737	12 146	15 590	15 632	17 653	23 222	21 952	13 513
55 to 59 years	13 389	7 770	9 060	10 810	10 988	11 446	15 804	15 712	18 029	21 916	21 359	13 079
60 to 64 years	11 421	4 876	5 727	6 967	7 281	7 057	13 678	13 242	12 893	18 490	18 949	10 956
65 and more	7 915	5 483	4 890	5 926	5 624	5 707	8 127	8 158	7 374	12 261	12 973	8 225
- older pensioners	7 460	5 124	5 013	6 112	6 133	5 695	8 829	8 190	7 261	11 235	11 403	7 512
<b>Total</b>	<b>12 632</b>	<b>8 004</b>	<b>8 638</b>	<b>10 495</b>	<b>9 936</b>	<b>11 556</b>	<b>14 326</b>	<b>14 355</b>	<b>14 381</b>	<b>21 018</b>	<b>19 558</b>	<b>12 482</b>
Average age	40,37	41,70	43,58	39,45	40,67	33,56	38,69	41,09	42,72	42,34	50,95	41,69

CZK

Women		Average gross monthly pay by type of education										
Age	Total	Uncomplet- ed basic	Basic	SOU without MZ	SOŠ without MZ	SOU with MZ	ÚSV (G)	SOŠ with MZ	Post-second- ary and "post-maturi- ta" education	VŠ	Research training	Not stated
to 19 years	4 516	2 095	3 440	4 941	4 552	4 094	4 186	4 653				4 527
20 to 24 years	7 684	4 778	5 864	6 489	6 688	7 773	8 511	8 643	7 191	6 935	7 410	8 189
25 to 29 years	8 312	4 832	5 330	5 825	6 192	7 854	9 083	8 910	9 039	11 640	13 881	8 733
30 to 34 years	8 810	4 966	5 960	6 213	6 927	8 240	9 315	9 605	9 866	12 937	12 548	8 780
35 to 39 years	9 607	5 734	6 409	6 826	7 541	9 313	9 880	10 568	10 866	14 750	13 791	9 481
40 to 44 years	9 848	6 046	6 779	7 248	8 195	9 859	10 879	11 543	11 861	16 133	18 571	9 500
45 to 49 years	9 940	6 075	6 831	7 484	8 479	10 033	11 290	11 965	12 888	16 516	17 531	9 877
50 to 54 years	10 348	6 149	6 947	7 465	8 768	10 356	11 506	12 135	13 065	15 579	17 567	10 148
55 to 59 years	9 946	4 492	5 336	6 102	7 774	8 744	11 464	12 047	10 589	14 900	15 380	10 032
60 to 64 years	6 772	3 622	4 367	4 692	5 224	6 946	8 103	8 572	6 101	11 790	15 215	7 098
65 and more	5 192	3 272	4 138	4 315	4 324	4 928	5 843	6 473	7 284	8 674	11 235	5 505
- older pensioners	5 848	3 727	4 333	4 671	4 932	5 950	7 163	7 826	6 684	8 909	10 517	6 185
<b>Total</b>	<b>9 272</b>	<b>5 370</b>	<b>6 392</b>	<b>6 782</b>	<b>7 558</b>	<b>8 711</b>	<b>10 188</b>	<b>10 580</b>	<b>10 614</b>	<b>14 321</b>	<b>16 016</b>	<b>9 364</b>
Average age	40,27	42,25	44,92	38,48	41,00	36,39	39,67	38,87	40,23	40,80	47,85	42,00

Source: Employees' Wages in 1997.

## F.3 Average Gross Monthly Pay in Major Occupation Categories – KZAM (1997)

CZK

Total	Average gross monthly pay in major occupation categories – KZAM								
Education of the employee	1	2	3	4	5	6	7	8	9
Uncompleted basic			11 442	7 637	8 308	7 798	10 069	10 817	7 250
Completed basic			11 732	8 916	8 700	8 510	9 795	9 782	7 127
SOU without MZ			11 445	9 146	8 941	9 012	11 440	11 156	7 854
SOŠ without MZ			11 617	10 467	8 427	8 821	11 546	10 633	7 596
SOU with MZ			11 533	10 287	13 559	9 596	10 852	11 988	8 071
ÚSV (G)	15 682	11 382	13 207	11 451	12 129	9 475	12 140	11 823	8 190
SOŠ with MZ	19 672	12 147	12 918	11 748	12 239	9 978	12 499	12 623	8 301
Post-secondary and "post-maturita" education	25 315	12 651	13 122	12 433	12 726	9 325	12 639	11 057	8 386
VŠ	29 832	17 419	17 412	15 503	15 245	11 276	15 199	13 986	8 654
Research training	36 153	19 090	19 044						
Not stated	18 103	15 092	12 427	10 317	7 674	8 435	10 180	10 399	8 280
<b>Total</b>	<b>23 171</b>	<b>15 629</b>	<b>13 150</b>	<b>10 694</b>	<b>9 342</b>	<b>8 961</b>	<b>11 354</b>	<b>10 982</b>	<b>7 546</b>

CZK

Men	Average gross monthly pay in major occupation categories – KZAM								
Education of the employee	1	2	3	4	5	6	7	8	9
Uncompleted basic			***	7 831	9 880	***	***	11 433	8 701
Completed basic			16 048	9 862	10 576	9 713	11 660	10 894	8 319
SOU without MZ			13 998	11 033	11 974	9 604	11 878	11 880	8 991
SOŠ without MZ			14 997	12 557	10 510	9 323	12 075	11 354	8 668
SOU with MZ			14 162	12 493	16 271	10 441	12 490	12 544	8 801
ÚSV (G)	20 794	15 902	14 800	13 890	14 425	10 081	12 969	12 640	8 876
SOŠ with MZ	24 176	17 307	15 222	13 518	13 840	10 982	13 009	13 138	9 147
Post-secondary and "post-maturita" education	27 405	14 038	16 435	15 216	13 909	9 218	***	12 245	***
VŠ	32 700	20 089	19 068	16 697	15 834	11 927	15 197	13 900	8 386
Research training	37 865	19 564	21 140						
Not stated	22 721	16 902	14 811	13 213	11 466	9 231	11 369	11 774	10 409
<b>Total</b>	<b>28 378</b>	<b>18 702</b>	<b>15 643</b>	<b>12 580</b>	<b>12 681</b>	<b>9 671</b>	<b>11 942</b>	<b>11 879</b>	<b>8 785</b>

CZK

Women	Average gross monthly pay in major occupation categories – KZAM								
Education of the employee	1	2	3	4	5	6	7	8	9
Uncompleted basic			***	7 628	6 998	***	***	9 241	6 537
Completed basic			10 586	8 744	7 268	7 185	8 764	8 495	6 642
SOU without MZ			10 187	8 444	7 471	8 057	8 219	8 486	6 859
SOŠ without MZ			10 975	10 044	7 580	7 921	8 981	8 958	7 004
SOU with MZ			10 786	9 610	7 901	8 234	8 778	8 887	7 266
ÚSV (G)	12 462	10 421	11 773	11 061	10 024	8 358	9 018	9 533	7 519
SOŠ with MZ	15 550	10 939	11 576	11 447	10 306	8 710	9 758	9 772	7 537
Post-secondary and "post-maturita" education	20 438	11 894	12 104	11 910	10 476	9 451	***	8 089	***
VŠ	22 680	15 209	14 424	14 694	10 444	9 052	15 209	14 388	10 217
Research training	25 914	17 731	12 534						
Not stated	13 991	13 758	10 800	9 835	6 882	7 800	8 114	8 690	6 657
<b>Total</b>	<b>16 483</b>	<b>13 597</b>	<b>11 517</b>	<b>10 282</b>	<b>7 525</b>	<b>7 995</b>	<b>8 397</b>	<b>8 628</b>	<b>6 775</b>

\*\*\* Data for men and women cannot be distinguished.

Employees who, in 1997, were paid for 1,700 hours and more classified according to their education

- |  |   |
|--|---|
| 1 Legislators, senior officials and managers                             | 5 Service workers and shop and market sales workers |
| 2 Scientists and professionals (including teachers)                      | 6 Skilled agricultural and forestry workers         |
| 3 Technicians, health care personnel and teachers (including economists) | 7 Craft and related trades workers                  |
| 4 Lower administrative staff (clerks)                                    | 8 Plant and machine operators                       |
|  | 9 Semi- and unskilled workers                       |

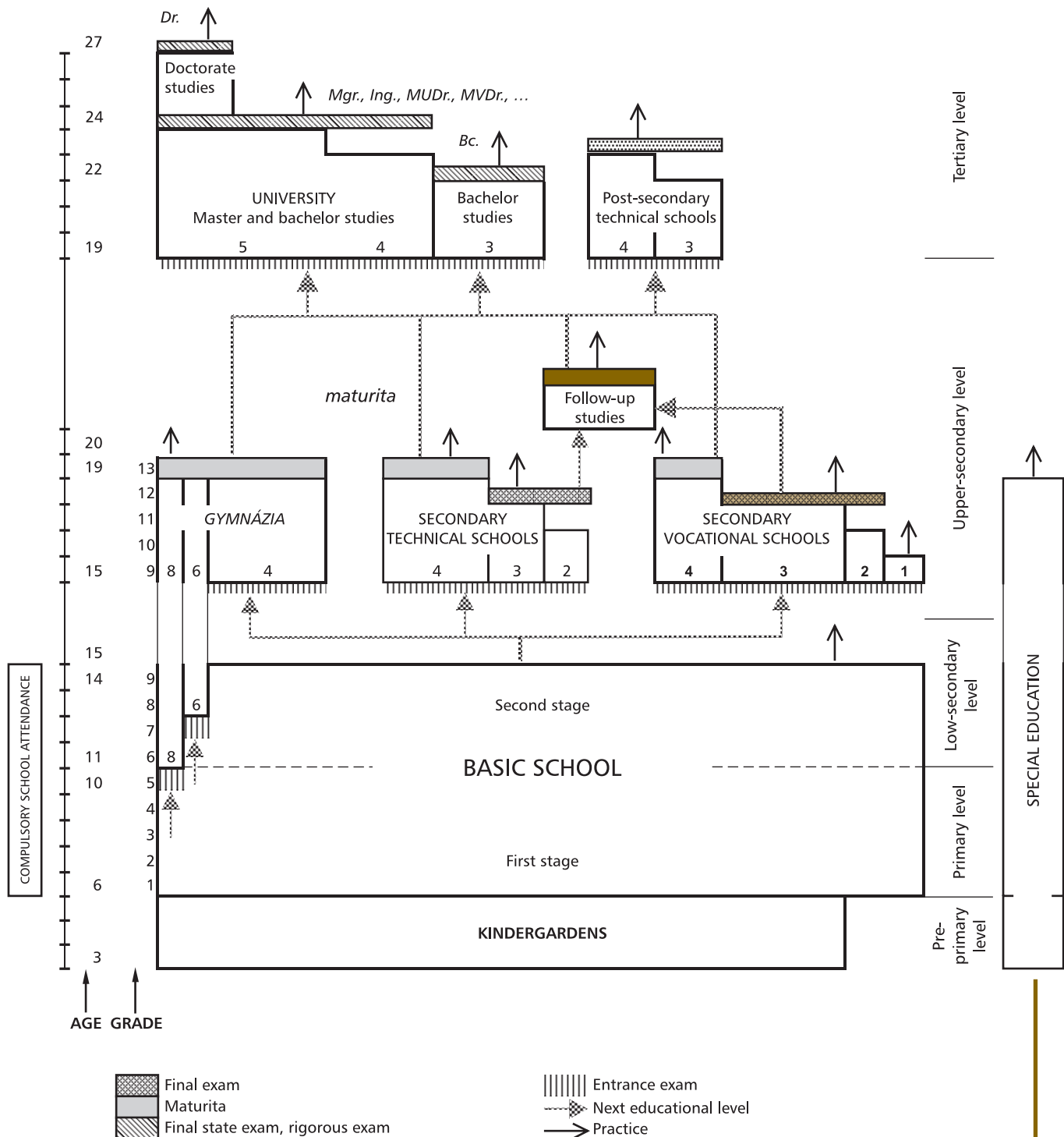
Source: *Employees' Wages in 1997*

## F.4 Gross Monthly Pay of Employees according to Type of Ownership and Gender (1996, 1997)

Gender	CZK											%
	Numbers of employees in the statistical set			Employees' average gross monthly pay						Index of average gross pay 1997/1996 in %		
	1996	1997	Total	1996		1997		1997		Total	Men	
Entrepreneurial sector	230 531	335 662	10 976	12 040	9 101	12 718	14 023	10 466	115,9	116,5	115,0	
Non-entrepreneurial sector	47 611	125 691	11 517	14 408	10 314	12 181	15 046	11 087	105,8	104,4	107,5	
Private	66 978	113 836	10 316	11 313	8 439	11 748	13 087	9 291	113,9	115,7	110,1	
Co-operative	9 011	12 324	8 429	9 456	7 465	8 834	10 203	7 800	104,8	107,9	104,5	
State	88 114	154 167	11 299	12 643	10 048	12 308	14 130	11 054	108,9	111,8	110,0	
Municipal	5 452	22 873	10 713	12 792	9 732	11 961	14 554	10 683	111,6	113,8	109,8	
Political parties, associations	459	807	9 186	9 825	8 505	9 644	10 664	8 723	105,0	108,5	102,6	
Foreign	3 441	12 154	13 288	17 590	10 555	14 782	18 799	11 613	111,2	106,9	110,0	
International	16 542	32 162	12 605	13 966	10 129	14 601	16 219	12 038	115,8	116,1	118,9	
Mixed	88 145	113 030	11 338	12 424	9 393	13 500	14 663	11 421	119,1	118,0	121,6	
Total	278 142	461 353	11 069	12 245	9 449	12 572	14 166	10 730	113,6	115,7	113,6	

Source: *Employees' Wages in 1997*.

# EDUCATION SYSTEM OF THE CZECH REPUBLIC (valid from 1996/97)



## BASIC TERMS IN THE AREA OF EDUCATION

### *ISCED 1997 – International Standard Classification of Education*

In order to facilitate the international comparison of education systems in this publication, we have used the International Standard Classification of Education (ISCED). This classification is the result of joint action by various trans-national organisations. At the suggestion of the United States, it was approved by the UNESCO General Conference in Paris in 1978. Its modified version, ISCED 1997, allows for finer distinctions within individual levels as well as between levels. The most important change is the introduction of level 4, which will include post-secondary, but not tertiary, education (in the Czech Republic, this relates to follow-up courses, for example). The first data collected using this classification will be published in 2000. The following overview shows the levels and types of education within the Czech education system and their equivalents according to the ISCED updated version. This classification reflects the new efforts of international organisations to recognise levels of education achieved in a non-traditional manner (continuing education, re-training). Apart from this classification, we also devote attention to the specific position of continuing education.

**Pre-school education**, i. e. education prior to basic school (kindergartens, including special kindergartens, the preparatory stage of *pomocná škola\** (auxiliary special school), the preparatory class of special basic school and *zvláštní škola\** (remedial special school), preparatory classes for children from socially and culturally disadvantaged backgrounds)

#### **ISCED 0 – Pre-primary Education**

**First stage of basic school**, 1<sup>st</sup>–5<sup>th</sup> grade of basic and special basic school, 1<sup>st</sup> and 2<sup>nd</sup> stage of remedial special school, auxiliary special school

#### **ISCED 1 – Primary Education or First Stage of Basic Education**

**Second stage of basic school**, 6<sup>th</sup>–9<sup>th</sup> grade of basic school, 2<sup>nd</sup> stage of special basic school, 1<sup>st</sup>–4<sup>th</sup> grade of multi-year *gymnázia* and of eight-year courses at conservatories, training courses with specially adjusted study plans, *praktická škola\** (practical school), 3<sup>rd</sup> stage of remedial special school, courses for the completion of basic education, courses for the completion of education provided by remedial special school

#### **ISCED 2 – Lower Secondary or Second Stage of Basic Education**

**Secondary education**, four-year *gymnázia*, the upper stage of multi-year *gymnázia*, courses at secondary technical schools which are completed by a final examination and the “*maturita*” examination, 5<sup>th</sup>–6<sup>th</sup> grade of eight-year courses at a conservatory, 1<sup>st</sup>–4<sup>th</sup> grades of five- and six-year courses at a conservatory, 1<sup>st</sup>–5<sup>th</sup> grades at special a conservatory, courses at secondary vocational schools which are completed by a final examination, courses at secondary special schools completed by a final examination and a “*maturita*” examination, studies of individual subjects at a secondary school, re-training courses completed by a final examination

#### **ISCED 3 – (Upper) Secondary Education**

**Nástavbové studium\*** (follow-up courses) etc., training courses taken after the completion of secondary schooling, re-training courses which require previous secondary schooling, courses which last from six months to two years, *post-maturita*” studies at language schools which are accredited by the Ministry of Education, Youth and Sports

#### **ISCED 4 – Post-secondary, Non-tertiary Education**

**Post-secondary technical education, Bachelor's courses, Master's courses, continuing education** after graduation from a HE institution (which does not lead to a degree), education of secondary school graduates provided by HE institutions, two final grades at conservatory and special conservatory

**ISCED 5 – First stage of tertiary education (not leading directly to an advanced research qualification)**

**Doctoral study programmes leading to the PhD. degree**, the former research training leading to the CSc. degree and DrSc. degree ( Candidate of Sciences and Doctor of Sciences respectively)

**ISCED 6 – Second stage of tertiary education (leading to an advanced research qualification).**

**Further education, continuing education, and adult education:** this is education which follows after the completion of initial education within the education system, after an individual joins the economically active population. It is provided in various forms, the lengths of courses vary, as do forms of certification and sources of funding (the government, employers, trade unions, foundations, participants themselves, etc.). The spectrum of providers is also diversified (companies, non-profit organisations, churches, etc.). Courses within continuing education are, to a considerable extent, also provided by schools. This type of education may be divided into four types: (1) in-service training, (2) re-training, (3) part-time courses (while in employment), (4) education as interest .

## STATISTICAL CLASSIFICATION OF OCCUPATIONS USED

### *OKEČ – Sector Classification of Economic Activities*

This classification has been drawn up in compliance with rules that are binding for the establishment of sector classifications by member states of the European Communities. This means that this classification is also compatible with the International Standard Industry Classification – ISIC.

The classification covers all working activities carried out by economic entities. In general, each activity is established by combining criteria relating to work, production technology, information network, materials and products. The components of each category normally include units of organisational structure, the activities of which cover in terms of their results one or more groups or sub-groups of products, industrial works or services. The individual categories are defined using characteristic results of activities. In some cases, however, it is the production process, not the resultant product, that is important for the classification in categories.

The classification is used to distinguish between economic entities (not products or services). Production units are classified according to their major economic activity. The classification of employees according to OKEČ has no relationship to the job they perform, nor is it related to the area or level of their training.

### *KZAM – Classification of Occupations*

This classification has been established within the framework of the transformation of the Czechoslovak classification system to meet the needs of the market economy and allow for international comparison of statistical data. It has been created on the basis of the **International Standard Classification of Occupations – ISCO-88**, which was drawn up by the *International Labour Organisation (ILO)* in Geneva. This classification covers jobs, i. e. specific activities performed by an individual (even if it is not his/her occupation), which are the source of his/her main income from work. The classification groups jobs according to similarity of types of activities performed as well as of qualifications required to fulfil tasks and obligations in a job. It is irrelevant where, i. e. in what organisation or what sector, the job is performed. There are two dimensions used in the definition of major categories within this classification: the level of education, which is a function of the scope and complexity of tasks involved, and the specialisation of education, which reflects the type of applied knowledge, instrument and equipment, material or the nature of goods produced or services provided. The classification concentrates on the qualification required to perform the relevant tasks. It is not concerned with whether or not the individual is really qualified to perform the given job.

The classification includes 9 major categories, 28 sub-categories, 119 groups and 500 sub-groups. Eight major categories are established with regard to the level of education. Category 2 covers jobs which normally require higher education (according to ISCO it must be university-type education), possibly including a Bachelor's degree. Category 3 requires a full secondary, post-secondary technical education or a Bachelor's degree (according to ISCO, it must be higher than secondary, but not higher education). Categories 4 to 8 require a secondary or full secondary education (according to ISCO, a period of training while in employment may be necessary for this level (this may be formalised by means of an apprenticeship contract), or employment experience which may complement formal training or replace it in part

or in full; a lower secondary education is sufficient in the CR, this is the second stage of basic school). In category 9, basic education suffices (according to ISCO, it may even be primary education, i. e. the first stage of basic school). A more precise description of the ISCO classification is stated in brackets where it provides fuller information:

- I. Legislators, senior officials and managers** including managers of small companies
- II. Research and intellectual workers** (*Professionals*) jobs which require a university degree, i. e. teachers, economists, physicians, engineers, etc.
- III. Technicians, medical personnel and teachers** (*Technicians and associated professionals*) these jobs require a full secondary education (with “*maturita*” examination) or post-secondary technical education. This means that it includes a small group of teachers, but a group of financial staff, medical staff, etc.
- IV. Lower administrative staff** (*Clerks*) this category includes lower administrative staff who carry out simple administrative tasks, desk clerks, etc.
- V. Service workers and shop and market sales workers**
- VI. Skilled agricultural and forestry workers**
- VII. Craft and related trades workers** jobs which require craft skills
- VIII. Plant and machine operators and assemblers**
- IX. Semi- and unskilled workers**
- X. Armed Services personnel**

### Unified Classification of Jobs

This classification was used before 1990 based on *Decree no. 173/80 Coll.*, which related to *a unified database of organisations*. This classification covered the jobs, i. e. specific activities within a specific sector of the national economy, which the individual performed and which constituted the source of his/her main income from work. The basic classification contained four categories: *I. Production workers (including repairs and maintenance), II. Operators and service workers, III. Other workers, IV. Persons outside permanent classification.*

### Auxiliary Classification N (auxiliary classifier)

For the purpose of establishing a time series by means of combining censuses and labour force surveys data, a classifier has been set up (for the purpose of linking the data, the 4<sup>th</sup> level of KZAM classification has been used). This is the classification of occupations which, at the second level, contains 48 groups of occupations. The data in tables in the annex as well as in the actual text is only classified using the main categories:

- N1 Agricultural, forestry and fisheries workers**
- N2 Workers concerned with the exploitation and treatment of raw materials in mining, energy and water management**
- N3 Workers-processors (producers, repair and maintenance people)**
- N4 Construction workers**
- N5 Operators and service workers**
- N6 Technicians**
- N7 Managers and administrators**
- N8 Workers in education, culture, health care, science, research and other non-production workers**



## CHARACTERISTICS OF EMPLOYMENT SURVEYS

### *Labour Force Sample Surveys (Czech Statistical Office)*

Since December 1992, the Czech Statistical Office has been conducting *labour force sample surveys* which are focused on the regular acquisition of information about the development of the employment and unemployment of the population. The indicators are constructed in compliance with the international definitions and recommendations of the *International Labour Organisation (ILO)*. These are panel surveys, which are conducted throughout the whole year. Households are selected using a two-stage methodology. The selection is stratified according to districts in such a way as to ensure the provision of representative data for each quarter of the year. The selected set includes more than 28,000 households on the entire territory of the Czech Republic (0.8% of all permanently lived-in flats). Approximately 72,000 respondents of all age groups are surveyed. Out of these, some 60,000 are aged 15 years and over. This scope of the sample makes it possible to obtain a very reliable estimate of the basic characteristics of the labour market at a national level. Moreover, regional estimates are provided, which are sufficiently reliable. A very important part of data processing is the extension of this to the full population.

For the purpose of analysing the employment and unemployment of the economically-active population and graduates, tables have been prepared for this publication that include data relating to all economically active people, the employed and the unemployed. Similar overviews have been drawn up relating to graduates. The category of graduates includes groups of 14-to-19 year-olds without an education and with a basic education, vocational school graduates (without the "*maturita*" examination) aged 17 to 23, university-degree holders aged 23 to 29, others aged 18 to 24 – all broken down by occupation.

The tables have been prepared with the purpose of presenting a picture of the employment of people educated in a certain group of fields of study according to the Classification of Occupations – up to level 4 of this classification. They show the number of people (individuals in households) as an annual average of ascertained quarterly data. With regard to the time schedule for the assignment, the data includes two time sections with the length of one year, which are composed in a similar manner (the last quarter of 1997 and three quarters of 1998, and, for the purpose of comparison, also the last quarter of 1993 and three quarters of 1994).

### *Unemployment Surveys (Ministry of Labour and Social Affairs)*

Since 1990, unemployment has been systematically monitored in the Czech Republic. The Ministry of Labour and Social Affairs, through the network of labour offices, collects data on unemployment. In April and September, this data is complemented by regular ***Unemployed Graduates Surveys***. In compliance with the Labour code, these are surveys of registered job seekers, whose total length of employment has not amounted to two years subsequent to successful completion of studies (training). This period of time does not include military service, community service which substitutes for military service, or maternity leave. Unlike labour force surveys, all graduates are included – not only those who have already worked – broken down by field of study and by type of education. The basis for calculations is the number of graduates in the last two years. Graduates are also classified in categories of total unemployed and newly unemployed (those who have not had a job since their graduation). The results are summarised at the level of districts.

The data is annually assessed and published by the Ministry of Education, Youth and Sports in the ***Report on Employment of Graduates in the Labour Market***.

## COUNTRIES OF THE EUROPEAN UNION AND OECD

### *1. European Union*

Austria  
Belgium  
Denmark  
Finland  
France  
Germany  
Greece  
Ireland  
Italy  
Luxembourg  
Netherlands  
Portugal  
Spain  
Sweden  
United Kingdom

### *2. Organisation for Economic Co-operation and Development*

Australia  
Austria  
Belgium  
Canada  
Czech Republic  
Denmark  
Finland  
France  
Germany  
Greece  
Hungary  
Ireland  
Island  
Italy  
Japan  
Korea  
Luxembourg  
Mexico  
Netherlands  
New Zealand  
Norway  
Poland  
Portugal  
Spain  
Sweden  
Switzerland  
Turkey  
United Kingdom  
United States

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## *The Institute for Information on Education*

The Institute for Information on Education (IIE) is a subsidised organisation which is directly managed by the Ministry of Education, Youth and Sports.

Pursuant to Law no. 89/1995 Coll. On State Statistical service, the IIE is authorised to perform state statistical services in the sector of education. On the basis of this authorisation, it collects statistical as well as other information on the performance of schools, educational facilities, employment, wages and economics in the area of education. The Institute processes and analyses the data for the purpose of efficient management and administration of the sector.

In addition to domestic sources of information, the Institute also uses international sources and takes active part in their development (e. g. the European information network EURYDICE of the European Commission, close co-operation with the Organisation for Economic Co-operation and Development, the Council of Europe, UNESCO and other institutions).

The results of statistical surveys and many other activities are published by the Institute in daily press and, for the needs of the professional as well as the lay public, in various books.

Information is available on the following address:

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## *The National Training Fund*

The National Training Fund (NTF) is an independent foundation, which was set up in 1994 by the Minister of Labour and Social Affairs within the Phare programme for the promotion of human resources development. The NTF's mission is to contribute, by means of human resources development, to the transformation of the society and economy and to the process of the Czech Republic's integration into the European Union.

Since its establishment, the NTF has sought to enhance standards of management of education, expand the supply and availability of education, guarantee quality and develop a new culture of human resources development and management in companies. The scope of NTF's activities has gradually expanded. At present, there is a National Co-ordination Unit of the Leonardo da Vinci international programme at the NTF (the programme promotes projects in the area of vocational education), PALMIF and SWIF funds, which provide resources for programmes in the area of the development of labour market and social services. There is also the National Information Centre which provides information and co-ordinates information services in the areas of vocational education and labour market.

An important part of the NTF's activities includes analytical projects, which are implemented by the National Observatory for Vocational Education and the Labour Market. The Observatory is an NTF unit which is also part of the network of similar facilities in the countries that implement the Phare and Tacis programmes, and which is supported by the European Training Foundation (ETF). The Observatory has successfully completed analytical studies relating to the current state and future needs of vocational education and training (VET) in the CR, the roles of social partners in VET, tertiary education in the CR, continuing vocational education in the CR, issues linked to the transfer of young people from schools to employment, and qualification needs and institutional development of the Ostrava region. Furthermore, it provides annual selected statistical labour market and education indicators. Apart from its own products, the Observatory has the access and capacity to provide studies prepared in partner countries and comprehensive comparative overviews compiled by the ETF. As regards broader international projects initiated by the ETF or other EU institutions, the Observatory recommends the involvement of Czech experts and arranges contacts between these experts and the institutions concerned.

NTF staff have also provided professional consultation services to the teams working on this publication.

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## **HUMAN RESOURCES IN THE CZECH REPUBLIC 1999**

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***Human Resources in the Czech Republic 1999*** is aimed to serve both the public and policy-makers, decision makers, managers at all levels, teachers, students and R&D workers ... In addition to basic information about the topic, it therefore contains professionally-focused information and analysis. Human resources are perceived as the potential of the population in terms of the knowledge and skills gained via education as well as by other means which has an impact on economic and social developments in society.

The relations between spheres that usually are described separately – education system, contemporary labour market and higher future demand of the knowledge and information society on real competencies of population - are showed by a unique way. The issue of social adjustment to the new economical conditions is not omitted. The important leading topic of the publication is readiness of the Czech Republic to join the developed countries - especially the European Union countries. This broad range corresponds with the interdisciplinary composition of the team of authors.

***Chapter I*** focuses on the situation in lifelong learning. They inquire how far processes have been initiated in the Czech Republic to modify the education system in to foster effectively the development and enhancement of human resources and their competencies. The terms such as benefit of education and human capital are explained. The attention is paid not only to the initial education at schools but also to the continuing education. The publication contains valuable and to the Czech readers not very known information on this matter.

***Chapter II*** attempts to answer the question of the way in which human resources are being used in the labour market under conditions of growing complexity of the work, and in particular, whether or not the education of the labour force is sufficient in this respect. Special attention is paid to the situation of school graduates entering the labour market and to policies aimed at to improve their chances of finding jobs.

The objective of ***Chapter III*** is to broaden the vantage point from which to view the level of readiness for the labour market and to do so by creating a finer picture of the real competencies of the population. This is based on a survey of adult literacy which the Czech Republic joined in 1998.

***Chapter IV*** examines the question of whether or not people are sufficiently motivated to perform efficiently at work - both financially and in terms of life values. Another question discussed here is whether or not certain problems associated with necessary motivation may not be exacerbated by the way in which the “social net” currently functions.