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ABSTRACT

The current recession in the Czech Republic is driven by aggregate demand, unsustainable growth of wages, weak enforcement of the legal system, non-operational bankruptcy law, and poor corporate governance. The wage dispersion has been growing continuously, and wage setting has become increasingly more responsive to market forces. Education has become more highly valued on the labor market. Income inequality has increased considerably. The current recession should cause a substantial increase in the low-income share of the population and a heavier reliance on social transfer. The unemployment rate has been rising steadily for almost 3 years, is currently 8 percent, and should surpass 10 percent by the end of 1999. The share of the population with secondary-level vocational education is extraordinarily high and highly stratified; workers have few of the flexible skills required for success in the changing labor market. Links between labor market needs and the vocational system are weak, as is involvement of social partners in vocational education development. Social policies, such as the high level of the state-guaranteed minimum income defining eligibility for social support benefits, act as work disincentives. (Appendixes include: tables; sources of the economic recession; schemes of labor market administration; and map of district unemployment rates. Contains 26 references.) (YLB)

Background study on employment and labour market in the Czech Republic

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Prague
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Foreword

This study is part of the preparation process for the accession of the Czech Republic to the European Union. The study gives a factual description to allow an evaluation of the readiness of the country to participate in the Single Market with respect to the labour market and employment policies, and also identifies key issues in this area to be addressed in the pre-accession process. The study provides a background for the employment reviews prepared by Directorate General V of the European Commission and has been written under the supervision of DG V and the European Training Foundation.

The study was conducted during the first major economic downturn in the Czech Republic -ignoring the initial shock of transition - and in a general air of disillusion at the collapse of the Czech economic miracle of transition. These circumstances may have had the effect of making us paint rather too gloomy a picture. Our general impression of the labour market is in fact quite favourable. However, we believe that it is important to stress the existing problems and even to challenge some traditionally optimistic views.

The study has many objectives to meet in a limited space, which will necessarily cause some readers to demand more detailed descriptive work, while others would prefer a greater analytical focus. Further, given the vast amount of statistical and legal information surveyed in the study, it is likely that some errors will remain uncorrected even after careful checks. All of them are our sole responsibility. Finally, to facilitate orientation in the tables in the main text, they are numbered following the guidelines of the project. We also provide additional and/or more detailed tables in the appendix and number these consecutively in the order of appearance within chapters.

The study was written according to the Terms of Reference of DG V and the European Training Foundation, and an outline and guidelines provided by the EU advisers: Susanne Oxenstierna, Stockholm University, and, especially for Chapter 6, Japp de Koning, Netherlands Economic Institute. The drafts of the report were discussed at three workshops during spring 1999 in which the national experts from the Central and East European Countries writing the corresponding background studies for their countries participated. The study was presented at a local workshop organised by National Training Fund, to representatives of Czech governmental institutions and social partners in July. Final editing was done by Ms Oxenstierna, and Mr Timothy Chamberlain of Chamberlain Language Services, Stockholm.

We would like to thank all various experts, researchers, and administrators who provided manifold useful comments and corrections and who helped us in collecting both data and ideas. Special thanks go to Jaromir Coufalik, Vera Czesana and Olga Ilyina of the National Training Fund, NTF. Our assistants at CERGE-EI provided excellent research support. Last, but by no means least, we wish to thank the EU advisers and the project's co-ordinators from DG V and the European Training Foundation, Hjordis D'Agostino and Peter Greenwood, for their invaluable guidance, feedback, and encouragement. The comments from Raul Eamets and Henrik Huitfeldt were also very helpful.

Prague, July 31, 1999

Daniel Munich

National Expert and Team Leader

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Executive summary

The Czech labour market is now completing the first decade of transition from a planned system to a market economy. While many important steps have been accomplished along the way, others remain to be addressed and are especially pressing today, during a protracted economic recession. We have identified two sets of such issues. The first set, related to the recession and quickly rising unemployment, includes the high taxation of labour, work disincentives of the welfare system, the limited scope and uncertain effectiveness of the active employment policies, and the high regional variation in labour demand combined with the traditionally low territorial mobility of the labour force. The second set of issues requires long-term solutions and includes the age bomb, inefficiencies in the schooling system, illegal foreign employment, and the low educational attainment and labour market attachment of the Romany population.

The current recession is mainly driven by aggregate demand, with standard transmission mechanisms, making it similar to cyclical recessions in developed economies. The unsustainable growth of wages (2.5 times faster than labour productivity growth) was the most important labour market-related cause of recession, and while this came to a halt in 1998, There are also microeconomic structural factors contributing to the severity of the recession, including the weak enforcement of the legal system, the non-operational bankruptcy law, and poor corporate governance. The necessary privatisation of the banking sector is now finally under way, leading to a tightening of banks' credit policies, which in the absence of other sources of external finance is driving many of the still-surviving old-fashioned firms into deep economic problems. These factors combine with a tight fiscal situation for the government and are likely to hinder the country's economic performance in the near future.

The wage dispersion has been growing continuously up to now, and wage setting has become increasingly more responsive to market forces as the transition has proceeded. In particular, education has become more highly valued on the Czech labour market and the value of university degrees especially is still growing. Income inequality also increased considerably. Whereas in 1988, pensioners occupied most of the bottom decile, by 1996 they had moved to the lower middle-income bracket, and had been partly replaced by youth. The extent of redistribution from the middle class to the poor seems to be high in comparison with the most redistributing Western countries. Using this comparison, much more re-distribution occurs in terms of taxes and considerably more in terms of social benefits. It is also likely that the current recession will cause a substantial increase in the low-income share of the population and a heavier reliance on social transfers. Moreover, the social security and health insurance systems are making few preparations to cope with the ageing population, with the crisis looming around 2007.

For an average-wage employee, the net wage (net of all social security contributions and income taxes) constitutes on average 52 % of the employers' total wage-costs, as labour taxation is among the highest among OECD countries. This not only lowers labour demand, but also creates incentives for tax evasion on the part of both firms and workers.

The total size of the population has been stable up to now, but it will change substantially over the next 30 years. Substantial ageing is expected to start in the second half of the next decade. The gross birth rate is now at its lowest point in the last two centuries and ranks bottom in Europe. Emigration

appears to be a negligible source of changes in the labour force size. Internal (within-country) migration was relatively low in the early 1990s and actually appears to have declined since then.

The transition witnessed a persistent decline of employment in agriculture, mining, and other heavy industries and these declines are likely to continue. The current structure of employment is not much different from that of the EU countries. Three-quarters of all those employed work in the private sector and the private/state mixed sector. The country has a very low proportion of part-time employment by OECD country standards for both genders.

The labour market participation rate is very low among the Romany population due to both the low level of educational attainment in this group and ethnic prejudices of employers. Over the last few years, foreign employment has become a significant substitute for local low-skill labour, especially in the construction industries. At the same time, illegal foreign employment (especially from former Soviet states) has grown. Foreign workers often work under safety and pay conditions that are far from acceptable to local labour.

The unemployment rate has been rising steadily for almost three years now. It currently comes to over 8 % and is likely to surpass 10 % by the end of 1999. It is largely driven by low aggregate demand, and more downsizing is now likely to occur in many large enterprises that have not undergone effective restructuring and that are often major local employers. Further, the unemployment outflow rate, which had been about four times larger than rates experienced in neighbouring countries, is now declining steeply. Labour market rigidities contributing to unemployment and especially long-term unemployment include the low territorial mobility of the workforce. This is partly caused by the fact that the housing market is burdened with rent ceilings and uncertainties regarding property rights. The specific unemployment rate of recent graduates of all school levels and types exceeds, but not by far, the total unemployment rate of the given educational group.

The share of the population with secondary-level vocational education is extraordinarily high and highly stratified. This provides workers with few of the flexible skills required for success in the changing labour market. This is likely to result in a skills mismatch, only further reinforced by the low territorial mobility. The enrolment in general secondary programmes remains by far the lowest in OECD countries and despite the high proportion of the population with secondary education, the share of people with tertiary-level education, albeit growing, remains very low compared to the OECD average. The pecuniary returns to education are already quite high and are still growing for both genders. The demand for university education is permanently much higher than the supply. There are new international comparative indications that the quality of Czech human capital may not be as high as the educational attainment measures suggest. Further, the extent of the desirable life-long learning is still low.

The links between labour market needs and the vocational system are weak as well as the involvement of social partners in the development of vocational education. The state provides financial support to private vocational schools. However, the actual funding varies by offices and over schools, with more discretion being applied to private schools. Private schools receive less resources than state-run schools and also face higher uncertainty regarding future funding. The provision of continuing training constitutes a free independent market. This leads to high flexibility and availability of programmes, and diversity among training institutions and their services. However, there is also weak co-ordination and availability of information about particular programmes, and mechanisms for assessing quality do not exist.

Except for certain sectors (mining and metal works, railways, chemical works) trade unions are perceived as being rather week. While trade union coverage is relatively low (about 30 % of employment), their influence is likely to be stronger in the companies that are in need of

restructuring and therefore in need of wage cuts. There is little government interference in wage setting by employers and the minimum wage level is very low. The labour code offers substantial protection for women and especially mothers. The effects of these measures are unclear.

The high level of the state-guaranteed minimum income defining eligibility for social support benefits results in a large number of benefit recipients. The total sum of welfare benefits represents a welfare trap for specific types of households. Further, especially low-skill workers and employers are likely misusing the sickness insurance scheme.

Pensions are provided by a state-guaranteed pay-as-you-go system. The system is currently in deficit and in the absence of further increases in the retirement age or cuts in the level of pensions, it will most likely become unsustainable. The current pension payment formulas are extremely egalitarian. Early retirements in 1998 constituted almost half of all old age retirements. The fiscal effects of early retirements more than outweighed the expected benefits of extending the statutory retirement age.

Unemployment compensation is not very generous, and the framework of District Labour Offices is well designed. Active labour market policies are well established, but their scope is limited and very little is known about their effectiveness and cost efficiency. The expenditures on active employment policies were higher in early transition, but later decreased to very low levels. Even after the current growth in spending, there is still much scope for expansion, which will, however, be limited by general fiscal pressures.

The institutions for EU admission are being created. This process coincides with the establishment of new regional units in the country which do not fully correspond to the territorial typology prescribed by EU standards.

Most economists believe the Czech economy has vast potential for economic growth in the medium run, but few expect the economic recovery to occur soon and to be powerful. The most important tasks to be carried out in combating unemployment and in fulfilling the growth potential have to do with macro-economic policy, the legal system and judiciary, and bank privatisation. We also believe, however, that the Czech labour market could be made significantly more flexible, thereby improving the long-term prospects of the country.

1. Introduction

1.1 The objectives of the study

The objective of this study is to survey major developments in the Czech labour market in order to provide a background analysis for the employment policy reviews prepared by Directorate General V of the European Commission on the accession countries.

This study describes the current state of the Czech Republic in terms of the employment situation, the employment policy institutions, employment policy delivery mechanisms and the connection between vocational education and the labour market.

We analyse the trends in employment, labour force participation and unemployment. We give a detailed description of the wage formation system. We analyse the state of employment policy and its institutions. At the same time this background study provides a summary of the key issues which emerge from the analysis. Besides providing a background for the employment policy review, this study tries to identify possible targets for the ESF, which starts operating in Eastern European countries in January 2000.

1.2 Methodology

We used a "data-first, experts-second" methodology in that we started our analysis by surveying the available evidence (tabulations of micro data trends and existing analytical studies) and used it to form a basis for interviews with labour market administrators and other experts. A list of and comments on the data sources are found in Chapter 11.

The experts participating in the project are Martin Cihak, Stepan Jurajda, and Daniel Munich. Both Stepan Jurajda and Daniel Munich are Assistant Professors of Economics at CERGE-EI, Prague, a joint workplace of Charles University and the Academy of Sciences of the Czech Republic. They shared the overall responsibility for the project's output. Martin Cihak is a doctoral candidate at CERGE-EI and the head of macroeconomic analysis team of Komercni banka, a.s. His expertise was primarily in the area of macroeconomics. The authors have participated in several projects on the analysis of the Czech labour market for different Czech and international institutions (Ministry of Labour and Social Affairs, Phare, NCEER, World Bank, etc.). Chapter 6 was drafted by Jaromir Coufalik and Vera Czesana of the Czech National Observatory, and was revised by Stepan Jurajda and Daniel Munich.

1.3 Limitations

There are two main types of limitations to our findings. One stems from a lack of data and/or analytical studies on a particular subject. Some issues are still subjects of academic and policy debate and the verdict is not yet in. The other difficulty is in disentangling the effects of the current economic recession from the fundamental labour market developments. The most important limitation is a consequence of the study's goal: to provide a comprehensive, internationally comparable, and truly analytical survey of any labour market in 40 pages of text.

2. Labour Market Situation in the Czech Republic

2.1 *General trends*

The most visible characteristic of any labour market is the rate of unemployment. This is also the most important current trend in the Czech labour market. After years of fluctuating between 3 and 4 %, unemployment started to grow rather abruptly in 1997, reached 8 % in early 1999 and is expected to surpass 10 % by the end of the year. Hence, recent developments cannot be properly understood in the absence of macroeconomic insights.

The Czech economy grew relatively rapidly in 1995-1996, but 1997 and 1998 witnessed a rather sharp downturn with GDP declining 2.7 % year on year in 1998. The recession even deepened at the beginning of 1999, with industrial production declining 11.3 % year on year in January and with a dramatic slowdown of inflation. There is an ongoing debate in the Czech economic community about whether this development was a result of institutional failures in transition, the long-awaited restructuring, or a business cycle. The distinction has important ramifications for forecasting labour market evolution. Our analysis suggests that the current recession, unlike the output decline in 1990-1992, is mainly demand driven, making it similar to cyclical recessions in developed economies.

The current Czech recession appears to have standard transmission mechanisms. We have identified six main reasons for the cyclical behaviour of the Czech economy and discuss these in Annex A. These macroeconomic factors currently work together to depress the aggregate demand, which in turn decreases prices and output, lowers the external imbalance and increases unemployment. The most important macroeconomic cause of the current recession from the labour market point of view was the unsustainable growth of aggregate wages. This might occur again. Even though GDP declined by over 4 % in the last quarter of 1998, real wages grew by 2.4 % in the same period. Further, nominal wage growth is likely to slow down by less than inflation in 1999. See Table 2.1 for the development of major economic indicators over time. A detailed account of other macroeconomic time series is given in the appendix Table A2.1.

Table 2.1: Economic Development in 1990-1999.

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999*
GDP (1990=100%)	88.5	85.6	86.1	88.9	94.5	98.2	99.2	96.5	96.3
GDP (y/y, %)	-11.5	-3.3	0,6	3.2	6,4	3,9	1,0	-2.7	-0.2
GDP per capita (1990=100%)	89.0	86.0	86.4	89.1	94.8	98.7	99.7	97,0*	96.8
GDP per employee (1990=100%)	93.6	93.0	95.0	97.3	100.9	104.2	106.3	106.0	106.5
Inflation (y/y, %, average)	56.6	11.1	20.8	10.0	9.1	8.8	8.5	10.7	3.1
Real Wages (1990=100%)	73.7	81.2	84.2	90.7	98.6	107.3	109.3	107.9	112.8
Real Wages (y/y, %, average)	-26.3	10.2	3.7	7,7	8.7	8,8	1.9	-1.3	4,5
Employment (y/y, %, average)	-1.8	-0.9	-0.5	-0.3	1.7	-3.0	-1.6	-0.6	0.7
GDP per employee (y/y, %, average)	-6.4	-0.7	2.2	2.4	3.7	3.3	2.0	-0.2	0.4
Registered Unempl. (%, end year)	4.1	2.6	3.5	3.2	2.9	3.5	5.2	7.5	9.6
ILO Unemployment (%, end year)	n.a.	n.a.	3.9	4.0	3.4	4.3	5.4	7.3	9.5
Regist. Job Applicants / Vacancies (end year)	4.6	1.7	3.4	2.2	1.7	2.2	4.3	10.3	n.a.

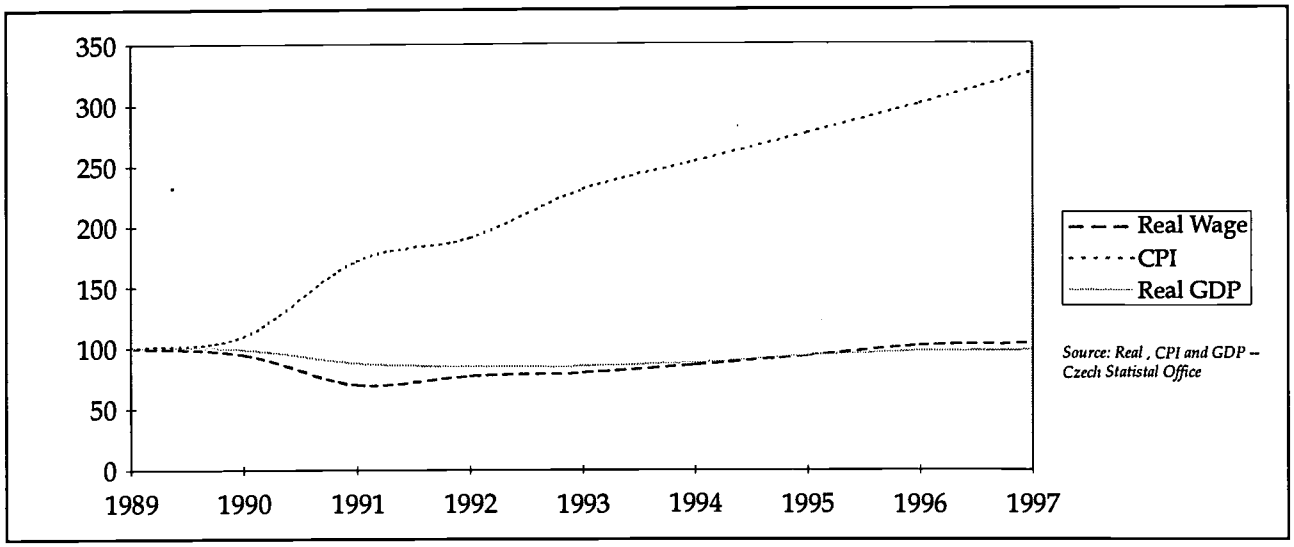
Source: CSO, calculations by authors.
** Forecasts by Komercni banka.*

While we believe the macro factors to be important sources of the current recession and especially of its timing, there are also microeconomic structural factors contributing to the severity of the recession, and these are more relevant for our discussion of the labour market.

Structural factors

Among the fundamental causes of the unfavourable situation is the deficient form of Czech privatisation, which in many cases transferred enterprises to owners who lack long-term commitments and have little capital, both financial and human. The transfer of ownership into appropriate hands was then hampered by a poorly functioning Czech stock market. Poor corporate governance, little shareholder protection, and "soft" bank loans helped many, especially large, Czech firms to build up large debts and survive transition without major restructuring. Further, large shares of property still remain in state hands. The prime example is the delayed privatisation of the banking sector, considered by many to be a key problem of the economy. Recent plans for bank privatisation and the concurrent tightening in banks' credit policies (caused largely by the central bank's tightened bad-loan regulations) have led to a credit crunch, which in the absence of other sources of external finance is likely to send many of these old-fashioned firms under. Finally, one of the most pressing issues seems to be the weak enforcement of the legal system in general, and the non-operational bankruptcy law, which delays the necessary reallocation of labour and capital. These factors then combine with the tight fiscal situation resulting from the pressure of mandatory payments and are likely to hinder the Czech economic performance in the near future.

Graph 2.1: Index of CPI and GDP



2.2 *Wage structure, social security and taxes*

Following the start of transition, real wages declined sharply, as illustrated in Graph 2.1. The initial fall in wages was caused by a jump in the price level following price liberalisation. Wages began to rise in 1992 but it was not until 1996 that the real wage was back to the 1989 level (the comparison is hard to make because of the change in the quality of goods included in the CPI basket). However, for most part of the transition, wages grew much faster than labour productivity: roughly 2.5 times quicker during 1993-1998. The large positive difference between the growth rates of wages and productivity led to a "puffing-out" of the large "wage cushion" created in 1991 after the devaluation of the domestic currency. Part of the cushion remains, but its size has decreased significantly: Czech wages are now around 45 % and productivity 49 % of the EU average. From this point of view, it was crucial that in 1997-1998, the relationship between the growth of wages and productivity started to reverse.

The two restrictive government packages of April and May 1997 initiated a significant restriction of domestic demand. The government froze wages in the state sector and in many large companies still under state control. These steps were accompanied and followed by a sharp restriction in monetary policy. The combined effect of these restrictions affected aggregate demand and real wages, and - with a lag - also employment. The effect culminated in 1998, when real wages fell significantly faster than productivity.[1]

Table 2.2, based on total wage bills of firms included in the Statistical Office firm census, presents this development. Another widely used wage measure is based on quarterly averages of hourly wages of employees from a large firm-based survey of employers. Using this database we also find that overall nominal wage growth slowed down during 1998: comparing second quarters of 1997 and 1996 it was 13 %, while comparing the second quarters of 1998 and 1997 it was only 10 %. Subject to inflation, overall real wages have been stagnant according to this data. The slowdown has been much more pronounced in the government sector, where the second quarter nominal wages actually declined by about 1 %.

1 In both 1997 and 1998 the biggest improvements in economic performance have been observed in the foreign-controlled sector. This sector, representing about one fifth of total industry sales, grew by more than 3 % in the first half of 1998 and led manufacturing growth. Foreign investors have also been permanently enhancing productivity in their firms, where it is currently 41% above the level in other industrial sectors.

In 1999, tariff wages were raised by 17 % in the public sector, and for the year 2000, the Czech government plans to lower employment in the public sector and increase nominal wages by 15 %. While some increase in public sector wages is understandable given the nominal wage freeze imposed in mid-1997, the signal sent to the private sector might be dangerous. In the non-public sector, the current collective wage agreements appear to be in the range of 7-8 %, actually surpassing some inflation forecasts. Non-public wages will, however, only partially be driven by collective agreements as trade unions cover only about 30 % of employment. There are preliminary indications that wages could again grow faster than productivity in the first quarter of 1999. For instance, while real wages in manufacturing, heavy industries and utilities stagnated in 1998, they grew by 6 % y/y in March 1999.

Table 2.2: Average Earnings and Wages in 1993-1998.

	Monthly Average Wage (CZK)	Monthly Average Wage Growth (y/y, %)	Minimum Wage (CZK)	Minimum Wage (% of average wage)	Nominal Annual Money Income per One Household Member (CZK), Households of employees	Real Money Income per One Household Member (1993=100%), Households of employees	Income from employment (% of (5))
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1991	3 792	15.4	2 000	52.7	n.a.	n.a.	n.a.
1992	4 644	22.5	2 200	47.4	n.a.	n.a.	n.a.
1993	5 817	25.3	2 200	37.8	52 700	100.0	84.6
1994	6 894	18.5	2 200	31.9	60 353	104.1	83.9
1995	8 172	18.5	2 200	26.9	72 332	114.4	84.3
1996	9 676	18.4	2 500	25.8	82 912	120.5	85.5
1997	10 696	10.5	2 500	23.4	90 537	121.3	85.5
1998	11 688	9.3	2 650	22.7	n.a.	n.a.	n.a.
1999*	12 600	7.8	3 250	25.8	n.a.	n.a.	n.a.

Source: CSO, 1999 are own forecasts.

Adjustment in wage structure

The socialist wage formation system was based on a set of quite complex industry-specific wage-tariff grids, reflecting characteristics of both the given worker and the job. Even though the system reflected most of the observable systematic determinants of wages, as we think of them in Western economies, it put priority on manual labour and on the maintenance of a very small dispersion in wages. Following the economic liberalisation of the early 1990s, wage dispersion started to grow and has continued to grow up to now. Moreover, wage setting has become increasingly responsive to market forces as the transition has proceeded. To give a basic idea of the current level of wage dispersion in the Czech Republic, we can compare the top and bottom decile to the mean and median of the hourly wage rate distribution in the third quarter of 1998. While the mean hourly wage rate was 2 ECU, a stable fraction of 37 % of employees earned wages above the mean. Further, 10 % of employees earned an hourly wage rate below 1 ECU and 10 % of employees earned an hourly wage above 3 ECU. These statistics are based on the firm-based sample of Czech workers

mentioned above. The 9th to 1st decile ratio grew from 2.77 to 2.81 between the third quarters of 1997 and 1998.

The skill differentials are widening at the tails, as can be seen from Table A2.4, which presents the ratios of average wages of selected high-paying and low-paying occupations to the mean wage in the fourth quarter of 1998 and in the second quarter of 1997. The most important trend is that non-manual occupations became better remunerated during the transition, especially information technology and business occupations (accountants, managers). The wage dispersion within manual occupations was not subject to such dramatic changes. The highest reported earnings are, of course, those of managers. A current survey of about 14 000 managers covering the years 1994-1997 revealed that the average annual salary of the top manager (general director) was about US$ 30 000, which is about 6 times the average wage in a given firm.

Table 2.3: Wage structure 1990-1998: Average Monthly Gross Earnings.(CZK)

	1990	1994	1995	1996	1997	4Q/1998*
In agriculture	3 603	5 865	6 878	7 808	8 503	9 365
In industry	3 410	6 888	8 148	9 587	10 733	13 181
In services	3 026	7 285	8 554	10 151	11 184	12 173
Private	n.a.	n.a.	8 130	9 556	10 717	10 995
Public	n.a.	n.a.	8 216	9 836	10 655	11 168

Source: Statistical Yearbook of the Czech Republic 1998.
** Information System on Average Earnings, Ministry of Labour and Social Affairs.*

Table 2.3 summarises the development in wages in broadly defined sectors, and Table A2.3 presents the average gross monthly salary within each industrial sector compared to the monthly salary in agriculture. While wages in agriculture have dropped relative to other sectors, earnings have been growing rapidly in the financial sector. The other sectors that are driving wages up are public administration, defence, real estate and construction. An important question is to what extent the wage increase in education-intensive industries is simply due to rising returns to education (see below) and to what extent these differences are pure industry-specific rents. Authors' calculations for the first quarter of 1997 using the firm sample of employees suggest that while the unadjusted wage average in banking and insurance is almost 100 % above the average in agriculture, this difference shrinks to about 30 % once we take into account factors such as the age and education of banking workers. The largest pure wage premium then appears to be in mining (42 %), suggesting the existence of sizeable compensating wage differentials. One of the pressing problems of the last few years has been the very low level of average wages in the education and healthcare sectors.

Table 2.4: Average Hourly Wage by Gender.(CZK)

Year	Men	Women	Women/Men
	(1)	(2)	(2)/(1)
1994	41.2	31.5	0.76
1995	51.3	37.5	0.73
1996	60.9	43.5	0.71
2Q/1997	71.9	51.5	0.71
3Q/1998	82.1	58.9	0.72

Source: The Ministry of Labour and Soacial Affairs, Trexima, Labour Cost Information System, ISCP.

Like most other measures of wage dispersion, gender wage differentials have also grown with the transition. As Table 2.4 demonstrates, men's wages rose faster than women's between 1994 and 1996. The raw gender wage gap later stabilised, with female average wages about 30 % below the male average. When we take into account observable differences between men and women in terms of their education, experience, etc., the pure gender wage gap seems fairly stable at about 25 % over the 1995-1997 period.

One source of the growing wage dispersion has been the rising returns to education. Although the rules for centrally set wage determination did reflect the level of workers' education and experience, the premiums for human capital were kept quite low. One of the findings of studies measuring returns to education in the Czech Republic is that while in 1984, under communism, the wage of a male university graduate was 30 % above that of an otherwise comparable worker with elementary education, this difference had grown to 124 % by 1997. Further, similar dramatic growth occurred in other educational categories and the ability of attained education to "explain" the differentiation of wages has grown over time as well. Substantially lower benefits accrue from attending vocational secondary schools without a state maturita school-leaving examination. See Tables A2.5 and A2.6 and the references therein for other details on the development of male returns to education over time. The returns are still growing for both genders in 1998; they are likely to surpass levels typical for the OECD and may reach levels typical of developing countries, probably due to excess demand. This leads to at least a partial adjustment of the student demand for education, as enrolment in tertiary education has increased; see Section 6.

Table 2.5: Gross Wage Structure by Educational Attainment and Working Life Experience (1997, CZK)

School level	Gross Monthly Wage (CZK)
Primary school	7 209
Secondary vocational school	
■ with maturita exam	10 056
■ without maturita exam	9 383
Secondary technical and general education school	11 739
Tertiary level school	17 954
Number of years in the labour market	
Less than 3 years	7 994
3-5 years	9 496
6-8 years	10 826
9-11 years	11 515
12-14 years	11 785
15-17 years	12 122
18-20 years	12 338
21-23 years	12 219
24-26 years	12 124
27-29 yeas	11 894
More than 30 years	11 394

Source: CSO, Employment and Wages.

Income distribution

Income inequality has been the subject of many research studies. In his most recent work, Vecernik (1999) provides a synthetic review and a comparative analysis of several inequality issues during the whole 1988-1996 period. Using real income per household from the Microcensus data, he finds that while the lowest and highest income categories have increased their living standards during transition, the middle income households have lost about 10-20 % of their purchasing power. However, the increase in the bottom decile could be a spurious finding because of considerable demographic mobility within it, and it has been the fast advance of incomes in the top decile that has led the overall rise in inequality. He finds that the range of income inequality increased considerably between 1988 and 1996. The increase in inequality was much larger when measured using individual incomes rather than household incomes. Important shifts occurred in the composition of the lowest income group. Whereas in 1988, pensioners occupied most of the bottom decile, by 1996 they had moved to the lower middle income bracket, and were partly replaced by youth.

The extent of redistribution from the middle class to the poor seems to be very high in comparison even with the most redistributing Western countries. A study by Atkinson, et al. (1995), based on Luxembourg Income Study data, offers a comparison of the Czech Republic to other OECD

countries. It finds that the Czech social security and tax system is much more re-distributive in terms of taxes and considerably more re-distributive in terms of social benefits that any other OECD country under observation. This result is to a large extent driven by the absence of taxation of pension benefits. Finally, it is very likely that the aftermath of the current recession and growing unemployment will cause a substantial increase in the low-income share of the population and a heavier reliance on social transfers.

Social security and labour taxation

Employers' social security contributions are 26 %, while employees contribute 8 % of their gross salary. Mandatory health insurance contributions represent an additional 9 and 4.5 %, paid by employers and employees, respectively. See Table 2.7 for the full structure of the payments. While old-age pension and health insurance contributions are kept in separate accounts, the sickness and employment policy contributions are counted as revenue in the government budget. Expenditures on sickness insurance and employment policies are currently lower than the payroll contributions. The contribution rates are comparable to those of the much richer EU countries.

Table 2.6: Pensions and Social Benefits 1990-1998.

Year	1990	1991	1992	1993	1994	1995	1996	1997
Average old age pension (CZK)	1 731	2 176	2 413	2 734	3 059	3 578	4 213	4 840
% of average gross wage	51.6	55.3	52.0	47.0	44.4	43.8	43.5	45.3
Sick pay compensation rate	First 3 days 50% of quarterly average wage, later 69%, maximum of 186 CZK / day. Valid until August 1999.							
Parental leave compensation rate	Fixed amount 2 343 CZK available for up to 4 years. Conditional on full-time home care for children.							

Source: Statistical Yearbook of the Czech Republic 1998, Ministry of Labour and Social Affairs.

The Czech Republic has a progressive personal income tax imposed on gross earnings net of social security and deductibles. Deductibles are a function of the family type and size.[2] The tax rate starts at 15 % for annual earnings below 91 440 CZK (2 540 Euro).[3] The maximum marginal tax rate - imposed on annual earnings above 822 600 CZK (22 850 Euro) - was lowered from 39 to 32 % in May of this year.[4]

2 A CPI-indexed value of 28,800 CZK for every taxpayer; 14,400 for each dependent child up to four; 16,800 for a spouse unless the spouse's income exceeds 28,800 CZK.

3 For example, the average monthly nominal wage in manufacturing was over eleven thousand Czech crowns in January 1999, which would correspond to almost 150 thousand crowns a year. In this average-wage bracket (91,440-183,000), the tax is calculated as 13,716 + 20 % tax on the amount above 91,440, corresponding to an overall tax rate of 17 % for our average-wage worker in manufacturing.

4 To complete the tax map, the corporate tax rate was 35% until May of this year, when it was lowered to 31%. Simultaneously, the capital gain tax was lowered from 25 to 15%. The VAT is 22% on most commodities and 5% for a selected set of goods. Finally, there is an additional sales tax imposed on certain commodities, such as gasoline, alcoholic beverages and cigarettes.

Table 2.7: Social Security and Health Insurance Contribution Rates (% of gross wage).

	Employee	Employer	Total
Total Social Security	8.0	26.0	34.0
Of it:			
■ Pension	6.5	19.5	26.0
■ Sickness Insurance	1.1	3.3	4.4
■ Unemployment	0.4	3.2	3.6
Health Insurance	4.5	9.0	13.5
Total Social Security and Health Insurance	12.5	35.0	47.5

According to OECD (1998), the overall average Czech tax wedge (the share of all income and payroll tax contributions in the gross labour costs) is the ninth highest among OECD countries. For an average-wage employee, the net wage (net of all social security contributions and income taxes) constitutes on average 52 % of the employers' total wage-costs. The excessive taxation (especially given the level of economic development of the country) not only lowers labour demand, but also creates incentives for massive tax evasion on the part of both firms and workers. According to anecdotal evidence, non-reported wage payments or employment have become widespread in smaller firms.

The share of overall social transfers in GDP is about 20 %, which is comparable with countries such as Portugal, Spain, Greece, and Ireland, which have the lowest per capita GDP in the EU. In terms of the social transfers structure (as of 1997, according to OECD 1998), relative to these countries more is spend on health care (about 6.5 %), and relatively less is spent on pensions (about 9 %) and employment policies (0.2 %).

2.3 *Key issues*

The obvious key issue in the Czech labour market is the rising unemployment. We believe that the most important tasks to be carried out in combating unemployment have to do with issues outside the scope of the present study, e.g. an appropriate macro-economic policy, improvements in the legal system and judiciary, and bank privatisation. There are, however, other crucial issues related to unemployment, and these are subjects of our discussion. We identify two types of key issues. The first class of issues is the most pressing today, when the economic recession reveals the weaknesses of the Czech labour market. It includes (i) the high taxation of labour, (ii) work disincentives of the welfare system, (iii) the limited scope and questionable effectiveness of active employment policies, and (iv) the high regional variation in labour demand, combined with the traditionally low territorial mobility of the Czech labour force. The second type of issues covers more long-term problems: (v) the demographic age bomb, (vi) the inefficiencies of the schooling system, (vii) illegal foreign employment, and (viii) the low educational attainment and labour force attachment of the Romany (Gypsy) population, including its youth.

We have already documented the high level of Czech labour income taxation and identified its two major effects: raising costs of labour and thereby lowering labour demand, and creating incentives for entering the shadow economy and for tax evasion.

The expenditures on active labour market measures were relatively low during the second half of the 1990s, and the rise in unemployment prompted the current government to start raising them. It is however important to verify which of the active measures are cost-effective,[5] especially in the tight fiscal situation.

When the second wave of restructuring (downsizing) finally reaches certain major enterprises (previously at least partially protected by the state through bank loans), the low territorial mobility of the Czech labour force is likely to further worsen unemployment. It is therefore important to focus on commuting costs and on lifting housing market rigidities.

Around 2007 the population will start ageing swiftly and little preparation is being made in terms of reforming the social security system. The problems of the Romany (Gypsy) population now receive more attention in the public debate, but there is certainly room for more long-term solutions.

The social assistance system is based on a two-income family model. As a consequence, the level of the legal minimum living standard for a family with two or more children is higher than the nation-wide average wage. This probably causes sizeable work disincentives. The minimum living standard is uniformly set with no adjustments to local costs of living and labour market opportunities. Hence, the extent of disincentives varies across regions and is most pronounced in families with a low-skill head who has below-average wage opportunities.

There are also emerging problems in the schooling system. Although the share of the population with secondary-level vocational training is extraordinarily high even among OECD countries, the highly stratified structure of vocational schooling is likely to provide workers with few of the flexible skills required to succeed in the changing labour market. The links between labour market needs and the vocational system are weak. Further, enrolment in general secondary programmes remains by far the lowest among OECD countries and despite the high proportion of the population with secondary education, the share of university-educated people, albeit growing, remains very low compared to the OECD average.[6] While there have been partial improvements on all of these fronts for the current cohorts, the effect on the educational composition of the labour force will remain low for many years to come. Further, the traditional belief in the high quality of Czech education has recently been challenged by international studies.[7]

5 There are, for instance, studies conducted in Poland and Slovakia, suggesting little efficiency of the job-creation wage subsidy programme (e.g. Lubyova and van Ours, 1999).

6 Only about 50 % of those desiring a university degree are admitted to universities due to limited facilities and central budgetary limits, since the central budget is by far the major source of financing.

7 The Third International Mathematics and Science Study survey (TIMSS, 1997) of secondary students and the Second International Adult Literacy Survey (SIALS, 1998) measuring the cognitive skills of the population.

3. Employment

3.1 *Structural changes in employment*

The adjustments in the employment structure by economic sectors and occupations during the 1990s have been dramatic. See Table 3.1 for a succinct picture of the recent changes in employment rates by three major sectors and Table A3.1 for a detailed sectoral breakdown. Also see Table 3.2 for employment changes by major sectors and its extended version in the Appendix (Table A3.3). These tables are based on the Labour Force Survey (LFS), which was not available until 1993. Table A3.2 therefore provides a parallel time series on sectoral employment based on firm census data starting in 1990, the first year after the breakdown of communism. According to published statistics, total employment appears to have dropped by about 10 % during the first four years of transition. Using the more reliable LFS statistics, total employment in the last 5 years has been relatively stable, if somewhat declining. Even though the magnitude of annual changes in sectoral employment have declined over time, it is still relatively high. Agriculture and mining have continued to shed labour throughout transition, while wholesale and retail trade grew early on. Further, public administration and especially financial sector employment have grown steadily. The employment shifts in the other sectors do not appear to have much of a systematic trend.

Table 3.1: Employment Rates by Sector (LFS data, %)

	1994			1996			1998		
	Total	Women	Men	Total	Women	Men	Total	Women	Men
Employment in agriculture/working age population	4.7	3.7	5.9	4.0	2.7	5.3	3.6	2.4	4.8
Employment in industry/working age population	29.8	20.8	39.7	28.8	18.1	39.7	27.7	16.7	38.7
Employment in services/working age population	36.4	41.9	32.0	37.0	40.3	33.8	36.8	39.6	34.0
Non-employment/working age population	29.1	33.6	22.5	30.3	38.9	21.3	32.0	41.3	22.6

Source: LFS, 4th quarter 1998, CSO, p. 54, Winter 1996/97, p.54, Winter 1994/95, p.44,Winter 1993/94, p.44

Let us now look at some of these industries in more detail. There has been a permanent decline in agriculture and forestry employment so that employment in this sector is half of the pre-transition level, representing now only 4.3 % of total employment. This share is already comparable with many EU countries. The rate of employment decline in agriculture continued to be high in 1998 (at over 7 %). Low productivity in this sector persists and further declines in employment are likely. See also Table A2.1 for the time series depicting declines of agricultural product and employment. The pace of future employment losses, however, depends on the extent of internal and external competitive pressures on productivity and on agricultural protection policies, a frequent topic of current policy debate.

Table 3.2: Employment during 1993-1998. (LFS data)

Year	1993	1994	1995	1996	1997	1998	1998/93
Employed Total	5 044 700	5 027 100	5 111 600	4 958 400	4 881 300	4 852 900	0.96
Annual change (%)	n.a.	-0.3	1.7	-3.0	-1.6	-0.6	n.a.
Primary sector	n.a.	-5.9	-2.3	-13.3	-2.0	-7.3	n.a.
Secondary sector	n.a.	-3.3	2.0	-4.9	-2.4	-1.3	n.a.
Tertiary sector	n.a.	3.0	1.9	-0.2	-0.8	0.6	n.a.
Employed Women	2 331 100	2 323 900	2 346 600	2 167 100	2 126 000	2 101 400	0.90
Annual change (%)	n.a.	-0.3	1.0	-7.6	-1.9	-1.2	n.a.
Primary sector	n.a.	-6.8	-7.9	-19.3	-5.1	-5.6	n.a.
Secondary sector	n.a.	-5.8	2.0	-13.8	-4.1	-3.4	n.a.
Tertiary sector	n.a.	3.3	1.1	-3.8	-0.5	-0.8	n.a.
Employed Men	2 713 600	2 703 200	2 765 000	2 791 300	2 755 300	2 751 500	1.01
Annual change (%)	n.a.	-0.4	2.3	1.0	-1.3	-0.1	n.a.
Primary sector	n.a.	-5.4	1.2	-9.9	-0.4	-8.1	n.a.
Secondary sector	n.a.	-1.9	2.0	-0.2	-1.6	-0.3	n.a.
Tertiary sector	n.a.	2.5	2.8	4.5	-1.1	2.1	n.a.

Source LFS, 4th quarter 1998, CSO, p. 54, Winter 1996/97, p.54, Winter 1994/95, p.44,Winter 1993/94, p.44.
Note: Sector definitions: See Table A3.3

The initial large decline of employment in heavy industries has proved persistent. Moreover, the decrease in employment in mining and quarrying has not only been large initially, but continues to be a major source of job losses. It should be noted that employment in this sector is concentrated in two regions of North Bohemia and North Moravia.[8] Sharing borders with East Germany and Poland reinforces the resulting high unemployment in these two regions. Manufacturing, still the largest sector in total employment (27.7 %), has lost one-fifth of all jobs. Table A2.1 provides the complete time series for both industry employment and sales.

8 Mass layoffs now loom in mining in this area with few alternative employment opportunities. The trade unions threaten the government with social unrest.

To provide at least some indications of the possible extent of future changes in employment structures, we compare employment by industrial branches in the Czech Republic to the EU average in Table A3.7. According to this (heroic) comparison, there still remains over-employment in the manufacturing, mining and energy sectors (31.2 % compared to 21.7 %) and under-employment in service-oriented branches. Comparing employment by basic occupational categories with the EU average, we find interesting similarities. Only machine operators and technicians are significantly more frequent than they are in the EU.

Female employment declined significantly during early transition and has still been on the decline at an average annual rate of -1.5 % during the last 2 years. The initial decrease in female employment is likely a consequence of the full-employment strategy of communist planning. The decline in employment is present in all three major sectors, and the structure of changes is comparable with those of males, i.e. gender shares in sectors have remained relatively stable.

Table 3.3: Employment rates. (LFS)

Age group	1994			1996			1998		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
15-64	71.0	76.4	65.7	69.0	77.5	60.5	67.2	76.0	58.4
15-24	48.7	51.0	46.3	45.0	52.4	37.3	42.7	49.2	36.0
25-49	89.7	93.5	85.8	85.8	93.3	78.0	83.6	92.0	74.9
50-64	51.5	63.3	40.9	56.5	68.1	46.0	56.7	68.0	46.2
65-	5.0	8.4	3.0	5.1	8.6	2.9	4.7	8.0	2.6
15-pension age	77.2	80.1	73.9	74.1	80.6	66.9	72.2	79.0	64.7

Source LFS, 4th quarter 1998, CSO, p. 30, 39, Winter 1996/97, p. 30, 39, Winter 1994/95, p. 30, 39.

Table 3.3 provides the employment rates broken down by gender and age groups. The female employment rates (15 to 64) appear to decline after 1994, while male rates are stable.The female employment rate decline occurred in the 15-24 age category and in the 25-49 group. Female rates actually increased between 1994 and 1996 for those aged 50-64. These shifts can be traced to the changes in labour force participation, see Table 4.3 in Section 4 and the discussion therein.

3.2 *Employment in private sector*

The private sector emerged through different methods of privatisation and through the establishment of new private enterprises. The major part of privatisation was carried out during 1991 and 1994 within three programmes: i) restitution, ii) small-scale privatisation, and iii) large-scale privatisation. Restitution returned certain types of property nationalised by the communist regime after 1948 (typically buildings or agricultural land) to the previous owners. It is estimated that by 1992, between 2.7 and 4.5 % of the total fixed assets in the Czech Republic had been restored to the original owners. Small-scale privatisation consisted of public auctions of small businesses primarily in retail trade, catering and services. Approximately 22 000 units were auctioned by the end of 1992. This programme was an important first step in creating the small-scale private sector. Large-scale privatisation was the most important part of the programme in terms of the value of assets, estimated at over US$40 billion or roughly 41.5 % of fixed assets in 1991. After the programme

was completed in 1995, an estimated 75 % of productive capacity had been transferred into private hands. Due to slow bank privatisation and the ill-functioning bankruptcy law, however, large-scale privatisation seems to have had a lasting negative impact on the performance of privatised firms and the economy as a whole.

Table 3.4: Shares of Total Employment by Ownership. (%, employers census data)

Type of Ownership	1989	1993	1994	1995	1996	1997
Private	1.3	47.1	53	57.2	58.9	63.6
Private/State Mixed	-	6.4	5.9	13.4	14.3	11.4
Collective (coops)	12.9	5.7	4.8	4.2	3.7	3.3
Civic Organization	1.5	0.6	0.5	0.7	0.6	6.7
State & Local	83.8	40.1	35.8	24.5	22.4	21
Total	100	100	100	100	100	100

Source: CSO, Data refer to end of a year.

As seen in Table 3.4, in 1997 almost 64 % of jobs were in the private sector. It is also clear that the growth of employment in the private sector slowed down after 1995 when large-scale privatisation was already completed. Another 11.4 % of employment was in the private/state mixed sector in 1997. By the end of 1997, three-quarters of all those employed were working in the private sector and private/state mixed sector. The share of employment in the state and local government sector dropped from 83.8 % in 1989 to 21.0 % at the end of 1997.

The ownership statistics of the Czech Statistical Office are, however, only very imperfect indicators of ownership structure, for two reasons. First, an incestuous ownership structure is quite prevalent. The state has a decisive ownership stake in three major commercial banks. These banks effectively control investment funds that have decisive stakes in many major firms. Second, the state National Property Fund alone still effectively controls about US$10 billion, an estimated 75 % of the book value of almost 400 major officially private firms. A second source of imperfection in the reported ownership statistics lies in the infrequent updating of the codes. Often, firms do not report changes in ownership to the Office and ownership codes are therefore updated on an ad hoc basis using daily newspapers, etc. Finally, some evidence on the extent of the employment of individual entrepreneurs is provided later on in section 4, in Table A4.7, which indicates that about half a million workers (about 10 % of those employed) were entrepreneurs in 1997.

3.3 *Regional distribution of employment*

There are now eight main regions (kraj) and 77 districts (okres) in the Czech Republic, but a regional reform is underway, see Section 7.1. We will focus on the regional distribution of employment here and only refer to individual districts in the section on the regional distribution of unemployment. Table A3.4 shows the recent evolution of employment rates for major Czech regions using the Labour Force Survey data. In 1998 Prague emerges as the leader in terms of the employment rate (see also Section 4.4). Prague represents a truly exceptional thriving commercial and urban area, with all international headquarters, central administration, and 40 % of tertiary education. Hence, the unusually high percentage of female employment. At the other extreme, North Moravia - a

traditional steel mill and coal mine region - and North Bohemia are the regions where employment rates are as low as 61 %, with the female rate actually hitting 50 % in 1998. Among common characteristics of these regions is a traditional reliance on heavy industry and proximity to non-western borders. Table A3.5, based on the LFS, provides some evidence that the decrease in total employment has been evenly distributed and that the regional structure of employment is quite stable (see also Section 4.1. on demographic issues and migration).

3.4 *"Hidden employment" and "hidden unemployment"*

The most important source of hidden employment is the shadow economy. The most widely discussed type of non-reported employment is that of the foreign labour force. Unfortunately, reliable estimates of both of these are extremely scarce. Some insight into the extent of the Czech shadow economy is provided by a study of the Czech Statistical Office (Vondrus, 1999), based on the imbalances in national accounts. The results are very approximate and indirect but provide at least some sense of the possible extent of activities, which are by definition not directly observable.

Table 3.5: Estimated share of the shadow economy.

Branch	5 Wages		6 Employees	
	Bill.CZK	Share (%)	Individuals	Share (%)
Agriculture, hunting and related service activities.	11.6	12.5	13 000	9.5
Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	0.1	0.1	n.a.	n.a.
Industry Total	29.3	31.5	n.a.	n.a.
of it:				
■ Mining and quarrying	-0.2	-0.2	n.a.	n.a.
■ Manufacturing	20.0	21.5	16 000	11.7
■ Electricity, gas and water supply	-0.1	-0.1	n.a.	n.a.
■ Construction	9.6	10.3	15 200	11.1
Wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods	27.6	29.7	56 200	41.0
Hotels and restaurants	8.1	8.7	39 900	29.1
Transport, storage and communications	2.7	2.9	6 800	5.0
Financial inter-mediation	1.0	1.1	n.a.	n.a.
Real estate, renting and business activities	6.6	7.1	15 700	11.5
Public administration and defense; compulsory social security	0.6	0.6	n.a.	n.a.
Education	0.3	0.3	n.a.	n.a.

Branch	5 Wages		6 Employees	
	Bill.CZK	Share (%)	Individuals	Share (%)
Health and social work	1.6	1.7	n.a.	n.a.
Other community, social and personal service activities	3.4	3.7	5 400	3.9
Total	92.9	100.0	137 000	100.0

Source: Ondrus, Vitezslav (1999): "Stinova ekonomika a narodni ucty (Shadow economy and national accounts), Statistika No.3, CSO, Prague.

Table 3.5 provides the estimated shares of the shadow (non-reported) economy by industrial branches. More than forty % of shadow employment is in wholesale and retail sale, while it represents less than one third of the total estimated shadow wage bill. The second highest share of shadow employment is estimated in hotels and restaurants, but the wage bill in this sector seems to be rather low. The incidence of shadow employment and shadow wages in sectors with a large number of small firms supports our opinion that payroll tax evasion is much more widespread in small firms with larger opportunities to create the out-of-accounting funds necessary for the unreported remuneration of labour. The total estimated shadow employment is below 3 % of the labour force, according to this study, which we believe to be an underestimate.

Furthermore, the size of the shadow economy seems to be growing. According to an estimate by Komercni banka, the largest bank in the country, the share of the shadow economy in GDP grew from 10 to 15 % between 1994 and 1998; see Table A3.9. The main reasons for the rise in the relative size of the shadow economy include the slowdown and recession in the Czech economy in the last two years, the inability of the state to enforce more efficient legislative and tax systems, and the increasing number of employed foreigners. The number of long-term residence permits to foreigners tripled in the last five years (to about 150 thousand in 1998), while the number of legally employed foreigners doubled (from 30 thousand to 60 thousand).

Foreign employment

According to expert estimates, illegal foreign employment (mainly from former Soviet Union countries) may be similar in magnitude to the legal employment figures. Illegal foreign employment exists both in legal economic activities (construction) and illegal ones. Since there are no statistical indices available, we refer only to legal foreign employment in this section. Table A3.10 gives the distribution of registered foreign employment by country of origin (except Slovakia) and by the type of job. While the educational structure of foreign Slovaks covers workers with full higher-secondary education, qualified blue-collar workers and non-qualified workers very evenly, skilled workers represent most of the foreign employment from other countries, which does not imply that they work in jobs requiring such qualifications.

Foreign employment is predominantly concentrated in large urban areas and is negatively correlated with local unemployment rates. Foreign employees in many cases accept working, safety, living, and pay conditions well below acceptable local standards. Effects of crowding out (local labour) and complementarity (some jobs would not be accepted by the domestic labour force) coexist. Recently, there has been a decline in the number of foreign workers. As reported by the Ministry of Labour, the employment of Slovaks in the Czech Republic declined from 72 to 65 thousand between December 1996 and June 1998, while foreign employment from other countries shrank from 71 to 55 thousand workers. Whether this is a true decrease due to economic recession

(especially severe in the construction industry) or a shift to illegal employment is not clear. There have been, however, increases in the number of entrepreneurial licences issued to foreigners. Such licences represent one legal way of entering the local labour market.

Foreign employment represents on the one hand extreme competition to specific segments of the domestic labour force, while on the other hand it allows productive (construction) activities which would not otherwise be undertaken. It is important to realise that the imposition of legal limits on foreign employment could bring relief to certain labour market segments, but it could also lead to the further growth of illegal employment. Plans are now being worked out at the Ministry of Labour and Social Affairs to change the employment law in order to limit the time period for which foreigners may work in the country. This would also mean that key personnel from certain countries could work for only three consecutive years in the Czech Republic, which is in sharp contrast to the proclaimed will of the government to attract foreign investment. The agenda of foreign employment is in the hands of the District Labour Offices, which can allow imports of foreign labour depending on the local demand conditions.

There are no estimates of hidden unemployment. However, a significant part of early retirement comes from the long-term unemployed (see section 8.4). Further, there is anecdotal evidence that sickness leave (fully covered by the state) can be used in place of a temporary layoff. Medical doctors have monetary incentives to serve more customers and are therefore easy to manipulate.

3.5 *Vacancies and structural imbalances*

According to the Employment Law of 1991 firms are obliged to report all open vacancies to district labour offices. This stipulation is only partly followed, especially by employers who do not hire among the unemployed or have had bad experiences with unemployed persons sent by the offices. However, for most of the transition, the district labour offices represented a place where firms with a demand for labour with low skills could efficiently search for workers. Recently, with growing unemployment, the average quality of those unemployed has improved. Until 1998, district labour offices reported only stocks of open vacancies and there have been imperfections in the information system including the delayed removal of filled vacancies. Since 1998, gross flows of vacancies have been reported, significantly enhancing the potential for monitoring labour markets and providing job counselling. There is no other source of information on vacancies. Since the type of vacancy monitoring differs across individual district labour offices, it would seem optimal for the labour market administration to develop a standardised monitoring approach applied by all districts. Such a monitoring system would provide centralised information on the employers' employment plans and could significantly improve the analysis of unemployment and contribute to timely decision-making and a proper targeting of labour policies.

Reported job creation declined steadily during 1997-1998 and the unemployment-vacancy ratio increased five times, from 2.2 to 10.3, during 1997-1998 (as of December of each year). In the low-unemployment regime of the mid-1990s, the skills and territorial mismatch of vacancies and the unemployed was not an issue of much policy interest. Table 3.6 provides some insight into occupational and regional imbalances in terms of reported vacancies. The first panel shows that the occupational structure of vacancies has been very stable during the last five years. Craft and related trade workers represent by far the largest proportion of vacancies (45.9 % in 1998).

Vacancies, as a demand side indicator, also have to be considered vis-à-vis unemployment. (See also Table A2.1 for a time series of vacancy/unemployment ratio and section 5.2 and its Table 5.3 for a breakdown of the ratio by occupations.) Until recently vacancies were distributed disproportionately across regions. There were twice as many vacancies in Prague as in both regions of South and North Moravia. The ongoing recession has led to a proportional decline in reported vacancies in all regions. It should also be noted that statistics on posted vacancies do not reflect the attached wage offers, which are frequently well below the reservation wage of unemployed skilled workers. In terms of the occupational unemployment vacancy rate, the largest imbalances appear in the case of clerical workers. To make these statistics easier to interpret, they should be supplemented with data on the duration of unemployment. The high unemployment/vacancy ratio for a given group may potentially be due to above average turnover.

Table 3.6: Total registry vacancies. (by occupation, region)

Year	1992	1993	1994	1995	1996	1997	1998
Total vacancies	79 423	53 938	76 581	88 047	83 976	62 284	37 641
Vacancies by occupation (% of total vacancies)							
Legislators, senior officials and managers	n.a.	1.1	0.7	0.7	0.7	0.6	0.9
Professionals	n.a.	5.7	6.1	5.1	4.5	3.4	4.7
Technicians and associate professionals	n.a.	10.2	11.1	9.9	8.2	8.1	10.4
Clerks	n.a.	2.6	2.0	1.8	1.5	1.0	1.2
Service workers and shop and market sales forces	n.a.	9.6	10.3	9.5	10.3	9.5	10.0
Skilled agricultural and forestry workers	n.a.	2.4	2.2	2.6	2.5	2.1	2.2
Craft and related trades workers	n.a.	52.0	46.0	46.6	46.2	49.4	45.8
Plant and machine operators and assemblers	n.a.	8.7	11.8	12.4	12.9	13.6	14.7
Elementary occupations	n.a.	7.6	9.6	11.5	13.2	12.1	9.9
Armed forces	n.a.	0.1	0.1	0.1	0.1	0.1	0.1
Regional vacancies (% of regional labour force)							
Country total	1.51	1.02	1.52	1.74	1.64	1.21	0.73
Prague	n.a.	n.a.	2.28	2.26	1.88	1.18	0.84
Central Bohemia	n.a.	1.19	1.62	1.77	2.03	1.42	1.03
South Bohemia	n.a.	0.92	1.65	2.26	2.02	1.73	0.84
West Bohemia	n.a.	0.90	1.54	1.90	1.64	1.18	0.83
North Bohemia	n.a.	0.91	1.28	1.44	1.39	1.02	0.68
East Bohemia	n.a.	1.24	1.87	1.99	2.01	1.58	0.96
South Moravia	n.a.	0.42	1.03	1.25	1.38	1.03	0.58
North Moravia	n.a.	0.27	1.08	1.41	1.16	0.93	0.40

Source: Registry data of the Ministry of Labour and Social Affairs.
Note: Data on December 31 of each year

4. Labour Force Participation

4.1 Demographic trends

The total size of the population during the 1990s has been stable, as can be seen from Table 4.1 presenting population by both genders in absolute terms and relative to 1989. The demographic age structure of the population will, however, change substantially during the period of the next 30 years. These demographic changes will be a result of relatively large cohorts of individuals born after World War II that are going to enter retirement age in the near future and of relatively small cohorts of individuals born after 1989, when the country witnessed an unprecedented decline in fertility rates. Annual live births declined by 30 % from 1990 to 1997, as can be seen in Table A4.2. The gross birth rate in the country in the last two years reached the lowest point in the last two centuries and ranks fertility in the country at the bottom in Europe, and therefore in the world (Simek, 1998). It remains an open question to what extent this drop is a result of one generation delaying fertility decisions due to new career opportunities.

The existing pension scheme defines different statutory retirement ages for men and women and in the case of women it differentiates according to the number of children raised. Under the current plan, the statutory retirement age will be gradually increased to 62 and 59 years of age for men and women with two children respectively. This process is expected to be complete in 2007. (See Section 8.4.) Table A4.1 depicts forecasts of the working age population using both the current definition of working age and a standard one, i.e. 15-64. The standard (current) dependency ratio will fluctuate slightly in the range 0.41-0.49 (0.55-0.59) until the year 2010 and will rise steadily afterwards so as to reach the very high levels of 0.59 (0.75) in 2030 and 0.82 (1.00) by 2050. The standard working-age population in 2030 will shrink to only 89 % of its 1998 size and it will be even lower in 2050, at the level of 72 %. This evolution is similar for both genders. Obviously, the growth in the current dependency ratio would slow down if the statutory retirement age were set at 65. Under such a regime, the dependency ratio in 2030, at 0.59, would be equal to its current 1999 value. The ageing of the population has therefore strong implications for the existing pay-as-you-go pension scheme (see Section 8.4) and through the state budget also affects the payroll tax burden. Further, the demographic forecasts do not account for the possibility of early retirements, a quite extensive current phenomenon (again see Section 8.4). The ageing population will also have implications for financing the health system because reported expenditures per individual are increasing steeply for the elderly.

Labour Force Migration

Emigration appears to be a negligible source of changes in the labour force size. See Table 4.2 for the net migration flows during the 1990s and Tables A.4.3 and A4.4 for breakdowns of these flows by gender, nationality, and educational attainment. What does affect the size of the labour force is foreign employment, discussed in more detail in section 3.4. Suffice it to say here that the number of Slovaks working in Czech territory was about 65 000 in 1998, based on working permits, while there were another 55 000 workers from other foreign countries. According to some estimates the total size of foreign employment is somewhat over 3 % of the domestic labour force. The country has accommodated at least 50 000 migrants from other countries during the last five years.

Table 4.1: Total population by gender (end of the year)

Year	1987	1988	1989	1990	1991	1992
Men	5026035	5030950	5035262	5036486	5006002	5013413
Women	5322799	5325409	5326995	5326254	5306546	5312284
Total	10348834	10356359	10362257	10362740	10312548	10325697
Index (in % of 1989)						
Men	-0.2	-0.1	0.0	0.0	-0.6	-0.4
Women	-0.1	0.0	0.0	0.0	-0.4	-0.3
Total	-0.1	-0.1	0.0	0.0	-0.5	-0.4
Year	1993	1994	1995	1996	1997	
Men	5019297	5020464	5016515	5012085	5008730	
Women	5314716	5312697	5304829	5297052	5290395	
Total	10334013	10333161	10321344	10309137	10299125	
Index (in % of 1989)						
Men	-0.3	-0.3	-0.4	-0.5	1.0	
Women	-0.2	-0.3	-0.4	-0.6	1.0	
Total	-0.3	-0.3	-0.4	-0.5	1.0	

Source: Demography forecasts, forthcoming, authors: Burcin and Kucera, Demography Department of the Charles University.

Internal (within-country) migration was relatively low in the early 1990s and has actually declined since then. Migration in 1997 dropped to less then one half of its 1993 size (see Table A4.5). This low extent of internal migration during a period of transition indicates the presence of a rigid housing market and/or cultural barriers to territorial mobility. The decline in labour-related migration was even larger (Andrle, 1998). Within labour-related migration, the share of moves motivated by finding a new job as opposed to moving closer to an existing job dropped from 56.2 % in 1992 to 50 % in 1996.

According to an unpublished study conducted at the Demography Department of the Charles University, the dramatic variation in economic and social conditions across districts and regions has resulted neither in higher migration mobility nor in higher migration efficiency (the ratio of migration balance to migration turnover). In 1997, the total sum of the migration balances of districts with above-average unemployment was reported as positive, indicating an inflow of individuals into these districts. Only 14 districts with the highest unemployment reported a slight loss of population through migration. One might expect more internal migration if the government decided to lift the existing rent controls. The speed of rent deregulation, however, has been slowed down to zero and other legal imperfections persist as well. Further, one could question the willingness of the Czech labour force to move even if the housing market becomes more flexible. Issues of improving commuting costs and opportunities are therefore also highly pressing.

Table 4.2: Migration in 1989-1997.

Year	8 Mid-year Population	Increase (decrease) by		Total
		Internal migration	External migration	
1989	10 362 257	2 745	-1 286	1 459
1990	10 362 740	2 399	-1 775	624
1991	10 308 682	1 010	1 866	2 876
1992	10 317 807	4 917	6 864	11 781
1993	10 330 607	n.a.	5 476	5 476
1994	10 336 162	n.a.	9 942	9 942
1995	10 330 759	n.a.	9 999	9 999
1996	10 315 353	n.a.	10 129	10 129
1997	10 303 642	n.a.	10 275	12 075

Source: CSO: Pohyb obyvatelstva v CR v roce 1997, Prague, p.14, 15
Notes:
In 1992 the migration between the Czech Republic and the Slovak Republic was for the last time included in the internal migration. Since the 1st of July 1954 the external and internal migration includes migration of all persons (including foreign citizens) with the permanent residence in the Czech Republic.
Internal migration is a change in a municipality of residence (or a district of residence in the case of Prague) on the territory of the Czech Republic is considered to be internal migration.
External migration is a change in the country of residence, irrespective or nationality.

4.2 *Labour force participation of the population*

Labour force participation rates fell substantially during the first transition years as in other transition countries. An artificially high participation rate of women during socialism[9] was expected to lead to a greater number of withdrawals from the labour market for women. The female drop in participation was, however, only somewhat larger than the male decrease. The male participation rate in the 15 years and older population fell from 77 % in 1989 to 71 % in 1994, while the female rate went from 64 to 54 % in the same time period. (This might be caused by the early-transition drop in real wages forcing both parents in a typical household to work.) The female participation rates (15 to retirement age) appear to further decline between 1994 and 1996, while male participation was stable, see Table 4.3.

Looking at the age breakdown of the rates, we see that there were really two types of changes: (i) a decline in participation among women aged 15-24 and 24-49 between 1994 and 1996, and (ii) an increase in both male and female rates for those aged 50-64, again between 1994 and 1996.[10] Further, it is likely that the 1998 female rate is underestimated due to a change in the methodology, since in the first quarter of 1997 women on maternity leave were no longer counted as employed. The estimated difference is minus 5 %, which would make the 1998 female participation much higher than in 1996.

9 In socialism, everyone had to be employed according to the law (unless on maternity leave etc.).

10 While we can attribute the first finding at least in part to increasing school enrolments, we do not see an immediate explanation for the latter.

Table 4.3: Labor force participation of the population by gender and age. (LFS data)

Year	1994			1996			1998		
Age group	Total	Men	Women	Total	Men	Women	Total	Men	Women
15-64	74.0	79.3	68.8	72.1	80.5	63.7	72.5	80.6	64.4
15-24	52.6	55.6	49.4	48.7	56.3	40.7	50.2	56.6	43.5
25-49	92.9	96.2	89.7	89.2	96.2	82.0	89.2	96.3	82.0
50-64	52.9	64.8	42.1	58.4	70.2	47.5	59.2	70.5	48.7
65-	5.2	8.7	3.1	5.3	9.0	3.0	5.0	8.4	2.8
15-pension age	80.4	83.1	77.4	77.4	83.7	70.4	78.0	83.8	71.5

Source: LFS, 4th quarter 1998, CSO, p. 30, 39, 79; Winter 1996/97, p. 30, 39, 79; Winter 1994/95, p. 30, 39, 80.

While much of the decline in early 1990s has been due to withdrawals of older workers who have been entitled to early retirement pensions, the decline in participation rates in mid 1990s was likely led by increasing school enrolments of the young cohorts. The encouragement to retire has been a part of government measures intended to combat unemployment during early transition. The room for early retirement then further widened in 1996 along with transitory increases of the statutory retirement age. The less-than-actuarially-fair adjustments in pensions combined with the current recession now lead to a further increase in the number of early retirements (see Section 8.4).

4.3 *Labour force participation by educational attainment*

The educational attainment of the Czech population has traditionally been high. The minimum length of education required by law is currently nine years. The proportion of the working age population with elementary education (ISCED2) is low (20.7 %) and declining, since low education is much more widespread among the older population. The Czech Republic has an extremely high proportion of the working age population with secondary education (ISCED3), currently at 65 %, and the share is still rising. Only about 8 % of the working-age population reports having attained tertiary education. This represents a very low share, comparable only with Hungary and Poland. However, the proportion of 18-year-old cohorts entering some tertiary-level education has increased sizeably from 12 % in the early 1990s and reached 22 % in 1998 (UIV 1999, pp. 79), perhaps due to the increase in the returns to education (see Section 2.2). These facts are important for interpreting the labour force participation rates by education.

Table 4.4 shows that, as is the case in other market economies, labour market participation increases with education, except for the remarkably high participation rates for vocational degrees, which is higher than the combined rate for technical and general upper secondary schools. The level of labour force participation for university educated workers is almost three times the rate of workers with only elementary education. The composition of these rates was fairly stable during 1994-1998, with the minor exception of females with a vocational or university degree, whose participation decreased between 1994 and 1996. This was followed by a similar decrease for females with other secondary education between 1996 and 1998.

Table 4.4: Labour force participation rates by educational attainment.(%)

	1994			1996			1998		
Education	Total	Men	Women	Total	Men	Women	Total	Men	Women
Primary	30.4	35.5	27.8	28.3	34.8	25.2	29.2	37.4	25.1
Apprentices	75.7	79.4	71.4	72.3	79.2	64.4	72.0	78.9	64.3
Vocational and General Secondary	55.8	51.1	58.3	54.1	51.0	55.8	49.8	47.8	51.0
Tertiary	83.5	84.4	82.1	82.7	86.2	77.3	80.3	82.4	77.4

Source: LFS, 4th quarter 1998, CSO, p. 31, 39, 80; Winter 1996/97, p. 29, 37, 80; Winter 1994/95, p. 30, 39, 81.
Note: Due to lack of data, denominator used is the whole population with given education, not the population in working age 15-64.

4.4 *Regional and ethnical characteristics*

The participation of the working age population in the labour force does not vary significantly across Czech and Moravian regions, even though the participation rate in Moravia has persistently been somewhat lower, see Table A4.5. (This may have something to do with Moravia historically having a much larger proportion of practising Catholics then the rest of the country.) On the other hand, Prague, a large urban area representing 11.5 % of the national working-age population, has the highest participation rate. We should note that Prague also has the oldest population and that Prague's youth is more likely to stay longer in school. In the absence of these two effects, the participation rate in Prague would have been even higher. The gender composition of participation is fairly stable across the main regions, but Prague's female rate tops the hinterlands in 1998.

The Romany minority

The ethnic structure of the population is very homogenous. The only sizeable ethnic group are Romanies (Gypsies), who probably represent about 200 000 individuals. Neither LFS data nor any other current data source provides information on the employment and participation rate of this ethnic group. Despite this, it is well known that the participation rate among Romanies is dramatically lower than that of the rest of the population. This is due to the very low average education levels[11], high crime rates, and poor average working habits of this ethnic group, as well as an intense social stigma. Ethnic prejudices (discrimination) on the part of employers severely limit the scope of their work opportunities. At least for the last two years, the labour market discrimination has been accompanied by a series of physical attacks and killings, which has resulted in waves of emigration to countries such as Canada and the United Kingdom. The Romany population is concentrated in certain districts. Let us only name a few of the most important ones: Rokycany, Písek, Most (where a relatively successful programme aimed at increasing their labour market attachment was first enacted), Ústí n.L., Teplice, Vsetín, Pøerov, Karviná.

11 It is estimated that as many as 70 % of Romany children are transferred from the elementary schools into the so-called "special" schools typically caring for mentally disabled children. Workers with only "special" education will find it virtually impossible to succeed on the labour market. In some regions, District School Offices organise one year of pre-elementary education for Romany children to eliminate their Czech language and social handicap. Although the number of such classes and pupils attending has been rather low, there are now plans to extend the programme.

Commuting

Finally, some workers from the bordering Czech districts commute to work in Germany and Austria, but this is unlikely to be a major phenomenon. The number of work permits issued for Czechs in Austria in 1997 has been slightly below 4,000 (Labour Market Service (AMS), Vienna). This number is one of the lowest among Central European countries, adjusting for the total population size. The gross migration flows within the Czech Republic and Germany have been similar and low (slightly less than 10,000 individuals per year) according to the available evidence from 1994-1996. The net emigration to Germany has been below 1,000 individuals per year (Federal Statistical Office Germany).

4.5 Supply of hours

The OECD Employment Outlook of 1997 (p.178) shows that in 1996 the Czech Republic had the lowest proportion of part-time employment among OECD countries, for both genders. Let us first look at LFS indicators of part-time work in the last quarter of 1998. There were 273 000 individuals working in part-time jobs at that time, which constitutes a very low 5.7 % of total employment. This fraction has been relatively stable over time, as can be seen from Table 4.5. This table describes not only the proportion of the labour force working part time, but also the average weekly hours in part-time jobs, and the incidence of multiple job holding. The average weekly hours for the part-time work group in the last quarter of 1998 were 25.5, while the average hours in full-time employment were 43.6. Of the total number of part-time jobs about 25 % qualified as underemployment, that is part-time work in jobs that should require full-time. Further, about 150 000 workers held two or more jobs. While the ongoing recession somewhat lowered the number of multiple jobs, it had little impact on the other part-time work.

Table 4.5: Part-time Work and Multiple Job Holding. (LFS data)

Proportion of LF working part-time (%)	1996	1997	1998
Total	5.6	5.4	5.2
Men	2.7	2.5	2.4
Women	9.3	9.0	9.1
Average weekly hours worked by part-timers	25.7	25.8	25.5
Proportion of Labour Force working on more than one job (in %)	3.7	3.2	2.9

Source: CSO, LFS.

While the incidence of part-time work appointments is rather low, one can also work less than 30 hours (a typical definition of part-time work) in a full-time appointment. The mandated full-time working week in the Czech Republic is 42.5 hours. (This, however, includes 2.5 lunch hours a week, so the actual number of weekly hours is the typical 40.) State-owned companies are not allowed to lower the actual hours below the mandated level, but private firms may do so. Again, using the LFS, we find that about 10 % of current employment required less than 30 hours actually worked in the reference week. Table A4.6 shows the proportion of this indicator of part-time work among primary employment as increasing until 1996, i.e. during the economic boom period when weekly hours

worked also grew. However, the economic recession starting in 1997 reversed this trend and the incidence of low hours has declined to pre-1994 levels. By the end of 1998, only 7.4 % of working men and 15.1 % of employed women had a job requiring less than 30 hours a week. This evidence suggests that the recession led to a reduction of part-time work, while average hours were kept stable by an increasing share of long-hours work.

Finally, let us return to the issue of multiple job holding. Table A4.7 uses the employer census data to provide a breakdown of first and second jobs by large occupational groups and by employment status. The total number of multiple jobs seems to be shrinking according to this data source, confirming the LFS figures of Table 4.5. About 35 % of second jobs are held by women and less than half of those working in second jobs are entrepreneurs without employers. Professionals and technicians together form the largest occupational group in second job holding (80 %).

5. Unemployment

5.1 *Unemployment data*

There are two major regular data sources providing information on unemployment, its structure and dynamics. First, the Labour Force Survey provides unemployment statistics defined by the ILO methodology. Second, the registry database of the District Labour Offices provides information on registered unemployed and reported vacancies. The ILO unemployment has, for the most part, been only somewhat higher than registry unemployment and the two have converged recently. Table 5.1 gives a comparison of gender and age specific ILO and registry unemployment. The registry data is collected directly by the labour market administration and is available with monthly frequency and no delay (unlike the quarterly LFS results, which are published with about 3-4 months of delay). It is therefore primarily the registry data that is used by the Ministry of Labour and Social affairs when designing labour market policy. Finally, note that unemployment registration is a necessary condition not only for receiving unemployment benefits, but also for collecting social benefits (see Section 8.4).

5.2 *General trends in total unemployment*

Czech unemployment has been stable and extremely low - between 3 and 4 % - during 1992-1996. This is in striking contrast to the situation in other transitional countries in the region of Central and Eastern Europe. Starting in 1996, however, Czech unemployment has been rising steadily, with regular seasonal slowdowns in the spring and higher growth during the second half of the year. The unemployment rate reached 8.4 % in March 1999, according to the registry data. A time series model of the authors and of the Ministry of Labour predicts that unemployment will surpass 10 % by the end of 1999.

Inflows and outflows

Before we turn to describing the recent trend, we should attempt to explain what kept unemployment so low for so long. Our explanation relies on the exceptional dynamics of Czech unemployment. Inflow rates into unemployment have been persistently lower and outflow rates from unemployment have been much higher than in other transitional countries. See Table A5.1, where the inflow rate is the proportion of monthly entrants into unemployment in total employment, while the outflow rate is calculated as a proportion of monthly unemployment-pool leavers in the population of the unemployed.

Until 1998, the inflow rate into unemployment has been at levels below 1 % (less than one % of all those employed have been losing a job during a given month). The inflow rates in other neighbouring transitional countries have been persistently higher, in the range of 1 - 1.8 %.[12] In

Table 5.1: Unemployment rates (registry and ILO, %)

Registry Data	1995			1996			1997			1998		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Total [1])	2.9	2.3	3.6	3.5	2.8	4.3	5.2	4.0	6.6	7.4	6.2	8.9
15-24	4.9	4.5	5.3	6.0	5.6	6.4	9.6	7.9	11.9	15.2	14.1	16.7
25-49	2.7	1.9	3.4	3.2	2.4	4.1	4.6	3.3	6.2	6.3	4.7	8.2
50-64[2])	2.2	1.7	2.7	2.8	2.4	3.4	3.5	3.3	4.3	4.9	4.5	5.5
15-pension age[3])	2.9	2.3	3.6	3.5	2.8	4.3	5.2	4.0	6.6	7.4	6.2	8.9
ILO definition (LFS)	1995			1996			1997			1998		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Total	3.3	2.8	3.9	3.5	2.9	4.2	5.2	4.0	6.7	6.8	5.1	8.8
15-64	3.3	2.8	3.9	3.5	2.9	4.2	5.2	4.0	6.7	6.8	5.1	8.8
15-24	6.3	6.0	6.6	6.2	5.9	6.5	9.9	7.8	12.8	13.8	11.9	16.5
25-49	2.8	2.2	3.5	3.1	2.3	3.9	4.7	3.4	6.2	5.8	3.9	8.1
50-64	2.1	1.9	2.4	2.6	2.3	3.0	3.2	2.6	3.9	4.2	3.6	5.1
15-pension age	3.3	2.8	3.9	2.2	1.9	2.6	3.1	2.5	3.9	4.1	3.6	4.7

Source: LFS, Labor Force Survey, Winter 1995, 1996, 1997; last quarter 1998. Ministry of Labour and Social Affairs, Data as of December 31 of each year.
NOTES: Unemployment registry does not provide age structure identical with LFS (ILO). Therefore: [1]) Represents all unemployed. [2]) Represents age group 50+. 3) Represents age groups 15-64.

explaining the low level of unemployment, we should therefore focus on what caused the unemployment outflows to be so high. The evolution of GDP does not provide an immediate answer, as it was quite similar in the Czech Republic to other Central and Eastern European countries. One possible explanation supported by some studies is that the service sector was relatively under-employed in the Czech Republic during communism and was therefore able to absorb a larger proportion of workers. However, since only data for service companies with more than 25 workers were collected until 1997, the hard evidence does not exist. Further, the unemployment compensation (see Section 8.1) was not very generous, active labour market policies were developed early on, and the quite generous social benefits were not used as much probably due to initial social stigma.

Nevertheless, inflow rates into unemployment have been growing since 1997, though the 1998 rate (1.1 %) is still below the values widespread in neighbouring countries (1.2-1.5 %). The unemployment outflow rate, which had been about four times larger than rates experienced in neighbouring countries, is now declining steeply. Of those who leave the unemployment pool each month, just above 70 % have been finding a job. This proportion is now declining to 60 - 65 %, suggesting that the discouragement effect of the protracted recession is having an impact that is likely leading unemployed persons into early retirement and out of the labour force. The high outflow rates during early transition have been translated directly into short duration of average unemployment spells and a low proportion of long-term unemployed. This has changed between 1994 and 1998, when the fraction of ILO unemployed with spells lasting over one year increased from 27 to almost 32 %. See Table 5.2 for the description of unemployment duration using the ILO definitions.

Table 5.2: Unemployment level by duration and gender (LFS data)

Year	1994	1996	1998
Total number of unemployed	209700	205900	366800
Unemployment by duration (in %)			
Total	100.0	100.0	100.0
Less than 6 months	52.9	49.8	47.0
6- 12 months	20.2	19.9	21.4
Over 12 months	26.9	30.3	31.6
Men	100.0	100.0	100.0
less than 6 months	55	52.4	50.5
6- 12 months	19.3	17.3	20.1
Over 12 months	25.7	30.2	29.4
Women	100.0	100.0	100.0
under 6 months	51.0	47.9	44.3
6-12 months	21.0	22.4	22.4
over 12 months	28.0	29.7	33.3

Source: LFS, 4th quarter 1998, CSO, p. 15, 83-85, winter 1996/97, p 83-85,winter 1994/95, p 79

12 This indicates that the reallocation of labour through unemployment has been lower in the Czech lands. Labour reallocation has likely been accomplished through job-to-job transitions. Some experts claim that low inflow rates support the hypothesis of slow and delayed restructuring. This hypothesis, however, cannot be definitely confirmed since there are no internationally comparable statistics on the job-to-job labour market dynamics in early transition.

Structural characteristics

Job creation reported to labour offices is now minimal. While there were less than 3 unemployed individuals per reported vacancy in 1997, by the end of 1998 there were 10 unemployed per one available vacancy (see also Table A.5.3 and A5.4). Table 5.3 shows the structure of vacancies as well as the unemployment/vacancy ratio for major occupational groups using the registry data in 1998. Clerical workers face by far the largest number of unemployed per vacancy. While the largest share of vacancies is in craft and related trades, the largest share of unemployed is in manufacturing.

Table 5.3: Structural unemployment (1998).

Occupations	Vacancy Shares (%)	Unem./Vacancy Ratio
Legislators, senior officials and managers	0.9	6.1
Professionals	4.7	6.5
Technicians and associate professionals	10.4	9.0
Clerks	1.2	61.0
Service workers and shop and market sales forces	10.0	11.8
Skilled agricultural and forestry workers	2.2	7.7
Craft and related trades workers	45.8	3.4
Plant and machine operators and assemblers	14.7	4.0
Elementary occupations	9.9	25.7
Armed forces	0.1	22.2
Sectors	**Unemployment Shares (%)**	
Agriculture, hunting and related service activities	4.2	
Forestry and fishing	0.9	
Mining and quarrying	3.2	
Manufacturing	31.2	
Electricity, gas and water supply	1	
Construction	10.1	
Trade, repair of motor vehicles and personal and household goods	17	
Hotels and restaurants	6.7	
Transport, storage and communications	6	
Financial intermediation and insurance	1.2	
Real estate, renting and business activities	2.8	
Public administration, defence	3.7	

Sectors	Unemployment Shares (%)	
Education	3.4	
Health and social work	4.3	
Other community, social and personal services	4.2	
Private households with employed persons	0.2	

Source: Registry data of the Ministry of Labour and Social Affairs. CSO, Labour Force Survey, 4th quarter 1998.
NOTE: Data as of 31 December of each year.

A disproportionately high share of blue-collar workers in total unemployment has persisted, around 60 % until the end of 1997 (statistics have not been collected since then). The share of unemployed with only elementary education was stable at about 37 % until 1996, and had declined to 30 % by the end of 1998. Table A5.2 gives occupational unemployment rates and shows elementary and service and shop workers with the highest unemployment, followed by clerks and machine operators.

Low mobility

Labour market rigidities in the period of a growing incidence of lay-offs contribute to the growth of unemployment and may lead to greater problems with long-term unemployment. One such problem is the low territorial mobility of the workforce, which also contributes to the sizeable differences in district unemployment rates (minimum at 1.6 % and maximum at 15.6 % in December 1998). Unemployment in some isolated micro-regions now even reaches 20 %. This is partly due to the rigid housing market with imposed rent ceilings and uncertainties regarding property rights. Low territorial mobility also has habitual roots. For instance, the dependence between young families and grandparents is likely to be stronger than in western countries.[13]

5.3 Unemployment by age groups and gender

A closer look into the structure of unemployment shows that individuals of both genders, of all ages, and all levels and types of education are affected by the steep growth of unemployment. Although some groups are more affected by unemployment than others, compared to other countries, the unemployment is not extremely concentrated to specific demographic groups.

Expressed as the share in the total registry unemployment in 1992 (1998), unemployment increasingly affects older workers, 8.8 % (13.6 %). The share of school graduates has grown persistently from 1991 (11 %) to 1998 (17.6 %). The share of physically handicapped workers also increased from 1991 (7.6 %) to 1996 (16.9 %) but has been declining since then, to 12.7 % by the end of 1998. This decline is likely to be due to the outflow of these people out of the labour market as discouragement grows during the protracted recession.

13 In addition, it is interesting to note that existing estimates of the so-called wage curve show that the negative relationship between Czech unemployment rates and wages across districts already works. It is quite similar to relationships found in market economies as a one percentage point increase in unemployment rate translates into a 0.1 percentage decrease in the wage level. This finding supports evidence from Section 2.2 suggesting that the wage setting mechanism now operates in a fashion similar to that observed in a typical western country.

The proportion of youth (15-24) in the total registered pool of unemployed has been steady at about 37 % and has even declined during the recession, to 30 % in 1998. The ILO unemployment rate of this group is almost twice of the overall unemployment rate, and is rising steadily. The speed of its increase, however, has been similar to that of the 25-49 age group. In 1998 it reached 12 and 17 % for men and women respectively. Female unemployment is higher than male, with the ILO comparison being 8.8 to 5.1 % in 1998. This comparison holds within age brackets as well. In 1998 women represented 56 % of the unemployed, while their share in 1996 was only 52 %. The opposite trend of declining proportion of women appears in the registry data. The proportion with spells longer than one year is higher for women than for men in both LFS and the registry data.[14]

5.4 *Unemployment by educational attainment*

Table 5.4 shows that, as is the case in many other countries, the incidence of Czech unemployment declines steeply with higher educational attainment. The unemployment rate has always been much higher among individuals with primary education only. This group with ISCED 2 education represents about 8 % of employment, but its unemployment rate was 12.2 % in 1996 and 16.8 in 1998. Though the unemployment rate of those with elementary education is by far the highest, it has increased relatively less than the unemployment rates of those with secondary and higher education during the recession. The share of the unemployed with secondary education (with or without the maturita school-leaving exam) has been increasing over the years. The unemployment rate of workers with general secondary education is higher than the unemployment rate of workers with a technical background.

Table 5.4: Unemployment Rate by Educational Attainment 1998. (LFS data)

Unemployment rate by educational attainment	
Primary	16.8
Secondary without maturita exam	7.0
Secondary with maturita exam	5.2
Tertiary	2.6
Shares in unemployment by educational attainment	
Primary	30
Secondary without maturita exam	42
Secondary with maturita exam	25
Tertiary	3

14 While the share of long-term unemployed men using the ILO definition grew, the same share in the registry data has not changed much during 1994-98 and remains at about 20 %.

Unemployment rate by regions	
Capital Prague	3.6
Central Bohemia	6.2
South Bohemia	5.0
West Bohemia	6.5
North Bohemia	12.0
East Bohemia	6.5
South Moravia	6.4
North Moravia	10.0

Source: CSO, Labour Force Survey, 4th quarter 1998.

School leavers

The Ministry of Labour and Ministry of Schooling in co-operation annually publish a detailed analytical report (MSMT, 1998) on the labour market performance of recent school graduates. Although the unemployment rate of recent graduates can be measured in different ways, it has followed a clear general pattern independent of the measurement approach taken. The proportion of recent school graduates among the registered unemployed has grown persistently since 1994, from 12 % to the current 18.1 % in August 1998. The impact of the lasting recession on recent school graduates is greater than is the impact on the rest of the labour force and it has grown during the last three years.

The specific unemployment rate of recent leavers of all school levels and types exceeds, but not by far, the total unemployment rate of the given educational group. These two rates move together so that higher unemployment in a specific educational group corresponds to higher unemployment in the corresponding group of recent graduates. The exception are graduates from general secondary programmes whose unemployment rate is very low, while the unemployment rate of the labour force with general secondary education is the highest (except, of course, for workers with primary education only).

Since general education is meant as a preparation for studies at the tertiary level, the discrepancy might be caused by the self-selection effect of the more able continuing on to universities. The expanding supply of tertiary education during the 1990s could then significantly decrease such a selection effect. The highest incidence of unemployment in 1998 has been among graduates from apprentice programmes (9.3 %) and professional schools (8.6 per cent). Unemployment among graduates from secondary vocational and technical programmes with the maturita school-leaving exam in almost all fields exceeds the unemployment of tertiary level graduates, which is below 3 %. The incidence of unemployment varies widely across vocational and technical fields; it is somewhat higher for graduates in natural sciences than for those in social science fields.

Skills mismatch

An extremely large proportion of graduates still acquires a narrowly focused technical or vocational education. What is likely to result is a skills mismatch, only further reinforced by low territorial mobility. There is, however, no recent detailed study providing evidence on the scope of possible

occupational, skills, or territorial mismatches. It should be noted, however, that there are no exceptional territorial disparities in terms of the unemployment of recent school graduates. Only one region, Ústí in North Bohemia, is an outlier with the unemployment rates of recent school graduates exceeding 3-4 times those in other regions. Projections of educational and training labour market needs are currently not elaborated, but a Leonardo-EU financed project has been launched recently with the aim of developing such a methodological background. Even though forecasts of future education and training needs are likely to be imperfect due to the ongoing restructuring, they are in high demand by schooling and retraining administrators.

5.5 *Unemployment by region and ethnic groups*

Unemployment figures reported for the eight statutory regions (Table A5.3) are not particularly informative because they average out sizeable intra-regional disparities. While the gap between the regional unemployment rates does not seem to be growing, the disparities in district unemployment rates expressed as the coefficient of variation (standard deviation/mean) grew during the early period (1991-1995) from 0.38 to 0.55 but declined afterwards to 0.39 in 1998. This is consistent with the recession increasing unemployment by less in high-unemployment districts than in formerly low-unemployment districts.

As illustrated by the map of district unemployment in Annex E, two regions, Northern Bohemia and Northern Moravia, typically have rates of unemployment two to three times those of the capital city Prague. Both Moravian regions have a common border with Slovakia. Heavy coal mining and steel mill industries are concentrated in the northern part of North Moravia. This region still lacks good highway connections both with the Czech lands and with the Moravian capital Brno. The proximity to the Slovak Republic and the special employment status of Slovak workers (no work permission required and no language barriers) combine with the higher real wages in the Czech Republic compared to the Slovak Republic to attract a significant inflow of Slovak workers. Agriculture is most widespread in South and Central Moravia, contributing to higher unemployment and larger seasonal fluctuations.

The Romany population

The Romany population is disproportionately affected by unemployment. According to registry data, their share in total unemployment has fluctuated during 1992-1997 within the range of 4 to 6 %. The data, however, is not very reliable and likely under-reports the share of Romany unemployment. Further, the collection of this characteristic was terminated in 1998 and now no systematic evidence exists of the ethnic composition of unemployment. The unemployment rate of the Romany workers is sometimes estimated at approximately 70 %.

An unemployment duration study conducted on data from the early 1990s (Ham, Svejnar, and Terrell, 1999) showed that the average unemployment spell of an unemployed Romany is almost 2 years longer than for an otherwise comparable Czech worker. The Romany families typically have a large number of children and the welfare trap of social benefits is exceptionally strong for them. This problem was created under communism and will be extremely hard to solve. There are now special programmes for the Romany population, especially in North Moravia and North Bohemia, targeted at social re-integration and training courses, assistance in job-seeking, support of Romany entrepreneurs and creation of work opportunities.

6. Vocational Education and Training Systems

6.1 *General status of the education and training system*

The structure of the Czech educational and training systems parallels those of other European countries. However, three significant differences in enrolment patterns stand out and we would like to point these out before discussing the vocational system in more detail. First, the secondary school completion rate is very high. In 1995, 88 % of the Czech labour force aged 25 to 64 had completed at least higher secondary school. Second, a very small proportion of workers have completed university. Only 12 % of the population aged 25 to 64 had a university degree, compared to an OECD average of 23 %. Third, perhaps reflecting the low propensity to enter university, a very high percentage of secondary school students were enrolled in vocational programmes. In 1995, only 16 % of Czech secondary school students were in an academic secondary programme, compared with 47 % in a typical OECD country.[15]

6.2 *Initial vocational education*

The initial vocational education is provided by separate schools for vocational education. Applicants are admitted after finishing the nine-year basic school. There are two main types of vocational school at the upper secondary level (ISCED 3) in the Czech Republic. *Secondary technical schools* provide specialised secondary education, which usually takes four years and requires a final exam *(maturita)*. They prepare their students not only for technical working activities, but also for business, health care, social services etc. Those completing these programmes obtain a secondary education (maturita) certificate and can continue their education at the tertiary level. Secondary vocational schools usually offer secondary vocational education in three-year courses. This type of vocational school focuses on apprenticeship training. Students can gain a qualification as a skilled worker in a chosen branch. An integral part of tuition is practical training aiming at the acquisition of manual or manipulative skills. At the end of the training programme, students take the final exam and obtain a generally recognised skilled worker certificate. The practical training mostly takes place in specific teaching rooms within a school and sometimes also in the enterprises. Those who would like to continue their education can enter the mostly two-year-long follow-up courses leading to the *maturita* exam.

15 Only one OECD country had a greater rate of high school completion (the U.S. at 89 %), while the average across OECD countries was only 65 % (OECD, 1997). Among OECD countries, only Turkey and Italy (8 %) and Austria (9 %) had a lower rate of university completion among the working-age population. In part this reflects a Central European organisation of education, which places strong emphasis on vocational training. Thus, Germany and Austria, each with 23 % of secondary school students in general programmes, also fall well below the OECD average.

Vocational education enjoys very high respect in the Czech Republic. Due to this respect and the long tradition of vocational education, the share of youth educated in both types of vocational schools is extremely high (approx. 83 %) and this share is not changing despite considerable changes in the economy and in the society during the 1990s. Young people as well as their parents believe vocational education to lead to a good career path. Only 18 % of graduates of basic school enter the general secondary schools. However, the proportion of enrolment between both types of secondary vocational schools has changed significantly during the 1990s. On the one hand, the share of students enrolled in the secondary technical schools is increasing, and on the other hand, the share of students enrolled in the secondary vocational schools is decreasing. Therefore the number of students educated in the longer (four-year) courses is increasing and this trend pushes up the total rate of participation in education. The drop-out rates are relatively low: 2.6 % at secondary technical schools and 10.1 % at secondary vocational schools.

The graduates of secondary schools with the *maturita* certificate can continue their education either at higher professional schools or at universities. Demand for university education is permanently high in the Czech Republic (only less than half of all applicants are admitted). The higher professional schools (mostly three-year, ISCED 5) were introduced in 1996. They provide the necessary qualifications for demanding technical activities that do not require a university degree. The new Higher Education Act adopted in 1998 enables the introduction of non-university private higher education and makes it easier for the structure of the higher educational sector to adjust to changing labour demand.

Vocational education and training has undergone extensive restructuring during transition. The content of education (curricula) has been improved. The number of vocational schools (especially secondary technical schools) has increased considerably. The number of fields of study has increased as well, because vocational schools have implemented many new courses focusing mostly on training in a narrower branch. Some of these trends are positive and some negative. The improvement of curricula, introduction of educational standards and implementation of new branches, for example, have helped to react to the new requirements of the economy and to the shifts in the employment structure. On the other hand, too many new vocational schools were established (incl. private ones), so that the network of vocational schools comprises many relatively small schools. The Ministry of Education, Youth and Sports started a project aiming to improve the network of schools in order to adapt the network to regional training needs and to increase the efficiency of expenditure on education.

Adaptability to labour market needs

The number of unemployed graduates of vocational schools was not significant during the first half of the 1990s but during the second half of this period it has increased. The trends in the structure of graduates by branches are similar compared to the shifts in the employment structure and the changes in job requirements. The share of students in business, economics, trade and service fields has increased while the share of those focusing on technical branches has decreased. Given the inherited structure of the economy, the demand for graduates of technical branches is now again relatively high, and conversely the demand for graduates of business branches is already mostly covered. It is important to differentiate between the number of unemployed graduates by education and the unemployment rate for such a group. A study by (Ulovcova and Stradal, 1998) shows that while those with economics degrees constitute the largest group of unemployed graduates, their unemployment rate is at an average level. This is often overlooked in policy discussions. The dependence of long-term labour-market success on the field of study is also often neglected.

A system of educational planning has not been used from 1990 till now, because the structural development of the economy has been hard to forecast and because forecasting of the labour market needs has not yet been developed. Many believe that the enrolment structure of vocational schools is mainly influenced by the interests of applicants and their parents and only to a lesser extent by the needs of employers. What results are discrepancies between supply and demand by field of education. The current situation is also influenced by the fact that the involvement of social partners in the development of vocational education is still weak in the Czech Republic. The contacts between vocational schools and enterprises are inadequate. Recently, this issue has attracted considerable attention and the government is now planning to strengthen these links. This intention, however, might not be fully optimal. Firms will always lobby to have the state produce labour in exactly the fields where the firms face needs at that moment. The optimal type of education, however, should help workers succeed on the labour market not only in the first few years after graduation. This is especially important in transition economies, where structural shifts in labour demand are large and swift. One might argue that since firms know their current needs best, they themselves should finish the general vocational training provided in schools by on-the-job training.

Organisational set-up

Initial vocational education is funded by the state through the budget of the Ministry of Education, Youth and Sports. This Ministry is responsible (with some exceptions) for vocational education as a whole. The current method of funding is based on the principle of financial resource allocation to schools according to the number of students and the costs of their educational programmes. The Ministry of Education, Youth and Sports sets the quotas for funding – i. e. the amounts it contributes towards the non-investment cost of education per student – annually. The quotas vary depending on the cost of education in various branches. The Ministry allocates the bulk of financial resources to the District School Offices and these Offices further distribute the resources to individual schools.[16]

The investment resources, however, are allocated to individual schools directly by the Ministry of Education, Youth and Sports. The state also supports private vocational schools by providing financial contributions corresponding to about 60 % of amounts for the state schools. However, the actual funding varies by Offices and over schools with more discretion being applied to private schools, which therefore not only receive less resources than state-run schools, but also face higher uncertainty regarding funding. Due to current legislation, employers are involved in the funding of vocational education (incl. apprenticeship training) only in exceptional cases. Secondary education provided by the state schools is free of charge for students. Higher professional schools and private secondary schools can ask for tuition.

16 While the allocation of funds from the Ministry to the Offices is guided by relatively transparent rules, the allocation to individual schools is left to the Offices' discretion.

6.3 Continuing training and adult education

Continuing training and adult education has undergone a number of changes in the Czech Republic during the 1990s. At the beginning of the transition there were training institutions subordinated to sector ministries, which were in charge of continuing vocational education and the training of employees in the given sector. These training institutions were mostly privatised and reorganised. Continuing training started to obey market forces. In a short period many providers of private training sprang up. This was a consequence of a rapid growth of demand for continuing training resulting from the transition to the market economy, and the introduction of new legislation and new technologies.

There is no composite law regarding continuing vocational training and adult education. The Labour Code and other regulations define several rules that are relevant for continuing training. These rules include e.g. the obligation of the employee to acquire further training necessary to perform his/her current profession, the obligation of the employer to cover the costs of continuing training if this training corresponds with the employer's needs, etc.

Provision of continuing training in the Czech Republic now constitutes a free independent market. This leads to high flexibility and availability, to a diversity of training institutions and their services. Training is offered mostly by private training firms, non-profit organisations and partly by secondary schools and universities. The supply of continuing training is now above demand. On the other hand, the free-market set-up makes it hard to co-ordinate and find information about particular programmes (there are no relevant information systems). There are no mechanisms for assessing the quality. The most frequent courses were the ones on PC use, accounting, management, finance and marketing, and foreign languages.

Those workers who want to complete secondary or tertiary education and to obtain a certificate can participate in the long-term part-time training programmes provided by secondary and tertiary schools. The content and the certification of these programmes are comparable with full-time study for young people. The number of part-time employed students has been stable during the decade. It comes to approximately one tenth of the number of full-time students. These programmes typically use distance learning methods. The training at the state schools is free of charge for part-time students. The employer who has agreed to the part-time studies of his employee refunds the costs of the employee's training.

In-house training

There is no detailed and composite data set capturing the continuing training in enterprises. Below, we note the results of various independent surveys. Approximately one half of the Czech enterprises elaborated their continuing training policy. The extent of participation of employees in continuing training can be measured as the proportion of company employees who had participated in any form of continuing training during one year before the date on which the study was concluded. This indicator reached 23 % in 1996. The time spent on continuing training is measured in the framework of the Cranfield Survey as the average number of days spent on continuing training per year by an employee in the respective category. Using this methodology, managers spent approx. 7 days on training per year, technicians 6 - 7 days, clerks 4 - 5 days and workers 2 - 3 days. Some other investigations show that the younger employees spent more time on training than the older ones. Some studies have also analysed the costs of continuing training in the Czech enterprises as a percentage of annual payrolls and estimate it at approximately 1 %.

The state does not play a very active role in continuing training or adult education. This is evident from the fact that there is no state social partner body responsible for continuing training or for co-ordinating activities supporting this training. The National Employment Plan of the Ministry of Labour, approved in 1999, involves recommendations to implement effective financial incentives supporting the participation of both employers and individuals in this training area. Expert studies recommend improving the quality control of the continuing training and its certification, and implementing the information system on training providers and their training programmes.

Management training

One of the often-cited reasons for the recent economic recession is poor corporate governance and the poor quality of Czech managers. The current situation in the field of management training is therefore of policy interest. Training institutions develop their own programmes, reacting flexibly to the demands of clients, or offer original or adapted know-how transferred from developed countries in the framework of foreign aid programmes (Tempus, Phare, British Know-how Fund). At present, the initial interest in programmes focusing on general management skills is declining, while an increasing interest has been noted in targeted programmes in modern management practices in specific fields. In general, institutions give participants certificates which are not guaranteed or accredited by any state body.[17] No qualification standards are applied in designing training programmes. There is at present no authorised body addressing the question of the quality of training and management qualifications. The first attempts in that direction are linked to the creation of the National Training Fund (NTF).[18]

6.4 *Training of the unemployed*

Retraining is provided by state or private schools or by other private training establishments. It is organised by the District Labour Offices. Employers may, however, take the initiative and strike an agreement with the Labour Office on specific courses. Vocational schools and other institutions usually provide such training and the Offices share the costs with the employers. Both specific and general courses are offered. Specific ones usually focus on acquiring the necessary qualifications for a given job that is being held vacant for the trainee. General training focuses on flexible skills and aims at improving the worker's position on the labour market, e.g. computer skills. There are also courses that aim to stimulate entrepreneurship. The shortest retraining courses last for a few weeks, the longest take one year. See also section 8.2 for more discussion of active labour market measures.

Retraining of the unemployed is financed from the state budget, with both employers and employees contributing from their payrolls. The expenditure share of this active employment policy measure comes to approx. one fifth of the total funds allocated to employment policy. The annual number of participants in retraining courses now reaches approx. 11,500. Due to the increasing unemployment rate, the share of participants in retraining now reaches only approx. 5 % of all unemployed. Among the proposals of the National Employment Plan is a considerable extension of

17 Some training institutions are members of the Czech Association of Management Education and Training Institutions (CAMETIN).

18 Since 1994, the NTF with EU Phare sources supports increasing the quality of management training, developing the range of management training, widening the access of managers to relevant training, ensuring compatibility of managerial qualifications with those of EU countries and transferring management knowledge and experience of big enterprises to owners/managers of small and medium sized enterprises.

employment policy measures, including more training for the unemployed, co-operation with the Ministry of Education, Youth and Sports, more support for entrepreneurship, and promotion of further education including a system of financial incentives.

Further, the Ministry of Labour and Social Affairs, in co-operation with certain other institutions, has prepared and implemented special measures for young unemployed persons in the Czech Republic, both graduates of schools and drop-outs. First, specific training programmes for those who have not completed basic schooling were implemented. These training programmes are provided by basic schools or by the other similar institutions (special schools). They are free of charge and are funded by the state through the Ministry of Education, Youth and Sports. These programmes are available in all districts. Second, other special programmes have been implemented in order to help young people without qualifications and with social problems. A network of institutions organises these programmes that provide basic qualifications (incl. practical training). Third, the Ministry of Labour and Social Affairs has implemented several support programmes for the unemployed graduates of schools. Within the framework of one of these programmes, Labour Offices create so-called internship positions. Graduates work in the participating companies for up to one year and Labour Offices fully or partially refund the firms for their wage costs.

7. Labour Market Institutions

7.1 *Government bodies*

The structure of the labour market administration is illustrated in the charts in Annexes B-D. The employment policy is co-ordinated by the Employment Service Administration of the Ministry of Labour and Social Affairs. The responsibilities of the Employment Services include: (i) monitoring the situation on the labour market; (ii) defining the employment policy with a special focus on pressing problems in the labour market, e.g. the employment of low skill labour or minorities; (iii) actively supporting job creation; (iv) providing aid in organising vocational training; (v) administering the budgetary provisions for the employment policy and deciding on the district allocation of fiscal resources; (vi) co-ordinating the network of District Labour Offices. The last responsibility includes supervision, technical and financial support, advising, and methodological support.

There are 77 District Labour Offices and about 238 additional branch offices. The network of Labour Offices is directly subordinate to the Ministry and there is no intermediate administrative level. Labour Offices have relatively broad discretion when implementing employment policies. Their primary tasks are job counselling and payments of unemployment benefits. In addition to the administration of active employment policies, the Offices also monitor and enforce the compliance of employers with legal stipulations (e.g. workers' protection, permits for foreign labour). The Employment Services and their network of District Labour Offices do not administer the system of state social support. District Labour Offices are also crucial in co-operating with the social partners at the district level as they all meet in the Office director's advisory board. This is particularly important in a situation when the national-level tripartite negations break down.

The existing two-level network of labour offices is likely to be modified in the next few years following the institutional establishment of 14 new Higher Self-administrative Units (by January 1st 2000, stipulated by law No. 347 adopted in 1997). These units (see the first map in the last Annex, which gives both the borders of the current 8 regions and shaded areas of the new 14 regions within them) are about half the size of the NUTS II territorial units of the EU. According to the Principles of Governmental Regional Policy Programme adopted by the government in 1998, the Units will be legally responsible for their social development.

According to the national Employment Plan of April 1999, the Employment Law of 1991 is to be modified. The expectation is that this law will delegate more authority to the regional Labour Offices for the co-ordination of employment policy at the regional level. Furthermore, this document identifies the major goals of the government's employment policy during preparation for EU accession. One of the most valuable projects aiming to encourage the decentralisation of decision making from the Ministry of Labour and Social Affairs to the individual Labour Offices is the Pro-active Labour Market Intervention Fund (Palmif). This fund was created in 1992 as a part of the European Union's Phare programme and provides funding to support new, innovative active labour market policy programmes targeting local problems.

Several ministries participate in shaping employment policy: the Ministry of Labour and Social Affairs, the Ministry of Regional Development, the Ministry of Industry and Trade, the Ministry of Education, Youth and Sports, and the Ministry of Transport and Telecommunication. The role of the last two is, however, rather limited. The Ministry of Transport and Telecommunication typically finances basic public transport services (e.g. public bus and rail services). While this certainly has a positive impact on labour mobility, it lacks a clearly defined provision policy.

The Ministry of Education, Youth and Sports is engaged in forming education policy through its district School Offices, which collaborate with the Labour Offices. In 1997 the Ministry of Education and the Ministry of Labour signed the Agreement on Co-operation and Transfer of Information and on the Provision of Career Guidance Services. This led to the establishment of Information Guidance Centres at the Labour Offices. These provide information on educational opportunities, types of facilities, forms of study, conditions on the labour market, and services for the unemployed youth. These specialised centres also work with high-risk groups of children and young people. Furthermore, the educational counsellors at secondary schools also assumed responsibility for providing career guidance services.

The Ministry of Regional Development provides subsidies for individual housing construction in the form of state contributions to housing savings programmes. While this certainly increases labour mobility, the effect is likely to be very small. Recently, the Ministry established the Centre for Regional Development, which provides information to local administration (municipal offices, district offices) and agencies of regional development. Among the main roles of the Centre is to design directives toward better use of EU support programmes. One part of this agency is the EURO INFO centre. The role of the regional development agencies on the labour market up to now has been largely limited to offering training programmes and supporting small business ventures that provide new job opportunities in depressed regions. To provide their services, these agencies frequently use international assistance funds from the European Union (Phare bilateral assistance), as well as other public sources, including community and private funding. The agencies have been established rather spontaneously and without co-ordination. At the moment there are about 15 agencies, but some are not located in accordance with the newly planned Self-governed Units. The lack of co-ordination is caused by two factors. First, the absence of national regional policy shows. The central support for the regional development agencies is limited. If the agencies are formed with the participation of municipalities, then the administrative costs are financed from municipal budgets. Second, the current absence of legal bodies in regional self-government takes its toll. The role of the state's provision in financing the administration and activities of the agencies is likely to increase as the relevant Ministry plans to complete the network before the anticipated accession into the European Union.

7.2 *Labour market regulations*

The legal mandate on maximum hours of work per week is 42.5, with a 30-minute break for lunch every day. Further, an employee must not work more than eight hours of overtime in any one week and there is a minimum annual leave period of three weeks with full pay. Employment contracts are of three basic types: (i) principal employment with indefinite duration, (ii) parallel employment with fewer hours compared to the principal employment, and (iii) work outside of employment relations. The hiring and firing rules are relatively rigid and it is particularly hard to lay off a worker for reasons of poor performance (a layoff is possible only six months after delivering the first written notice, etc.). Even with regular layoffs, the employer must provide the worker (or the trade union in case of large-scale layoffs) with written notice 2-3 months in advance and there are other stipulations

regarding the nature of layoffs and the firms' obligations. A worker is entitled to a minimum of two months severance pay.

Another potentially important legal constraint on the labour market is the protection offered to women which includes: (i) the prohibition of certain types of work; (ii) the stipulation that the employer is obliged to grant requests for shorter working time or some other suitable adjustment to the prescribed weekly working time for a woman taking care of a child younger than 15 or a pregnant woman; (iii) the entitlement to 28 weeks of maternity leave in connection with child birth and the obligation of the employer to grant a woman additional maternity leave until her child reaches three years of age if she asks for it. Several studies (e.g., Anker and Hein, 1985) show that labour protection laws in market economies can actually hurt women as they make them more expensive than men. The specific labour market position of women on the Czech labour market has been reviewed and analysed in the report of the United Nations (1998).

There is also a certain legal protection for the handicapped, but it is not fully enforced and monitored. Further, some types of protection (e.g. certain layoff regulations) are likely to have a negative impact on the employment of the handicapped. The social benefits system also provides incentives for the handicapped not to accept regular employment.

7.3 *Industrial relations*

Even though all workers belonged to unions before 1990, the 1222 collective agreements signed in 1998 cover less than 30 % of the work force. Except for certain public sectors (mining and metal works, railways, chemical workers) labour unions are perceived as being rather weak. The current trade union system is based on free association (of employees in trade unions and of employers in employer associations) so that if a firm disagrees with the industry-level agreement, it can, in principle, leave the employer association. Among the reasons for low coverage is that few workers form unions in newly established or re-structured firms. There is anecdotal evidence that the same company will have a union in a plant that has been privatised, i.e. where there has always been a union, but will not "allow" a new union to be formed in a newly built plant. While unions have for instance helped to raise the wages of railway workers, they have apparently not been the sole driving force of the unsustainable wage growth of 1994-1996.

The top-level tripartite body is composed of representatives of the trade unions, employer associations and the Ministry of Labour and Social Affairs, which chairs the body. (For a brief outline of the multilevel wage bargaining, see also Section 8.4.) Even thought the tripartite body has no legal standing it has served to foster social peace during the initial phase of transition. Its role weakened during the mid-1990s and the general tripartite agreement has not been signed since then. Employer associations are represented by two nation-wide organisations: the Confederation of Employers' and Entrepreneurial Unions (covering 1.8 million workers) and the Union of Industry and Transport (0.9 million). While larger companies are more likely to be members of these associations, some smaller associations deal primarily with the needs of small enterprises. Trade unions are represented by the two biggest associations: the Czech and Moravian Chamber of Trade Unions (CMKOS), which includes over 30 separate unions, covering over 16,000 enterprises, and the Confederation of Arts and Culture, with less than 20 unions and a relatively small number of members. Section 7.1 already mentioned the other important form of tripartite dialogue, the so-called "consultative bodies" established at the District Labour Offices and covering employers, co-operatives, organisations of people with disabilities, and trade unions. Their goal is to promote co-operation and to co-ordinate the State employment policy in the local labour market.

Finally, let us mention the so-called revitalisation plan approved last month by the government. Its goal is to protect a small number of large industrial companies where social tensions and wage arrears are now forming from bankruptcy. This goal is to be achieved thorough state financial injections conditioned on reorganisations and ownership shifts.

8. Policies Affecting the Labour Market

The expenditures on active and passive employment policies were relatively high in early transition (1991-92) and decreased later to 0.24 % of GDP in 1997. This value is well below the EU average. Currently, more funds are raised through the mandatory payroll contributions than are spent on employment policies and the extra funds are spent on other purposes. The tight fiscal situation of 1999 will, however, likely allow only a moderate increase in total employment policy spending. Not only the size, but also the composition of the expenditures has changed, since active measures played a more important role in early transition. This is a particularly pressing issue during the current recession. Further, early retirements are now used to avoid unemployment, comprising almost half of all old age retirements in 1998 (see section 8.5).The growing unemployment now more than proportionally increases the expenditures on passive policies because the newly unemployed have on average higher wages, which in turn raises the level of unemployment benefits. While further fiscal pressures on the central budget are expected, the National Employment Plan of 1999 proposes to significantly raise the expenditures on active measures. A comprehensive evaluation of expenditures on passive measures ought to take into account social security contributions paid by the state budget for those registered unemployed. Table 8.1 presents such comparisons.

8.1 Passive labour market measures

The unemployment benefits are not means-tested and do not differentiate between types of unemployed and regions. The replacement ratio (ratio of benefits to previous wage) is currently set at 50 % for the first three months and at 40 % for the next three months. This is very low compared to EU countries. The replacement ratios were cut from 60 and 50 % as a part of spending cuts during the fiscal instability in 1997, and the incumbent government now plans to raise them to their original levels. The replacement ratio for unemployed individuals in a retraining programme is 70 %. The maximum unemployment benefit is set as 1.5 times the Minimum Living Standard of a single person and is therefore indexed to CPI. Since the average wage of unemployment benefits recipients is below the economy-wide average wage, the average unemployment benefits constituted only 21 % of the average gross wage by the end of 1998.

Unemployed people with household income levels (including unemployment benefits) below the household-level of the minimum living standard can ask for the difference to be paid by the social offices. They are more likely to reach the welfare rolls once they have exhausted unemployment benefits six months into unemployment. These are subject to registration at the labour office, but are not subject to expiration and their level is targeted to provide a certain level of total household income. The provision of unemployment benefits is currently the major responsibility of the District Labour Offices. While the current growth of unemployment has resulted in a smaller fraction of registered unemployed receiving benefits, as can be seen in Table 8.2, the staffing of the Labour Offices has not yet been sufficiently adjusted to match the increasing unemployment level. Performance indicators on the efficiency of the employment service placement can be found in table A8.6.

Table 8.1: State budget expenditures on the employment policy

	1991	1992	1993	1994	1995	1996	1997
Total Expenditures (% of GDP)	0.33	0.37	0.22	0.22	0.18	0.17	0.24
Total Expenditures (CZK bill., current prices)	2.47	3.13	2.21	2.53	2.43	2.61	3.96
Share on total expenditures							
Passive Employment Policy	68.5	45.3	65.4	72.0	73.7	79.1	86.1
Active Employment Policy	31.5	54.7	34.6	28.0	26.2	20.8	13.7
of it:							
■ Jobs for graduates	1.9	10.4	11.3	5.0	4.9	3.8	2.6
■ Publicly useful jobs	20.3	30.8	10.1	9.4	6.8	3.8	1.7
■ Socially purposeful jobs	3.2	7.1	7.4	7.2	7.8	7.5	5.7
■ Retraining	1.6	3.1	3.4	4.0	4.1	3.4	2.3
■ Special workplaces for disabled	0.3	2.7	4.6	4.5	1.1	0.7	0.4

Source: Ministry of Labour and Social Affairs
Notes: Active employment policy includes publicly useful jobs, socially purposeful jobs, jobs for graduates, individuals in retraining and special workplaces for disabled.
Passive employment policy includes social assistance to those who seek jobs.

Table 8.2: Unemployment Benefits

Year	1992	1993	1994	1995	1996	1997	1998
Total registry unemployment	134662	185216	166480	153041	186339	268902	386918
Number of registered unemployed receiving benefits	62588	93560	78331	67623	93430	138107	190396
in %	46.5	50.5	47.1	44.2	50.1	51.4	49.2
Average unemployment benefit (in CZK)	1404	1654	1832	2056	2306	2567	2335

Source: Ministry of Labour and Social Affairs.
Note: Data as of December 31 of each year
Maximum level of unemployment benefits by the April 1999 is set at 1.5 of Minimum Living Standard (MLS) of a person older than 26 years of age in a single-person household. The maximum is set at 1.8 of MLS if unemployed participates in Retraining programme.
Minimum level of unemployment benefits by April 1999 is set at the MLS of a person in single-person household.

8.2 *Active labour market measures*

There has already been a 50 % increase in the funds allocated to active measures in 1999 compared to 1998, reflecting the rise in unemployment. Even after this sizeable increase there is still much scope for expansion. This will, however, be limited by general fiscal pressures. Furthermore, there is no convincing analytical evidence on the effect and cost efficiency of the existing programmes. Until now, major funds have been allocated to one of the existing four active pro-employment programmes:

Subsidised employment

Subsidised employment is the major channel of support, accounting for 55 % of total active policy funds. The Labour Offices provide support, typically for the less qualified workers, in the form of reimbursement to employers of a part of a worker's salary. The programme is known as "Socially Purposeful Jobs" and supports jobs in both existing firms and in self-employment. This form of support aims at the creation of permanent jobs, so a condition of a minimum 2-year job tenure exists. The Labour Offices drew upon German experience and aid from Phare in designing the pattern of this activity in the early 1990s. Further, the "Publicly Useful Jobs" programme creates short-term public-works jobs requiring few skills.

Training

Retraining programmes form the second largest spending share (17 %). This is, however, very low compared to EU standards and especially so when taking into account the disparity between inherited skill structures and current labour market needs. Retraining is provided only to selected registered unemployed persons and carried out mainly by commercial and certified agencies. The selection of training providers is based on open public competition. See more details in Section 6.4.

The disabled

Measures for the disabled consist of a number of special programmes aimed at groups with particular labour market difficulties. This support is mainly provided through subsidies to firms that hire these workers. In addition to active measures, there are penalties for those who discriminate against or refuse to employ the disabled.

Youth and minorities

Youth measures focus on school leavers and provide salary subsidies to employers who hire recent school graduates. The programme "Chance" is aimed at young people who have dropped out of the formal education system. Preference is given to on-the-job training rather than in-class training. Another example of a specialised programme is "Romstart" which is targeted at young Romanies.

Career Guidance Centres

Advisory services of the Career Guidance Centres at District Labour Offices provide their services free of charge to all those interested in choosing a career, improving or changing their profession (e.g. to students and to the unemployed, as well as the employed). The officers of these centres are in continuous contact with the educational institutions in the region. Special attention is paid to the final years in the lower secondary school grades. Labour Offices often act as intermediary in communication between employers and schools at the district level, since the advisory board of directors of Labour Offices usually includes representatives of employers as well as of educational institutions in the district. See Table 8.3 and the appendix Tables A8.1-A8.3 for more details on these programmes.

Table 8.3: Participants in Active Employment programmes (share of the labour force)

Year	1991	1992	1993	1994	1995	1996	1997
Jobs for graduates (placed individuals)	0.27	0.42	0.14	0.13	0.10	0.09	0.07
Socially purposeful jobs (placed individuals)	0.63	1.16	0.23	0.19	0.13	0.08	0.06
Publicly useful jobs (placed individuals)	0.34	0.49	0.22	0.25	0.21	0.19	0.23
Retraining (newly enrolled individuals)	0.15	0.34	0.23	0.28	0.26	0.23	0.22
Special workplaces for disabled (individuals)	n.a.	0.03	0.02	0.01	0.01	0.01	0.01
Acknowledged retirement benefits for early retirees							
Of it:							
■ temporarily shortened retirement	n.a.	n.a.	n.a.	n.a.	n.a.	0.07	0.16
■ Permanently shortened retirement	n.a.	n.a.	n.a.	n.a.	n.a.	0.14	0.32

Source: Ministry of Labour and Social Affairs

Efficiency of employment service delivery system

The efficiency of active programmes is difficult to evaluate. The Ministry of Labour's computations compare the direct and indirect costs of supporting an unemployed individual to the costs of employing the worker through active employment programmes. Their computations suggest large cost savings from active employment measures. However, whether the efficiency of the assignment of workers and firms could be improved is an open question.

Effects such a crowding out, self-selection, or long term impact on employment have not been taken into consideration as there is currently no fully reliable evaluation study of the impact and efficiency of the existing active programmes. The district labour offices have detailed information on the current participants in active programmes but they have very limited or no information on follow-up labour market or out-of-labour market trajectories. A research project of the World Bank (1998) provides a relatively rigorous analysis based on a follow-up survey of participants in active programmes and of workers in comparison groups. Their results have to be treated with caution due to a very high non-response rate and the likelihood that programme selection biases were not sufficiently controlled for. Focusing on the likelihood of employment and on post-treatment wages, the World Bank study concludes that active programmes did not have a great deal of success in improving the employment and earnings outcomes of all programme participants.

Only the subsidised employment programme (Socially Purposeful Jobs) for the self-employed seems to improve significantly both the employment prospects and the wages of programme participants. We would attribute at least part of the positive impact to the self-selection effect, i.e. these workers would probably do well even without the subsidy. On the other hand, the Publicly Useful Jobs programme, creating short-term public-works employment, is not effective in improving participants' employment or earnings outcomes.

The current share of expenditures on active labour market programmes is low compared to the typical levels in the EU and an increase in the "active" funds is likely to have a positive net impact. However, the efficient spending of these resources in the expansion of active programmes is, in our view, largely dependent on monitoring allowing for the reliable impact evaluation of individual programmes. Studies using randomised assignment into programmes could serve this purpose. A final note: currently the commercial manpower firms are not allowed to operate on a profit principle. The current government is proposing to remove this legal obstacle to enhance the job matching process and vacancy information dissemination.

8.3 *Industrial policies*

There are various government programmes aimed at supporting economic development. They fall into two major groups: the *regional programmes* and the *general programmes*. Let us first mention those falling into the first category. The Ministry of Industry and Trade co-ordinates the programme for economic development of towns, which supports entrepreneurial projects that modernise town infrastructure. Furthermore, the same Ministry co-ordinates the development of state-subsidised housing.

The Ministry of Regional Development also has regional programmes to support entrepreneurial activities. The programme "Region" provides interest rate subsidies to employers with less than forty employees, distinguishing *structurally affected* regions and *economically weak regions*. The programme "Village" targets employers with less than 250 employees operating in small municipalities of up to 2000 inhabitants and provides interest rate contributions. The programme "Preference" provides small entrepreneurs with less than 25 employees operating in structurally affected regions loans with preferential interest rates. The programme "Reconstruction" provides support to entrepreneurs affected by huge floods in 1997 and 1998. The following districts are considered structurally affected (see Maps in the Appendix): Děčín, Chomutov, Karviná, Český Krumlov, Kladno, Most, Ostrava, Přerov, and Teplice. The economically weak regions include Bruntál, Břeclav, Jeseník, Klatovy, Louny, Prachatice, Tachov, Třebíč, and Znojmo. The indicators used in identifying these districts are similar to the criteria used in the framework of EU Structural Funds used to identify regions belonging to *Target No.2* (structurally affected regions) and *Target No.5b* (economically weak, mainly rural regions). The area of the identified regions represents about one fifth of the country's population.

General programmes supporting small and medium entrepreneurs are co-ordinated by both the Ministry of Regional Development and the Ministry of Industry and Trade. The programmes are run by one bank (Ceskomoravska zarucni a rozvojova banka, a.s.) and assisted by the Czech Export Support Agency. The aim of those programmes is to promote entrepreneurial projects in the area of small and medium business. The major tool is providing easier access to bank credits and to leasing, e.g. in the programme "Assurance" and "Credit". The programme "Market" provides support for preparing for the requirements of the common EU market. Another programme aims at the support of employment of different handicapped groups. The programme "Capital" promotes the use of risk and development capital within small and medium entrepreneurial activities. Its goal is to support the competitiveness of domestic goods, export growth, productivity of labour and increasing employment, as well as the implementation of ecological technologies. The programme "Export support" aims to ease the access to foreign goods markets, to improve information, advisory, and educational services. The programme should make it easier for the Czech economy to join the common EU market.

8.4 Wage formation and income policies

Wage formation

Wages are predominantly set by the employers, with few wage controls put into effect by the government. Wage bargaining occurs at multiple levels. The top-level tripartite body is composed of representatives of the trade unions, employer associations and government. Even though it has no legal standing, it can play an important role in determining the aggregate wage growth and the development of the working conditions, etc., provided the government is willing to participate in the negotiations. Next, there are industry-level agreements between the employer associations and the trade unions, and finally, plant-level agreements are also common. The overall position of the wage unions is not strong. A union or an employer can apply to the Ministry of Labour and Social Affairs to have the industry-level agreement extended to all firms within an industry, not just those covered by the employer association signing the agreement with the trade unions. This option is not exercised frequently. Wages in the public sector are still set using a tariff system of wages, specifying the base wage (i.e. wage prior to assigning personal performance bonuses) depending among other characteristics on the worker's education and experience. These wage grid tables are binding within public administration and used to serve as one of the tools of wage determination even in the other sectors. Further, there are 3 official across-the-board wage tariffs, specifying the minimum wage depending on the degree of sophistication, responsibility, and physical difficulty of the job in question. Of these only the lowest one – the minimum wage – is legally binding. Although the law states that no employee can earn a wage lower than the two appropriate upper minimum tariffs, there are no penalties for those not complying.

Minimum wages

The legally binding minimum wage does not vary across regions or education. Its value has dropped during the transition and currently plays little role in affecting labour demand. Table 8.4 documents the timing of the increases in the minimum wage and the gradual erosion of its real value. Until the mid-1990s, the minimum was set by a tripartite social agreement, but currently the Ministry of Labour adjusts it when it deems it necessary. Collective agreements typically stipulate minimum wages about 10-20 % above the officially binding level. A 12-tariff minimum-wage bracket system was also a part of about 25 % of the collective agreements in 1998. Even though the minimum wage has been increased in January 1999 by almost 23 % from 2650 CZK to 3250 CZK,[19] its level is still about 27 % of the average monthly salary in the third quarter of 1998. The increase is therefore unlikely to have significant negative employment effects.

19 At 3250 CZK, the minimum wage is approximately 90 Euro using the exchange rate and very roughly twice as much using the purchasing power parity.

Table 8.4: The Minimum Wage (CZK)

Date	Feb. 1991	Jan. 1992	Jan. 1996	Jan. 1998	Jan. 1999
Hourly wage	10.8	12.0	13.6	14.8	18.0
Monthly wage	2 000	2 200	2 500	2 650	3 250

Source: Ministry of Labor and Social Affairs

However, since the minimum wage is the basis for calculating many social benefits (invalidity pensions, benefits for unemployed school graduates, etc.) changes in its level affect the social safety net and government expenditures. More importantly, the minimum wage is still well below the official minimum subsistence levels guaranteed by the welfare payments. This disparity will have work disincentive effects. The social benefits therefore serve as the effective wage floor. The total employment coverage of the minimum wage is not precisely known but is likely very low. The current government is planning to address this welfare trap by further increasing the statutory minimum wage by 23 % from the current 3250 CZK to 4000 CZK in July 1999. Such a level is likely to give the minimum wage some renewed impact on labour demand. The size of the impact is hard to forecast, however, as reliable empirical evidence is non-existent.

There is anecdotal evidence that a high number of small employers pay their employees minimum wages and provide the rest of their salary as unreported side payments to evade high social insurance and income tax payments (in combination about 48 %). By the recent increase in the value of the minimum wage, the government therefore also seeks to lower this type of payroll tax evasion. There is also anecdotal evidence that employers use the extremely low level of the minimum wage to get around the law for hiring cheap foreign labour. The posted vacancy at the Labour Office quotes a clearly unacceptable wage, the vacancy is not filled, and the firm is allowed to hire foreign labour.

Income policies

Indexing of pensions and minimum living standards to inflation is now the only automatic built-in income policy. Wage growth controls were in effect between 1991 and 1995. They provided support for the government's macroeconomic stabilisation policy in the first period of transition. However, their role was rather psychological and indirect, since there was a significant number of exemptions to the controls. In 1994-1995, when the economy started to grow, the controls were unable to stop wages from growing more rapidly. The abolition of the controls in 1996 therefore did not have any important economic impact. Wages continued to grow faster than labour productivity, until stopped by the fiscal and monetary restriction of 1997. The 1997 restriction consisted of two "packages," which cut government expenditures by more than 4 % of GDP. Wages in the state sector were fixed at nominal levels, and the government urged that wage bargaining must lead to an overall "wage abstinence". The government decides on raising the wage tariffs on an ad hoc basis, and in the past, these decisions seem to have been channelled to the private non-public sector. One vehicle for such an influence is the National Property Fund, which effectively controls many major firms (see Section 2.2). The Fund sends letters to company management suggesting the desirable level of nominal wage growth. Using all the existing channels, the restrictive measures of 1997 had a significant impact on wages and productivity in particular. The wage growth in the economy in 1997 was the lowest since 1991, reaching only 11.9 % in nominal terms and 3.1 % in real terms, while productivity growth reached the record level of 11 %.

8.5 Work disincentives through social policies

The state social assistance scheme is based on a two-income household model. It provides transfers to increase households' income to guarantee the official minimum living standards. The level of minimum living standards reflects the household size and the age of household members. Until 1995, the minimum living standard had been changed whenever inflation (measured using CPI) had risen by more than 10 % since the previous adjustment. This adjustment threshold was decreased to 5 % in January 1995, following the fall of the aggregate inflation level in the country. The law stipulates that the extent of each of these adjustments should take into account the magnitude of the cost-of-living increase, but the actual size of the increase in the standards is fully at the discretion of the government. There are no adjustments of the minimum living standard reflecting differences in living costs across regions. To be eligible for transfers from the social assistance scheme, all household members (except mothers on maternity leave, other household members on parental leave, members taking care of another household member, the retired, and the handicapped) have to have official employment or be registered as unemployed at district labour offices. The State social support is targeted to individual families. Some of its benefits are household means tested (child allowances, social allowances, housing contribution, and transport contribution), while others are not (parental allowances, birth or funeral bonuses, etc.) Let us now turn to some specific forms of benefits related to children.

Effects of child-related allowancesState support of maternal care has a long tradition in the country and persisting public support.[20] Child allowances can be received as long as children are in school full-time (including university studies). The amount reflects household income, but allowances are received by a majority of families with children, as approximately 75-85 % of all the dependent children in the country receive the allowances.

The parental allowance supports parents who take care of their child (or children) full-time. In the mid-1990s, entitlement to this benefit was extended from 3 to 4 years. To be eligible for the benefits, the child cannot be put into a child-care facility for more than three calendar days per month. Further, the parent loses the benefits if s/he accepts any part-time job. Many women with small children stay unemployed since available wage offers for part-time jobs are not high enough to compensate for the loss of parental benefits and the work-related fixed costs.

The fraction of single-child mothers relying on the 4-year parental leave is significant. Long periods of absence from the labour market can lead to a loss of human capital and labour force attachment. Further, employers worry about losing a women for such a long time period, which affects female career prospects. The employer is obliged to offer a woman returning from maternity leave the same job she held before leaving the firm, as long as the leave lasts less than 3 years. It is, however, possible to lay off women at the time of their return and pay severance pay.

Welfare trap

The relatively high level of the state guaranteed minimal income that defines eligibility for social support benefits results in a large number of benefit recipients (about one third of all households). While the share of social transfers to average income households with children has fallen during the last 2 years by 2.4 percentage points, this share rose by 5.3 percentage points for low-income

20 The opinion of 30 % of the adult population is that child allowances should be provided to all children irrespective of household income, 44 % support a scheme providing benefits according to household income and only 18 % prefer allowances targeted only to low income households (Social Policy 2/99, p.12).

households with children. Low-income households are eligible for several types of social benefits simultaneously. The total sum of even relatively minor benefits then represents a welfare trap for specific types of households. To provide a basic idea of the extent of this trap, we provide levels of alternative incomes (earnings and welfare benefits) in Table A8.4.[21]

Overall, the social support scheme creates obvious work disincentives for certain groups of households. Recall that social support is conditional on registered employment or unemployment. Because the provision of welfare benefits is administered separately from the administration of District Labour Offices, our opinion is that the Offices do not have strong incentives to monitor the willingness of the registered unemployed to work. This effect is strengthened by the fact that those on welfare are frequently long-term unemployed (unemployment benefits expire after six months of unemployment) who collect welfare benefits from welfare offices and do not receive any benefits from Labour Offices where they are still registered to be eligible for welfare. It is therefore likely that welfare recipients may easily participate in the shadow economy and collect both welfare and shadow earnings, while the state pays their social insurance contributions for them. The extent of such practices is obviously not explicitly measurable and we base our opinion on anecdotal evidence and the opinion of other experts.

Table 8.5: Sick-leave Absence

Year	1990	1993	1994	1995	1996	1997	1997*	1998*
Average percentage of sick-leave absence	4.8	5.3	5.8	6.2	6.0	6.3	6.7	6.5
Average duration of one sick-leave case (days)	18.4	23.2	24.7	24.4	25.8	26.3	25.7	28.2

Source: Statistical yearbook of the CR 1994, 1995.
Statistical information of the CSO 1996, 1997, "Pracovni neschopnost pro nemoc a uraz v CR"
** First half of a year*

Sick leave insurance

Sick leave insurance contributions are mandatory for all employees except the self-employed, who can choose public or private insurance or stay uninsured. The scheme has no component creating incentives for employers to improve and maintain healthy working conditions. In case of sickness, workers are eligible for sick-leave payments constituting 50 % of the quarterly average wage for the first 3 days and 69 % thereafter. There is a daily ceiling level of 186 CZK. The maximum level of benefits significantly favours those with low incomes and partly contributes to the significantly higher sick-leave rate for this group. A substantial increase in the daily ceiling has actually been approved in April 1999.

21 Further, let us present a simple example: the guaranteed minimum living standard for a household of two adults and two dependent children (12 and 16 years of age) is currently 9,660 CZK. If one of the parents stays at home to take care of the children, the decision of the other parent to acquire/keep official employment depends on the comparison of the gain from working (the earnings in excess of 9,660 adjusted at least for commuting costs) with the loss from working in terms of forgone benefits, time and effort. The disincentive effect is likely to be large as the average national wage is at a similar level to the minimum living standard and the comparison is even less favourable for low-skill workers, whose wage offers are below the national average. It should also be reiterated here that since 1994, the minimum wage has fallen below the minimum living standard for a single-person household.

Foreign employers point to the unusually large extent of the sick-leave rate among the labour force. Some adopt special schemes to overcome this problem and make remuneration conditional on the production piece-rate. There is also anecdotal evidence that employers send their employees on sick leave (benefits are fully covered from the state central budget) to overcome fluctuations in the demand for their output. The fraction of low-income workers on sick leave by far surpasses that of the high-income group and cannot be fully attributed to working conditions of low-income workers (Table A8.5). It is likely to be a combination of misuse by low-income workers and of employer pressure for low work absence for those in high paying jobs.

Health insurance

Average expenditures per individual increase steeply with age. As large cohorts are now approaching 60 years of age, expenditures on health care are likely to grow steeply during the next decade. The share of contributions to health insurance in GDP is already high and it will be difficult to maintain the current level of mandatory contributions to keep the health care budget in balance. The state pays compulsory health-insurance contributions for eligible individuals who do not work. The growing number of unemployed will therefore further burden the state budget.

Pension scheme

The state-guaranteed pay-as-you-go system is the major scheme providing old-age pensions. Payroll pension contributions are mandatory and since 1996 the revenues have been kept in a separate account. The account is, however, in a deficit notoriously covered by the general state budget. The current pension payment formulas are extremely egalitarian as individual pension levels only slightly depend on the amount of previous personal contributions.

The statutory retirement age for both sexes is now steadily increasing (see details in section 4.1). The adoption of this gradual increase in 1996 has been accompanied by the introduction of early retirement up to three years before the statutory retirement age. More specifically, there are two options for early retirement, a temporary and a permanent one, of which the latter has been used more frequently. The pensions of early retirees are prorated but the adjustment is less than actuarially fair and favours early retirement. In 1996 early retirements constituted only 18 % of old age retirements. By 1998, early retirements had increased by a factor of five (see Table 8.6) so that early retirements in 1998 constituted almost half of all old age retirements. The fiscal effects of early retirements more than outweighed the expected benefits of extending the statutory retirement age. In the light of the demographic outlook and growing unemployment of older workers, early retirements could become even more important.

During the first two years of retirement, statutory retirees lose their pension eligibility if their earnings exceed about half of the economy-wide average wage. The intention of this controversial implicit tax measure must be to discontinue the labour market attachment of older workers. It is questionable whether it actually weakens unemployment pressures or not.

Table 8.6: Regular and Early Retirements

Year	1996	1997	1998
Total retirements (individuals)	59714	80832	113834
of it:			
■ Regular	48846	56514	58299
■ Early	10868	24318	55535
Total retirements (% of total)	100	100	100
■ Regular	82	70	51
■ Early	18	30	49

Source: Celostatni zakladni ukazatele z oblasti duchodoveho zabezpeceni, Ministry of Labour and Social Affairs.

Voluntary supplementary pension insurance is subsidised by the state and provided by commercial pension funds. Personal monthly contributions up to the level of 500 CZK (about 5 % of the average net wage) are augmented by government subsidies to provide saving incentives.[22]

A pension reform has been under consideration for several years now. The government and independent experts sharply disagree on the necessity of a fundamental reform. The current administration is planning to rely on partial adjustments of the existing pay-as-you-go system and supplementary pension insurance. More employer involvement is considered in these plans and the goal is to maintain the public-pension/net-wage ratio of about 55-60 % (now at 55 %). While the dependence of the pension level on paid payroll contributions should increase, pension floors are to be guaranteed.[23] The deficit of the current pension system will necessarily grow in the coming decades, requiring substantial additional funding from the central budget. The dependency ratio will start increasing in 2005 (see Section 4.1). Under the current scheme, this will require further increases in the retirement age and most likely also hikes in the already high pension insurance contributions. This would, however, further deteriorate work incentives and increase total labour costs.

22 About 1.7 million people (17% of the population) participated in private pension programmes by the end of 1998. However, the amount of private savings per individual is low and even stagnating during last three years so that it cannot provide a significant supplement to state pensions in the future. The existing evidence suggests that savings in supplementary pension plans come fully at the expense of other savings and do not increase aggregate savings. Supplementary savings therefore seem to be merely another form of savings motivated by the state subsidy.

23 The administration opposes the introduction of a funding system, arguing that it would require unbearable fiscal costs and be too risky.

9. Conclusions

Even though the initial changes in employment structure have been dramatic, exceptionally low unemployment was sustained through large flows of workers from agriculture and industry into services and other small business. What also helped to subdue unemployment was the low level of unemployment benefits and the newly established network of the District Labour Offices. The extent of reforms and firms' restructuring, however, slowed down during the mid-1990s, while macroeconomic imbalances grew. In 1997 unemployment started to grow in a fashion typical for early transition stages of other Central and Eastern European countries. Given the current rather distressing trends, we will focus the conclusions on negative aspects of the labour market, pointing to problems that need to be remedied.

The weaknesses of the Czech labour market have become apparent in the current economic recession, which is likely to last at least until the end of 1999. While the increase in unemployment is largely driven by low aggregate demand, labour market weaknesses may be important in keeping unemployment high even when the economy finally takes off. The high labour taxation keeps labour demand depressed and motivates tax evasion and the growth of the shadow economy. Work disincentives of the welfare system, which is based on a two-income model, lower the labour supply. More and more unemployed people are likely getting caught in the welfare trap and may be losing labour force attachment. It is therefore crucial to focus on alleviating long-term unemployment, including prevention and early profiling. Furthermore, the extent of active employment policies is low in international comparison. It is not only important that more funds be allocated to active programmes, but also that the effectiveness and cost efficiency of these programmes be checked.

As major banks are now finally being privatised, the soft loans of early transition will vanish. Consequently, more downsizing is now likely to occur in large enterprises, which are often major employers within local labour markets. This can further worsen local unemployment, as the territorial mobility of the Czech labour force remains low, and this issue should become a major policy concern. We believe all of these points to be important in making the Czech labour market and its institutions more flexible and ready to cope not only with the expected continued massive unemployment inflow, but also with future labour demand and technology shifts. In the absence of significant improvements in labour market flexibility, in a few years the economy might find itself carrying a large group of discouraged workers, unable to return to work. While some of the EU member states are rich enough to be able to support these long-term unemployed, such an extra burden might become a very serious obstacle to future economic growth in the Czech Republic.

A closely related issue is the quality of the vocational education system, which is now becoming aware of its weak response to current labour market needs. It is also important, however, to focus on long-term labour market needs. From this point of view, the system appears over-stratified and unable to provide sufficient flexible skills. This could perhaps become one of the topics in redesigning the system and lead to an increase in the importance of on-the-job-training for providing currently needed firm-specific skills. Such a shift in focus would allow schools to provide an educational base allowing workers to acquire different and new skills during their productive years. There is also some indication that the quality of Czech human capital might not be as high as the educational attainment measures suggest. Further, the extent of desirable life-long learning is still low.

Equally importantly, the social security and health insurance systems are not preparing to cope with the ageing population, with the crisis looming around 2007. Under the pay-as-you-go system, which is likely to be retained, the statutory retirement age will have to be further increased and early retirement options will have to be made less attractive or terminated. Since the value of pensions will most likely decrease when ageing becomes a significant demographic force, more incentives should be provided now for private additional pension schemes. The level of sick-leave payments is low and is widely used by low-income workers. Pension payments are now even more egalitarian than they were under communism and provide little reward to those paying high contributions.

Over the last few years, foreign employment has become a significant substitute for local low-skill labour, especially in construction industries. At the same time, illegal foreign employment (especially from former Soviet states) has grown. Foreign workers often work under safety and pay conditions that are far from acceptable to local labour. It is not clear if stricter laws on importing foreign labour would - in the absence of thorough monitoring - lead to less illegal foreign employment. The labour market and social problems of the Romany population are now receiving more attention in public debate, and a number of important programmes have been started, but there is still a need to provide more long-term solutions. Two issues stand out: the high reliance on welfare, especially for the typical families with a large number of children and generous social support, and the extremely low educational attainment of even the current youth cohorts.

The structure of Czech wages, which was one of the most compressed even among the socialist economies, has adjusted to market forces and now reflects all of the most important wage determinants. The returns to education continue to grow even nine years into the transition. As the state monopoly for providing tertiary education was abolished as of 1999, the current low share of tertiary educated people is therefore likely to increase in the near future. There is little government interference in employer wage setting and the minimum wage level is very low. While the structure of wages is now quite responsive to market forces, the aggregate growth of wages (and consumption) was above that of productivity for most of the late 1990s and played its role in triggering the current economic downturn. Real wage growth has slowed down significantly during the recession and it is important not to allow wages to soar again in order to prevent new imbalances and a new GDP cycle. Preliminary indices from the first quarter of 1999 actually indicate that wages may again be growing too fast.

While trade union coverage is relatively low, the influence of unions is stronger in companies that are more likely in need of restructuring and therefore in need of wage cuts. The tripartite negotiations on the national level did not function in the mid-1990s and the wage settlements are typically worked out within the industry-level agreements. The network of District Labour Offices is a solid base for administering the employment policy. The individual Offices also help in fostering local tripartite dialogue and in making labour markets more transparent. The labour law imposes relatively minor constraints on labour market adjustment, such as those on hours worked or overtime hours. The protective measures for women (mothers), however, are often judged to have a negative influence on female career prospects. The effectiveness of stipulations protecting handicapped workers is questionable.

Most economists believe that the Czech economy has a vast potential for economic growth in the medium run, but few expect the economic recovery to occur soon and to be powerful. The most important tasks to be carried out in combating unemployment and in fulfilling the growth potential have to do with macro-economic policy, the legal system and judiciary, and bank privatisation. We also believe, however, that the Czech labour market could be made significantly more flexible, thereby improving the long-term prospects of the country.

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Czech Statistical Office

11.1 Comment on data sources

There are 4 major micro-data sets that one can use to regularly capture the evolution of the Czech labour market. The Czech Statistical Office (CSO) collects a quarterly Labour Force Survey (LFS) and also gathers data from a census of firms. Further, a large quarterly firm-based sample of employee wages is collected under the supervision of the Ministry of Labour and Social Affairs. The same Ministry also manages the unemployment registry of the District Labour Offices. While these databases are generally available for analytical purposes, they do not seem to be efficiently employed. Some of these surveys may suffer from biased sample selection and one should be careful in interpreting many results based on these data sets for the entire population in question. For instance, while the Czech law on statistical reporting requires every Czech service firm with above 1 worker to report its employment on a monthly basis, this reporting threshold was as high as 25 workers prior to 1997. Another example is provided by the firm-based sample of employee wages: the Information System of Average Earnings. (Since the Labour Force Survey (LFS) of the Czech Statistical Office does not ask about individual wages, this data is the most important source of labour market information.) While the wage sample now covers about 10 % of Czech employment (mainly in medium and large enterprises), it consists of both firms randomly selected into the sample and of firms which have volunteered to be included, thereby compromising the sampling quality. Further, since the sample grew from about 200 firms in 1993 to currently more than 2000 it is hard to interpret the observed changes in average wages as fully representing the underlying changes in the economy as opposed to merely mirroring the changing structure of the data.

The coverage and quality of micro data has grown over time. The LFS was launched in 1993, but no comparable data is available prior to 1993. In describing the employment patterns we therefore also provide an alternative time series based on the firm census. The one micro data set with full coverage and comparability is the unemployment registry, available from 1991 onward. Notwithstanding all the micro-data caveats, the samples are in general of high and improving quality and represent a most useful source of labour market information.

The aggregate statistics, on the other hand, are typically not well suited for time series analysis. Among their typical problems are frequent changes in definitions and in the structure of the primary data sources. Especially product indicators have to be considered with great caution. For instance in

1997, the Czech Statistical Office changed the methodology of national accounting. It shifted the emphasis to the expenditure side of GDP, the production side being in fact disregarded in the calculations. At the same time, the Office started publishing figures including the estimate of the shadow economy's GDP. The original GDP data have been recalculated back to 1990 only on an annual basis and quarterly year-to-year data are available only from 1995 on. Similarly, in 1997 the Office started publishing an industrial production index based on value added, while the index used up to 1997, called "production of goods in industry," was based on sales. An attempt to provide a consistent series by continuing to publish an "industrial sales" index is hindered by other methodological differences including a change in the range of firms covered by the index when compared to the original sales-based indicator. Finally, there is likely to be a large bias in the CPI calculations at least in the very first years of transition due to the changing quality of goods as well as the introduction of new goods into the consumption basket. These biases enter the real GDP calculations and are likely to overstate the GDP drop at the beginning of transition. We should also mention the fact that prior to 1993, the Czech Republic was a part of the federative Czechoslovakia. Even though most major economic statistics were re-computed for each of the two states for the pre-split period, their reliability and level of detail has certainly been compromised.

Appendix tables

Table A2.1 Economic development in 1990-1999

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999*
GDP (CZK bill., current prices)	749.6	846.8	1002.3	1148.6	1348.7	1532.6	1649.5	1776.7	1830.0
GDP (DEM bill., exchange rate)	42.1	46.5	56.9	64.5	72.9	84.7	90.1	97.1	92.9
GDP (1990=100%)	88.5	85.6	86.1	88.9	94.5	98.2	99.2	96.5	96.3
GDP (% y/y avg.)	-11.5	-3.3	0,6	3.2	6,4	3,9	1,0	-2.7	-0.2
GDP per capita (1990=100%)	89.0	86.0	86.4	89.1	94.8	98.7	99.7	97,0*	96.8
GDP per employee (1990=100%)	93.6	93.0	95.0	97.3	100.9	104.2	106.3	106.0	106.5
Industrial sales (%y/y)	-22.8	-11.7	-5.3	2.1	9.2	6.8	6.1	0.6	0.0
Gross Agricultural Product (% y/y)	n.a.	-9.0	-12.0	-2.5	-5.1	4.0	-1.3	-5.3	n.a.
Inflation (y/y, %, average)	56.6	11.1	20.8	10.0	9.1	8.8	8.5	10.7	3.1
Price Level (1990=100%)	156.6	174.0	210.2	231.2	252.2	274.4	297.7	329.6	339.8
Nominal Wages (CZK/month)	3792	4644	5817	6894	8172	9676	10696	11688	12600
Nominal Wages (% y/y avg.)	15.4	22.5	25.3	18.5	18.5	18.4	10.5	9.3	8.0
Nominal Wages (1990=100%)	115.4	141.3	177.0	209.8	248.7	294.5	325.5	355.7	383.4
Real Wages (1990=100%)	73.7	81.2	84.2	90.7	98.6	107.3	109.3	107.9	112.8
Real Wages (% y/y avg.)	-26.3	10.2	3.7	7,7	8.7	8,8	1.9	-1.3	4,5
Employment in Industry (% y/y)	-1.3	-7.7	-4.8	-4.4	1.3	-6.3	-3.5	-0.1	n.a.
Employment in Agriculture (% y/y)	-6.5	-16.2	-22.1	-9.3	-4.6	-11.6	-2.0	-7.8	n.a.
Registered Unemployment (%, end year)	4.1	2.6	3.5	3.2	2.9	3.5	5.2	7.5	9.6
ILO Unemployment (%, end year)	n.a.	n.a.	3.9	4.0	3.4	4.3	5.4	7.3	9.5
Registered Job Applicants / Vacancies (end year)	4.6	1.7	3.4	2.2	1.7	2.2	4.3	10.3	n.a.
Imports (% y/y, current prices)	n.a.	n.a.	n.a.	n.a.	23.5	6.6	20.0	17.7	7.0
Exports (% y/y, current prices)	n.a.	n.a.	n.a.	n.a.	33.7	13.0	15.3	7.9	7.0

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999*
Trade Balance (CZK bill.)	n.a.	n.a.	n.a.	-44.4	-105.9	-155.8	-151.2	-79.5	-80.0
State Budget Surplus (% GDP)	-2.1	-0.2	0.1	0.9	0.5	-0.1	-1.0	-1.6	-2.7
CZK/DEM	17.8	18.2	17.6	17.8	18.5	18.1	18.3	18.3	19.7
CZK/USD	28.0	28.29	29.16	28.78	26.55	27.14	31.71	32.27	36.0
**Purchasing Power Parity: Exch. Rate (CZK/DEM)	4.8	4.7	3.9	3.6	3.5	3.3	3.0	n.a.	n.a.
**Relative Price Level (Czech Rep./Germany)	0.21	0.22	0.26	0.28	0.28	0.31	0.33	n.a.	n.a.
Nominal Wages (DEM/month)-Exch. rate	213	255	331	387	442	535	584	639	640
** Nominal Wages (DEM/month)-PPP	1039	1193	1279	1408	1552	1747	1716	n.a.	n.a.

*Source: Czech Statistical Office.*Forecast by Komercni banka,.**PPP and Relative Price Level data from the Chamber ofthe Trade Unions.*
NOTE: The estimate of the relative price level from the ECP project is 0,4, so that the yearly relative price level data by the Chamber of Trade Unions seem to be underestimated.

Table A2.2: Growth rates of GDP and gross fixed investment (year-on-year in %)

Year	1991	1992	1993	1994	1995	1996	1997	1998
GDP	-11.5	-3.3	0.6	2.7	6.4	3.9	1	-2.7
Gross investment	-32.5	16.6	8.0	16.9	27.9	18.3	-9.5	-5.0*

*Source: Czech Statistical Office * 1-3Q/1998*

Table A2.3: Index of average monthly gross salaries in sectors (% of agriculture)

	1990	1993	1994	1995	1996	1997	1998*
Agriculture, Hunting and Forestry (CZK)	3603	5100	5865	6878	7808	8503	9151
Percent of Agriculture	100	100	100	100	100	100	100
Manufacturing	94.6	115.5	117.4	118.5	122.8	126.2	127.1
Construction	100.2	128	130	128.5	130.2	132	130
Wholesale and Retail Trade	78.2	100.6	107.7	104.7	108.8	123.7	130.9
Hotels and Restaurants	74.1	103.8	102.9	106.9	108.7	97.9	99.3
Transport, Storage and Communication	95.4	111.2	116.1	119.8	126.2	133.1	133.6
Financial Inter-mediation	93	202.7	206	203.8	210.1	219.4	223.6
Real Estate	88.2	118.3	126.2	129.3	134.4	138	144.1
Public Administration and Defense	91.6	135.6	141.9	139.7	146.8	138.6	130.4
Education	80.3	102.9	107.8	108	115.2	110.8	109.3
Health and Social Work	84.5	108.3	110.4	109.5	116.1	113.2	110.3
Other Service Activities	70.6	98.5	99	97.7	103.7	109	114
Total	91.2	114.1	117.5	118.8	123.9	125.8	126.7

*Source: Czech Statistical Office,Employment and wages, Evidencni pocet zamestnancu a jejich mzdy v CR. * Preliminarynumbers*

Table A2.4: Average gross wage by occupations

Selected Manual Occupations		Deviation fromaverage (%)	
Profession		2Q/1997	4Q/1998
Highest Earnings	Miners, stone-breakers in collieries	33.5	51.1
	Engine-drivers	26.7	38.6
Lowest Earnings	Porters, guards, attendants and cloak room attendants	-44.7	-45.5
	Assistants and cleaners in offices, hotels, hospitals	-50	-53.8
Selected Non-Manual Occupations			
Highest Earnings	Directors and presidents of large organizations and companies	326.6	409.6
	Managers in organizations offering business services	189.4	264.7
Lowest Earnings	Office and manipulation staff and text processing operators	-29.1	-27.0
	Cashiers in shops, public catering, etc.	-45.1	-43.5

Source: Information System on Average Earnings, Ministry of Labour and Social Affairs.

Table A2.5: Returns to education*

Year	1989		1996	
	Men	Women	Men	Women
Years of Education	2.7	3.8	5.8	7.0
Highest Level Attained				
Secondary vocational school (2 years)	6.3	7.4	9.4	10.4
Secondary vocational school (3-4 years)	7.7	7.9	11.2	16.6
Secondarytechnical school (4 years)	12.7	20.6	29.4	39.4
Grammar secondary school (4 years)	13.5	11.6	35.1	38.0
Tertiary school (4-5 years)	28.3	38.9	54.4	65.6

Source: Author's own estimates of earnings functions based on a representative survey of5 000 workers.
**Returns to education represent percentage difference in wages to a comparable worker with primary school controlling for other demographic characteristics.*

Table A2.6: Wage returns to education for males during the transition*

Education	1984	1993	1995	1997
Post-graduate school(2-4 years)	61.6	61.6	158.6	124.8
Tertiary school (4-5 years)	29.7	61.6	99.4	124.8
Vocational secondary school (4 years)	16.2	25.9	41.9	50.7
Grammar secondary school (4 years)	12.7	22.1	29.7	44.8

Source: The results (Chase, 1998, for 1984 and 1993 and Filer, Jurajda, and Planovsky, 1998, for 1995 and 1997) are based on multivariate regressions controlling for person specific, firm specific and other relevantcharacteristics using the Trexima ISPV database.
**Returns to education represent percentage difference in wages to a comparable worker with primary school.*

Table A2.7: Average gross monthly wages by region

Year	1996	1997	1998
Capital Prague	11 380	13 003	14 449
Central Bohemia	10 047	11 356	11 603
South Bohemia	8 504	10 153	10 525
West Bohemia	9 208	10 440	10 811
North Bohemia	9 161	10 428	10 959
East Bohemia	8 047	9 559	10 240
South Moravia	8 614	9 793	10 497
North Moravia	9 423	10 733	11 121
Czech Republic	9 298	10 683	11 276
% of country average			
Capital Prague	122	122	128
Central Bohemia	108	106	103
South Bohemia	91	95	93
West Bohemia	99	98	96
North Bohemia	99	98	97
East Bohemia	87	89	91
South Moravia	93	92	93
North Moravia	101	100	99

Source: Czech Statistical Office.

Table A3.1: Total employment by sector in 1993-1998 (LFS data)

NACE	Year	1993	1994	1995	1996	1997	1998
	Total	**5044700**	**5027100**	**5111600**	**4958400**	**4881300**	**4852900**
	Share of total (%)						
1	Agriculture, hunting and related service activities.	6.0	5.5	5.1	4.7	4.7	4.3
2	Fishing, operation of fish hatcheries and fish farms; services incidental to fishing	1.0	1.1	1.2	1.0	1.0	1.0
3	Industry, total. Including:	34.5	33.1	32.9	31.8	31.2	31.3
3a	Mining and quarrying	2.1	2.0	1.8	1.8	1.8	1.7
3b	Manufacturing	30.4	29.0	29.1	28.1	27.5	27.7
3c	Electricity, gas and water supply	1.9	2.1	2.0	2.0	1.9	1.9
4	Construction	8.8	8.9	9.1	9.4	9.7	9.3
5	Wholesale and retail trade; repair of motor vehicles, personal, household goods	11.2	12.8	12.8	13.3	13.1	13.5
6	Hotels and restaurants	3.2	3.1	3.0	3.2	3.5	3.4
7	Transport, storage and communications	7.6	7.7	7.7	7.9	7.8	7.8
8	Financial inter-mediation	1.5	1.7	1.9	2.0	2.0	2.1
9	Real estate, renting and business activities	4.7	4.8	5.0	5.2	5.0	5.1
10	Public administration, defense, compulsory social security.	5.4	5.5	5.3	6.5	6.5	6.8
11	Education	6.7	6.5	6.4	6.3	6.2	5.8
12	Health and social work	6.0	5.9	5.9	5.4	5.7	5.5
12	Other community, social and personal service activities	3.4	3.4	3.4	3.2	3.6	4.0

Table A3.1. continued

NACE	Year	1993	1994	1995	1996	1997	1998
	Annual growth (%)	n.a.	-0.3	1.7	-3.0	-1.6	-0.6
1	Agriculture, hunting and related service activities.	n.a.	-9.3	-4.6	-11.6	-2.0	-7.8
2	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	n.a.	15.0	8.7	-20.6	-2.0	-4.9
3	Industry Total. Including:	n.a.	-4.4	1.3	-6.3	-3.5	-0.1
3a	Mining and quarrying	n.a.	-8.2	-5.6	-5.6	-2.4	-2.8
3b	Manufacturing	n.a.	-4.9	2.1	-6.5	-3.5	0.0
3c	Electricity, gas and water supply	n.a.	7.4	-3.9	-2.5	-4.6	1.0
4	Construction	n.a.	0.9	4.7	-0.1	1.5	-4.9
5	Wholesale and retail trade; repair of motor vehicles, motorcycles and personaland household goods	n.a.	13.4	2.1	0.4	-2.7	2.2
6	Hotels and restaurants	n.a.	-3.6	-0.1	3.6	8.3	-4.6
7	Transport, storage and communications	n.a.	1.6	0.5	-0.3	-2.8	0.0
8	Financial inter-mediation	n.a.	13.5	14.0	-1.6	0.9	4.5
9	Real estate, renting and business activities	n.a.	2.0	4.7	0.2	-3.8	1.3
10	Public administration, defense; compulsory social security	n.a.	0.6	-1.5	18.4	-2.1	4.7
11	Education	n.a.	-2.9	0.3	-4.3	-3.3	-6.8
12	Health and social work	n.a.	-2.2	3.0	-11.3	2.8	-4.2
13	Other community, social and personal service activities	n.a.	-1.2	2.6	-6.8	8.1	10.7

Source LFS, 4th quarter 1998, CSO, p. 42, Winter 1996/97, p.42, Winter 1994/95, p.48, Winter 1993/94, p.48

Table A3.2: Workers in the civil sector of the economy (firm census data)

NACE	Year	1990	1991	1992	1993	1994	1995	1996
	Total (thousands)	**5351**	**5059**	**4927**	**4848**	**4885**	**5012**	**5044**
	Shares of total (%)							
1	Agriculture, hunting and related service activities.	8.0	6.8	6.0	4.8	5.0	4.8	4.4
2	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	Industry Total. *Including:*	25.5	26.1	25.3	25.0	23.8	25.1	23.4
3a	Mining and quarrying	2.3	2.3	1.7	1.6	1.5	1.4	1.3
3b	Manufacturing	22.2	22.9	22.3	22.1	21.0	22.3	20.9
3c	Electricity, gas and water supply	1.0	1.0	1.3	1.3	1.3	1.4	1.3
4	Construction	5.1	5.4	5.8	6.6	6.5	0.8	6.5
5	Wholesale and retail trade; repair of motor vehicles, motorcycles, personal, household goods	6.6	6.5	7.7	8.9	10.3	11.5	11.2
6	Hotels and restaurants	1.1	1.2	1.4	1.6	2.0	2.2	2.3
7	Transport, storage and communications	4.7	4.9	5.2	5.6	5.2	5.5	5.3
8	Financial inter-mediation	0.3	0.5	0.7	0.9	1.1	1.3	1.3
9	Real estate, renting and business activities	4.8	4.7	4.8	4.4	5.0	6.0	5.5
10	Public administration, defense; compulsory social security	1.2	1.3	1.7	1.9	2.2	2.5	2.4
11	Education	4.0	4.3	4.6	4.7	4.7	5.0	4.7
12	Health and social work	3.5	3.6	3.8	3.8	3.8	3.9	3.9
13	Other community, social and personal service activities	2.6	2.4	2.5	2.3	2.2	2.4	2.2

Table A3.2: continued

	Year	1990	1991	1992	1993	1994	1995	1996
	Annual growth (%)	n.a.	-1.8	-0.9	-0.5	0.3	0.9	0.2
1	Agriculture, hunting and related service activities.	n.a.	-6.5	-16.2	-22.1	2.1	-7.8	-3.4
2	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	n.a.	-2.0	-6.5	n.a.	n.a.	n.a.	n.a.
3	Industry, total. *Including:*	n.a.	-1.3	-7.7	-4.8	-5.3	0.6	-0.8
3a	Mining and quarrying	n.a.	-3.2	-26.6	-10.2	-9.4	-8.9	-5.6
3b	Manufacturing	n.a.	-1.0	-7.2	-4.4	-5.5	1.2	-0.3
3c	Electricity, gas and water supply	n.a.	-1.7	23.5	-4.7	3.0	1.1	-4.1
4	Construction	n.a.	0.1	1.0	11.0	-1.9	-88.7	800.1
5	Wholesale and retail trade; repair of motor vehicles, motorcycles and personaland household goods	n.a.	-2.6	12.5	11.9	15.3	6.7	3.6
6	Hotels and restaurants	n.a.	-0.7	15.0	11.0	22.8	3.5	9.6
7	Transport, storage and communications	n.a.	-0.3	-0.6	5.2	-8.3	0.7	2.2
8	Financial inter-mediation	n.a.	11.7	36.1	26.9	17.8	11.5	4.9
9	Real estate, renting and business activities	n.a.	-2.7	-3.4	-10.5	12.2	14.2	-1.8
10	Public administration, defense; compulsory social security	n.a.	1.2	24.6	7.5	10.2	10.5	3.9
11	Education	n.a.	0.7	0.9	-0.7	-0.8	0.0	0.1
12	Health and social work	n.a.	-1.4	0.1	-1.9	-1.9	-2.2	6.2
13	Other community, social and personal service activities	n.a.	-4.3	-1.3	-9.8	-7.6	5.2	-1.5

Source: Czech Statistical Office. 1997. Statistical Yearbook of the Czech Republic, Scientia: Prague.
Czech Statistical Office. 1994. Statistical Yearbook of the Czech Republic, Cesky Spisovatel: Prague.
NOTES: Data are in physical persons. This classification is compatible with the international classification ISIC (2 digits of the classification). Includes workers (manual and non-manual),includes all one (main) job holders, who work in the civil sector of the national economy (except armed forces). Data on the branch of activity are broken down by the categories of the Branch Classification of Economic Activities - OKEC (a national application of NACE).

Table A3.3: Regional employment rates (LFS data)

Year	1996			1997			1998		
Region	Total	Women	Men	Total	Women	Total	Total	Women	Total
Capital Prague	69	61	77	68	61	76	68	61	76
Capital Bohemia	68	57	78	67	57	77	67	56	78
South Bohemia	68	59	77	66	57	76	67	57	77
West Bohemia	69	59	79	67	58	77	66	56	75
Noeth Bohemia	64	56	47	63	53	73	61	50	71
East Bohemia	68	58	77	66	56	75	65	56	75
South Maravia	66	56	75	65	55	76	65	55	75
North Maravia	64	54	73	62	53	71	62	52	71

Source LFS, 4th quarter 1998, CSO, p. 29, 33, Winter 1996/97, p. 29, 33, Winter 1994/95, p. 29, 33.
Note: Figures for 1994 are not available

Table A3.4: Employment during 1993-1998. (LFS data)

Year	1993	1994	1995	1996	1997	1998	1998/93
Employed Total	5 044 700	5 027 100	5 111 600	4 958 400	4 881 300	4 852 900	0.96
Annual change (%)	n.a.	-0.3	1.7	-3.0	-1.6	-0.6	n.a.
Primary sector	353 900	333 000	325 300	282 000	276 300	256 200	0.72
Share (%)	7.0	6.6	6.4	5.7	5.7	5.3	n.a.
Annual change (%)	n.a.	-5.9	-2.3	-13.3	-2.0	-7.3	n.a.
Secondary sector	2 180 700	2 108 600	2 150 900	2 045 100	1 996 700	1 971 400	0.90
Share (%)	43.2	41.9	42.1	41.2	40.9	40.6	n.a.
Annual change (%)	n.a.	-3.3	2.0	-4.9	-2.4	-1.3	n.a.
Tertiary sector	2 506 900	2 581 600	2 630 000	2 625 500	2 604 900	2 619 500	1.04
Share (%)	49.7	51.4	51.5	53.0	53.4	54.0	n.a.
Annual change (%)	n.a.	3.0	1.9	-0.2	-0.8	0.6	n.a.
Employed Women	2 331 100	2 323 900	2 346 600	2 167 100	2 126 000	2 101 400	0.90
Annual change (%)	n.a.	-0.3	1.0	-7.6	-1.9	-1.2	n.a.
Share on Total (%)	46.2	46.2	45.9	43.7	43.6	43.3	n.a.
Primary sector	137 700	128 400	118 200	95 400	90 500	85 400	0.62
Share (%)	5.9	5.5	5.0	4.4	4.3	4.1	n.a.
Annual change (%)	n.a.	-6.8	-7.9	-19.3	-5.1	-5.6	n.a.
Secondary sector	771 700	727 000	741 900	639 300	613 400	592 700	0.77
Share (%)	33.1	31.3	31.6	29.5	28.9	28.2	n.a.

Table A3.4: continued

Year	1993	1994	1995	1996	1997	1998	1998/93
Annual change (%)	n.a.	-5.8	2.0	-13.8	-4.1	-3.4	n.a.
Tertiary sector	1 420 000	1 467 000	1 483 700	1 427 900	1 420 300	1 409 600	0.99
Share (%)	60.9	63.1	63.2	65.9	66.8	67.1	n.a.
Annual change (%)	n.a.	3.3	1.1	-3.8	-0.5	-0.8	n.a.
Employed Men	2 713 600	2 703 200	2 765 000	2 791 300	2 755 300	2 751 500	1.01
Annual change (%)	n.a.	-0.4	2.3	1.0	-1.3	-0.1	n.a.
Share on Total (%)	53.8	53.8	54.1	56.3	56.4	56.7	n.a.
Primary sector	216 200	204 600	207 100	186 600	185 800	170 800	0.79
Share (%)	8.0	7.6	7.5	6.7	6.7	6.2	n.a.
Annual change (%)	n.a.	-5.4	1.2	-9.9	-0.4	-8.1	n.a.
Secondary sector	1 409 000	1 381 600	1 409 000	1 405 800	1 383 300	1 378 700	0.98
Share (%)	51.9	51.1	51.0	50.4	50.2	50.1	n.a.
Annual change (%)	n.a.	-1.9	2.0	-0.2	-1.6	-0.3	n.a.
Tertiary sector	1 086 900	1 114 600	1 146 300	1 197 600	1 184 600	1 209 900	1.11
Share (%)	40.1	41.2	41.5	42.9	43.0	44.0	n.a.
Annual change (%)	n.a.	2.5	2.8	4.5	-1.1	2.1	n.a.

Source LFS, 4th quarter 1998, CSO, p. 54, Winter 1996/97, p.54, Winter 1994/95, p.44,Winter 1993/94, p.44.NOTE: Sectors:

1	p	Agriculture, hunting and related service activities
2	p	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing
3	s	Industry, total. Including:
3a		Mining and quarrying
3b		Manufacturing
3c		Electricity, gas and water supply
4	s	Construction
5	t	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
6	t	Hotels and restaurants
7	t	Transport, storage and communications
8	t	Financial inter-mediation
9	t	Real estate, renting and business activities
10	t	Public administration and defense; compulsory social security
11	t	Education
12	t	Health and social work
13		Other community, social and personal service activities

Table A3.5: Regional employment (LSF data)

Year	1996			1997			1998		
Region	Total Employment (age 15-64)	Share on country total (%)	Regional Women/ Total (%)	Total Employment (age 15-64)	Share on country total (%)	Regional Women/ Total (%)	Total Employment (age 15-64)	Share on country total (%)	Regional Women/ Total (%)
Capital Prague	569300	12.1	45.5	567800	12.2	45.9	566900	12.3	45.7
Central Bohemia	512300	10.9	41.9	510000	11.0	42.1	512100	11.1	41.8
South Bohemia	326900	7.0	42.9	320000	6.9	42.5	324400	7.0	42.4
West Bohemia	413000	8.8	42.6	401700	8.7	42.6	392600	8.5	42.4
North Bohemia	525600	11.2	43.3	521100	11.2	41.9	503100	10.9	41.0
East Bohemia	567600	12.1	42.8	554800	12.0	42.9	550800	12.0	42.4
South Moravia	917100	19.5	42.5	917700	19.8	42.4	913700	19.8	42.2
North Moravia	870900	18.5	42.2	846200	18.2	42.2	845200	18.3	41.9

Source LFS, 4th quarter 1998, CSO, p. 29, 33, Winter 1996/97, p.29, 33, Winter 1994/95, p.29, 33.
NOTE: Figures for 1994 employment are not available

Table A3.6: Employment rate (LFS data)

	1994			1996			1998		
Employment rates =Employed/Working age population (%)									
	Total	Women	Men	Total	Women	Men	Total	Women	Men
Primary School	27.3	25.5	30.9	24.8	22.5	29.7	24.3	21.1	30.7
Secondary vocational school	71.5	64.2	76.8	68.1	56.5	76.5	65.7	53.8	74.5
Technical or Grammar secondary school	72.3	71.1	73.8	69.2	65.6	73.8	66.1	61.5	72.0
Tertiary school	82.5	81.0	83.5	81.7	76.1	85.2	78.3	74.8	80.6

Source LFS, 4th quarter 1998, CSO, p. 30, 39, Winter 1996/97, p. 30, 39,Winter 1994/95, p.30, 39.

Table A3.7: Comparison of employment structures to EU

	CR 1998	EU 1997		CR 1998	EU 1997
Industrial Branch	%	%	Occupations	%	%
Agriculture, forestry	5.5	5.0	Legislators, Managers	6.7	8.0
Manufacturing, Mining, Energy	31.2	21.7	Researchers and Professionals	9.6	12.6
Construction	9.7	7.8	Technicians, Teachers, Health	17.9	14.4
Trade, Repairs	16.7	19.1	Lower Administrators	8.1	13.6
Transport, Storage, telecommunication	7.8	5.9	Operations in Trade and Services	12.3	13.3
Finance and Insurance	2.0	3.5	Qualified workers in Agriculture and Forestry	2.2	3.9
Commercial Services, R&D	5.1	7.6	Craftsmen	21.1	15.9
Public Administration, Defense	6.6	7.7	Machine operators	12.6	8.7
Education	5.9	6.8	Ancillary and not qualified workers	8.5	9.0
Health and Social Services	5.5	9.3	Armed forces	1.0	0.6
Other services	3.8	5.6			

Table A3.8: Regional employment (firm census data)

Year	1990	1992	1993	1994	1995	1996
Shares of total (%)						
Country total	100.0	100.0	100.0	100.0	100.0	100.0
Capital Prague	13.7	13.3	12.1	12.4	13.4	13.8
Central Bohemia	9.9	9.4	9.5	9.3	9.1	9.0
South Bohemia	6.6	6.8	6.8	6.8	6.9	6.8
West Bohemia	8.3	8.4	8.6	8.6	8.5	8.6
North Bohemia	11.7	11.0	11.2	10.9	11.4	11.2
East Bohemia	12.1	12.5	12.4	12.4	12.2	12.1
South Moravia	19.3	19.8	20.0	20.0	19.3	19.1
North Moravia	18.5	18.8	19.4	19.5	19.3	19.4
Annual growth (%)						
Country total	n.a.	-7.0	-6.3	-4.0	-5.0	-3.0
Capital Prague	n.a.	-7.4	-15.1	-1.4	2.1	0.2
Central Bohemia	n.a.	-7.9	-5.5	-6.0	-6.4	-3.9
South Bohemia	n.a.	-6.4	-5.7	-4.0	-4.6	-3.4

Annual growth (%)						
West Bohemia	n.a.	-6.7	-4.4	-4.5	-5.1	-2.7
North Bohemia	n.a.	-8.1	-4.7	-6.5	-0.8	-5.0
East Bohemia	n.a.	-6.5	-7.1	-3.5	-7.1	-3.9
South Moravia	n.a.	-6.6	-5.2	-4.0	-8.4	-3.8
North Moravia	n.a.	-6.8	-3.4	-3.3	-6.3	-2.3

Source: Czech Statistical Office,1997, Statistical Yearbook of the Czech Republic, Scientia: Prague, p.267.
Note: Figures do not include employees working abroad.
Figures cover all employees registered in the civil sector of the economy by businesses:
- *with 100 or more employees in 1990 and 1991*
- *with 25 or more employees from 1992 onand those with 100 or more employees, operating in the area of*
- *industry, trade, hotels and restaurants from 1995 on and employees of all budgetary and subsidized*
- *organizations (except armed forces).*

Table A3.9: Estimates of hidden GDP and employment (as % of GDP)

Types	1998	1995
	Share on GDP (%)	Employment
Grey economy	10	n.a.
produced by employees who have a main official job in addition to the grey activity	3	200,000 employees working 15 hours a week
produced by holders of entrepreneuriallicenses	2	30% of entrepreneurs working 15 hours a week
produced by persons working without any contract (e.g. unemployed , housewives, etc.)	2	200,000 workers devoting half of their total annual hours
produced by foreigners	3	40,000 workers full-time
Black economy	5	n.a.
Recorded criminal activities	3	n.a.
Unrecorded crime	2	n.a.
Shadow economy (grey + black)	15	n.a.

Source: Komercni banka: Economic Trends (Hospodarske trendy) No. 4, 1995, and additional calculations for 1998.

Table A3.10: Foreign employment (Issued work permits for foreign workers as of March 1998)

	Total	Women	Employment type		Job type			
			Individual	Refugee	Contract	Blue Collar	Upper Secondary	University
Ukraine	21 417	5 612	18 344	5	3 068	21 013	166	238
Poland	11 667	1 452	4 894	0	6 773	10 961	220	486
Bulgaria	3 279	879	2 726	2	551	3 003	110	166
Belarussia	2 404	1 019	2 212	0	192	2 325	30	49
Moldavia	2 223	430	2 017	0	206	2 204	14	5
Germany	1 571	346	1 175	1	395	154	403	1 014
USA	1 482	450	1 045	0	437	19	529	934
United Kingdom	1 286	328	922	1	363	14	463	809
Rumania	1 107	160	1 047	0	60	1 043	41	23
Russia	1 089	512	1 023	1	65	601	134	354
Macedonia	982	28	251	0	731	914	22	46
Mongolia	825	609	823	0	2	798	8	19
France	496	116	395	0	101	24	104	368
Austria	450	80	357	0	93	36	81	333
NIS	426	79	396	0	30	417	6	3
Yugoslavia	397	106	359	2	36	185	83	129
Other	3 943	1 055	3 257	12	674	1 199	867	1 877
Total	55 108	13 273	41 307	24	13 777	44 954	3 286	6 868

Source: Ministry of Labour and SocialAffairs

Table A4.1: Total population by age groups and gender (forecasts)

Working age: 15-64	1991 Census	1998	2000	2005	2010	2015	2020	2025	2030	2035	2040	2050	2070
1)	0.96	1.00	1.01	1.02	1.01	0.97	0.94	0.92	0.90	0.88	0.82	0.73	0.64
2)	0.97	1.00	1.01	1.02	1.00	0.95	0.91	0.90	0.88	0.85	0.79	0.70	0.61
3)	0.47	0.40	0.39	0.37	0.39	0.46	0.51	0.52	0.53	0.55	0.61	0.74	0.70
4)	1.84	2.06	2.12	2.20	2.08	1.79	1.62	1.57	1.53	1.48	1.32	1.11	1.15
5)	0.96	1.00	1.01	1.02	1.01	0.96	0.93	0.91	0.89	0.86	0.81	0.72	0.62
6)	0.51	0.44	0.43	0.41	0.44	0.51	0.56	0.58	0.59	0.61	0.68	0.82	0.79
Statutory Working Age*													
1)	n.a.	1.00	1.01	1.02	1.00	0.96	0.93	0.92	0.90	0.86	0.80	0.72	0.63
2)	n.a.	1.00	1.01	1.03	1.01	0.96	0.93	0.91	0.88	0.82	0.76	0.69	0.60
3)	n.a.	0.48	0.46	0.44	0.48	0.55	0.59	0.60	0.62	0.66	0.76	0.87	0.83
4)	n.a.	0.71	0.69	0.66	0.70	0.79	0.83	0.86	0.89	1.00	1.11	1.24	1.19
5)	n.a.	1.00	1.01	1.03	1.00	0.96	0.93	0.92	0.89	0.84	0.78	0.70	0.61
6)	n.a.	0.59	0.57	0.55	0.59	0.67	0.71	0.73	0.75	0.82	0.92	1.04	1.00

Source:Demography forecasts, forthcoming, authors: Burcin and Kucera, Demography Department of the Charles University.
Notes: 1) Working age(Index, 1998~1), Men
2) Working age (Index, 1998~1), Women
3) Dependency ratio= Non-working age (0-14 and 65+)/Working age (15-64), Men
4) Dependency ratio= Non-working age (0-14 and 65+)/Working age (15-64), Women
5) Working age (15-64), (Index 1998~1), Population
6) Dependency ratio= Non-working age (0-14 and 65+)/Working age (15-64), Population
** Under the current scheme, retirement ages have been increasing over time since 1996 until the year 2007: In the case of men to 61 years of age. In the case of women with 2 children to 58 years of age.*

Table A4.2: Births

Year	Births	Index (1990~100%)
1990	130564	1.0
1991	129354	99.1
1992	121705	93.2
1993	121025	92.7
1994	106579	81.6
1995	96097	73.6
1996	90446	69.3
1997	90657	69.4

Source: Czech Statistical Office

Table A4.3: Internal and external migration (by nationality)

Internal migration	Total			Men		
Year	1992	1993	1994	1992	1993	1994
Total	11740	241261	210207	n.a.	115312	99459
Nationality						
Czech	3514	233247	204177	n.a.	111401	96593
Slovak	7596	5612	4131	n.a.	2809	1988
Ukrainian	27	108	102	n.a.	47	42
Russian	8	84	65	n.a.	19	17
Polish	19	688	545	n.a.	294	238
Hungarian	489	363	314	n.a.	190	173
German	18	557	459	n.a.	243	200
Other	69	602	414	n.a.	310	208

External Migration	Immigrants		Emigrants		Increase (decrease)	
	Total 1994	Men 1994	Total 1994	Men 1994	Total 1994	Men 1994
Total	10207	5183	265	111	9942	5072
Nationality						
Czech	5337	2659	167	54	5170	2605
Slovak	2487	1246	48	31	2439	1215
Ukrainian	368	127	1	1	367	126
Russian	342	89	4	2	338	87
Polish	204	91	4	n.a.	200	91
Hungarian	110	56	3	1	107	55
German	164	109	12	2	152	107
Other	1195	806	26	20	1169	786

Source: Czech Statistical Office: Pohyb obyvatelstva v CR v roce 1993-5.
Notes:

- *Internal migration is a change in a municipality of residence (or a district of residence in the case of Prague) on the territory of the Czech Republic.*
- *External migration is a change in the country of residence, irrespective or nationality.*

Table A4.4: Internal and external migration (by gender and education)

Internal Migration	Total						Men				
Year	1992	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997
Total	11740	241261	210207	203877	195554	197226	115312	99459	96067	82220	92980
Highest educational attainment (age 15+):											
Primary	2413	42864	38228	35313	34844	33155	16306	14306	12993	12583	11985
Secondary w/o maturita exam	2491	72051	62410	62142	58297	59143	38530	32831	32596	31098	31285
Secondary w. maturita exam	2594	53277	46945	45632	45829	48005	21439	18956	18377	18672	19291
Tertiary	1807	19458	17738	15972	15652	16520	11550	10500	9168	8920	9547
External migration Emigration	**Total**						**Men**				
Year	1992	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997
Total	n.a.	n.a.	10207	10540	10857	12880	n.a.	5183	5782	6142	7086
Highest educational attainment (age 15+):											
Primary	n.a.	n.a.	1733	1921	1973	2224	n.a.	848	1034	1049	1123
Secondary w/o maturita exam	n.a.	n.a.	2511	2765	2869	3276	n.a.	1447	1681	1855	2052
Secondary w. maturita exam	n.a.	n.a.	2858	2774	2721	3347	n.a.	1244	1349	1401	1697
Tertiary	n.a.	n.a.	2143	2164	2154	2674	n.a.	1176	1256	1278	1524
External migration Immigration	**Total**						**Men**				
Year	1992	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997
Total	n.a.	n.a.	265	541	728	805	n.a.	111	211	298	319
Highest educational attainment (age 15+):											
Primary	n.a.	n.a.	95	148	180	159	n.a.	95	61	70	57
Secondary w/o maturita exam	n.a.	n.a.	51	168	233	270	n.a.	51	68	98	120
Secondary w. maturita exam	n.a.	n.a.	59	126	179	198	n.a.	59	32	58	57
Tertiary	n.a.	n.a.	32	52	56	74	n.a.	32	27	30	37

Source: Czech Statistical Office: Pohyb obyvatelstva v ÈR v roce 1992-7.

Table A4.5: Labour force participation by region (LFS data, %)

Year	1994			1996			1998		
Region	Total	Men	Women	Total	Men	Women	Total	Men	Women
Prague	75	80	71	75	81	69	76	82	71
Central Bohemia	74	80	68	73	82	64	74	83	65
Southern Bohemia	76	81	70	73	81	64	73	81	65
Western Bohemia	76	82	69	75	84	66	73	81	64
Northern Bohemia	75	80	70	71	79	63	71	80	63
Eastern Bohemia	75	80	70	73	82	64	73	80	65
Southern Moravia	73	79	67	70	79	61	72	80	63
Northern Moravia	72	77	67	70	79	62	70	79	62

Source: LFS, 4th quarter 1998, CSO, p. 30, 39, 79; Winter 1996/97, p. 30, 39, 79;Winter 1994/95, p.30, 39, 80.

Table A4.6: Supply of hours (LFS data)

Supply of Hours in the Main (First) Job (%)	Year		
	1994	1996	1998
Total	100	100	100
Up to 30 hours a week	14.9	19.8	10.7
Over 30 up to 40 hours a week	26.3	25.6	28.2
Over 40 hours a week	58.5	54.3	60.8
Average Weekly Hours	40.6	43.5	43.6
Men	100	100	100
Up to 30 hours a week	11.3	16.7	7.4
Over 30 up to 40 hours a week	24.9	23.8	26.8
Over 40 hours a week	63.4	59.2	65.5
Average Weekly Hours	43.9	45.4	45.5
Women	100	100	100
Up to 30 hours a week	19.5	23.9	15.1
Over 30 up to 40 hours a week	28.0	28.0	30.0
Over 40 hours a week	52.3	47.9	54.7
Average Weekly Hours	36.8	41.1	41.2

Source: Labour Force Survey

Table A4.7: The Employed in the economy (thousands, employers survey data)

Year*	1995		1996		1997	
By ISCO-88 (KZAM)	Total	Women	Total	Women	Total	Women
Total one (main) job holders:	5027.1	2323.9	4978.4	2177.1	4958.4	2167.1
Legislators, senior officials and managers	291.1	77.3	327.5	82.4	330.3	73.3
Professionals	476.4	256.4	478.9	254.7	482.4	260.3
Technicians and associate professionals	909.5	513.1	888.7	483.2	898.5	488.6
Clerks	383.8	316.8	379	307.1	396.5	318.5
Service workers and shop and market sales workers	589.2	416	560.2	377.7	574.8	395.2
Skilled agricultural and forestry workers	125.7	68.1	124	59.8	110.9	54.6
Craft and related trades workers	1097	201.1	1062.7	168.7	1047.1	161
Plant and machine operators and assemblers	667	177.8	631.5	157.7	638.5	159.7
Elementary occupations	478.7	295	464.3	283.8	422.1	253.6
Armed forces	n.a.	n.a.	58	1.0	54.2	1.3
Other and not identified	8.7	2.4	3.6	1.1	3.2	1.1
By employment status						
Employees	4347.3	2099.9	4292.5	1966.4	4267.1	1956.5
Members of producer cooperatives	115.3	52.5	86.9	36.7	88.2	38.5
Entrepreneurs without employees	357.4	108.8	378	110.3	377.7	110.2
Entrepreneurs with employees	181.3	45.2	196.8	45.1	204.7	46.8
Contributing family workers	25.5	17.5	24	18.3	20.5	15.1
Not identified	0.2	n.a.	0.4	0.4	0.2	/

Table A4.7: continued

Year*	1995		1996		1997	
By ISCO-88 (KZAM)	Total	Women	Total	Women	Total	Women
Total second (additional) job holders	205.3	74.8	207	73	192.1	69.9
Legislators, senior officials and managers	12.2	2.5	17.3	3.9	15	3.7
Professionals	36.4	12.7	37.1	12.5	35.5	12.4
Technicians and associate professionals	44.3	18.1	42.5	16.9	44.8	17.8
Clerks	8.8	5.8	7.7	5.8	9.4	7.0
Service workers and shop and market sales workers	20.8	9.2	21.3	10.7	16.2	8.0
Skilled agricultural and forestry workers	6.4	0.7	7.5	1.1	5.8	1.3
Craft and related trades workers	32.8	3.0	29.7	2.2	31.1	3.7
Plant and machine operators and assemblers	10.2	1.7	12.4	0.8	9.2	1.5
Elementary occupations	32.1	20.8	30.6	18.8	25.1	14.6
Armed forces	n.a.	n.a.	0.1	n.a.	n.a.	n.a.
Other and not identified	1.1	0.3	0.6	0.1	n.a.	n.a.
By employment status						
Employees	94.8	45.6	94.9	38.9	82.4	37.1
Members of producer cooperatives	1.2	0.4	0.8	0.6	0.9	0.4
Entrepreneurs without employees	97.9	24.8	98.1	29.7	95.3	27.6
Entrepreneurs with employees	8.0	2.1	8.9	2.0	9.3	1.5
Contributing family workers	3.1	2.0	4.2	1.8	4.2	3.3
Not identified	0.3	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Czech Statistical Office. 1997. Statistical Yearbook of the Czech Republic, Scientia: Prague, p. 281, 282.

NOTES to Table A4.7:
** 1st quarters of each year(December to February)*
-First (main) job indicates the total number of persons employed in national economy or civil sector.
-Second (additional) job additional working activity of persons who are already included among those who have a main job.
-Differences between the total and the individual items summed up to give the total are due to rounding off (it was the total that was rounded off and not the individual items)
-The employed are all persons who are 15+ and were in paid employment or self-employment in the reference week. Whether their work activity is permanent, temporary, seasonal or occasional, or their job is the only (main) or second (additional), or whether they are single or multiple job holders, makes no difference.
-The paid employed are all persons with a formal job attachment, irrespective of whether they work in the reference week or not.
-The formal job attachment is an employment contract (work contract, appointment or election by the current legislation), work execution agreement and working activity agreement and other contractual relations outside the domain of labour law (e.g., contracts for copyright). This definition incorporates , e.g. apprentices, who receive wages, salaries or a different kind of remuneration, into the category of the paid employed, like other persons in paid employment.
-Considered as the paid employed are also students, homemakers and other persons engaged in non-economic activities, if they are in paid employment in the reference period.
-According to ILO, the paid employed category also includes regular and temporary members of armed forces.
-Persons on child-care (parental) leave are not counted in the paid employed (their status is different according to ILO methodology).
-The self-employed are persons employed in own company. They are all employers, own-account workers and members of production cooperatives (mostly agricultural ones).
-Contributing family workers, too, are considered to be self-employed, whether they are paid or not, irrespective of hours worked in the reference period.
-Occupations are classified according to the Classification of Occupations, CSO, 2nd edition, 1996. The classification is compatible with the international classification ISCO-88.
-Only winter 1995/96 and winter 1996/97 data are governed by the methodology mentioned above.
-The year 1994/95 is governed by the original methodology tied with the national Classification of Occupations in effect by the end of 1995.
-The difference mainly consists in including members of the armed forces since the beginning of 1996. Besides, persons on child care (parental) leave were classified as employed in the past.

Table A5.1: Dynamics of unemployment in Central Europe

Monthly Inflow Rates								
Year	1991	1992	1993	1994	1995	1996	1997	1998
Czech Republic	0.9	0.9	0.7	0.6	0.6	0.6	0.8	1.1
Slovakia	1.7	1.5	1.8	1.3	1.4	1.5	n.a.	n.a.
Poland	n.a.	0.9	1.1	1.2	1.3	1.2	n.a.	n.a.
Hungary	n.a.	n.a.	1.3	1.1	1.0	1.2	n.a.	n.a.
Monthly Outflow Rates								
Czech Republic	n.a.	24.8	20.1	19.7	19.7	18.8	15.7	13.9
Slovakia	n.a.	10.1	7.8	7.4	9.5	10.5	n.a.	n.a.
Poland	n.a.	4.3	4.8	6.1	8.0	16.4	n.a.	n.a.
Hungary	n.a.	n.a.	7.6	9.1	7.8	9.0	n.a.	n.a.

Source: OECD-CCET Labour Market Database, 1990-1996

Table A5.2: Unemployment rate by occupations (LFS data, in %)

ISCO-88 (KZAM)	1996	1997	1998
Legislators, senior officials and managers	1.1	1.7	2.0
Professionals	1.0	1.7	2.0
Technicians and associate professionals	1.5	2.9	3.8
Clerks	2.7	5.1	6.3
Service workers and shop and market sales forces	5.5	7.2	8.4
Skilled agricultural and forestry workers	4.0	6.2	7.5
Craft and related trades workers	3.0	4.3	4.8
Plant and machine operators and assemblers	3.7	5.3	5.8
Elementary occupations	10.0	13.2	13.4
Unspecified (school graduates not employed yet, etc)	0.6	0.0	1.9

Source: LFS, 4th quarter 1998, CSO, p. 42,92, winter 1996/97, p.42,92

Table A5.3: Unemployment by region (LFS data)

	Unemployed	Employed	Unempl. Rate [%]	U/V rate*	Unemployed	Employed	Unempl. Rate [%]	U/V rate	Unemployed	Employed	Unempl. Rate [%]
Year	1996				1997				1998		
Region											
Capital Prague	12200	626200	1.9	0.2	18200	623100	2.8	0.7	23200	626400	3.6
Central Bohemia	18600	541400	3.3	1.5	25400	536400	4.5	3.2	35800	538700	6.2
South Bohemia	11200	343900	3.2	1.3	16700	334500	4.8	2.2	17800	339800	5.0
West Bohemia	14000	440300	3.1	1.6	24900	421500	5.6	3.7	28700	412700	6.5
North Bohemia	43200	546400	7.3	4.2	57000	544100	9.5	8.1	71700	526600	12.0
East Bohemia	24800	596600	4.0	1.5	30600	586000	5.0	2.7	40500	582000	6.5
South Moravia	34600	959900	3.5	2.6	49400	956200	4.9	5.2	65300	954100	6.4
North Moravia	63500	903700	6.6	4.9	84500	879400	8.8	8.2	96700	872500	10.0

Source LFS, 4th quarter 1998, CSO, p. 38, 79, Winter 1996/97, p. 38, 79
**Based on Registry data*

Table A5.4: Unemployment-vacancy ratio time series (registry data)

Year	1991	1992	1993	1994	1995	1996	1997	1998
U/V ratio	4.6	1.7	3.4	2.2	1.7	2.2	4.3	10.3

Table A6.1: Participation in education %

Age	15	16	17	18	19	20	21	22	23	24
1990	94.7	92.2	68.7	37.5	22.9	18.2	16.0	13.3	8.7	5.6
1991	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1992	91.7	83.8	57.5	31.8	19.5	17.1	19.3	17.9	10.2	5.7
1993	98.3	88.0	61.0	35.6	22.9	18.2	18.7	17.6	10.2	4.2
1994	98.7	96.9	71.7	41.9	26.1	20.3	20.1	18.1	11.1	5.1
1995	99.7	99.3	81.6	53.9	33.2	24.3	22.3	19.4	12.7	7.0
1996	99.6	99.0	85.3	59.1	34.0	23.1	19.7	20.0	18.4	14.3
1997	98.1	94.9	89.8	65.1	36.9	24.0	20.2	19.8	17.5	14.3

Source: Institute for Information in Education

Table A6.2: Students per teacher ratio

	1995/6	1996/7	1997/8
Pre-primary schools	11.9	11.5	11.9
Primary schools - first level	20.2	19.9	20.1
Primary schools - second level	13.1	12.3	13.5
Secondary vocational schools	8.1	10.2	11.2
Secondary technical schools	6.6	6.1	7.1
Grammar schools (gymnasia)	7.9	7.5	7.8
Universities	n.a.	n.a.	11.7 [1)]

Source: Education System of the Czech republic, Institute for Information in Education, Prague 1998
1)Ratio of students to scientifically qualified teachers, associate professors and professors is 19:1

Table A6.3: Public expenditure per student (th. CZK)

Type of school	1993	1994	1995	1996	1997	Index 1997/1993 (%)
Pre-primary schools	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Primary schools	n.a.	n.a.	n.a.	n.a.	22.1	n.a.
Gymnasium	18.1	25.1	30.3	32.3	28	155
Secondary technical schools	23.2	27.7	28.1	30.4	34	147
Secondary vocational schools	24	27.9	31.3	36.2	36.4	152
Universities	60.8	72.9	77.7	83.2	76.8	126

Source: Institute for Information on Education

Table A6.4: Public expenditures and dropout rates by type of education (1997)

	Annual Expenditure per Student (th.CZK)	Dropout rate (%)
	CR [1]	CR [2]
Completion of Primary Education at most (ISCED 0-2)	22.1	n.a.
Completion of Secondary Education at most (ISCED 3)	n.a.	n.a.
Of which:		
Vocational education (%) at ISCED3		
Secondary Vocational Schools	36.4	10.1
Secondary Technical Schools	34.0	2.6
General secondary education at ISCED 3	28.0	1.4
Tertiary education (ISCED 4 and above)	76.8	n.a.

Sources: 1) Key indicators, Czech Republic, 2)Institute for Information on Education.

Table A6.5: Participation in all education and in vocational education (% of population in given age group)

1997	15 - 24 years old	25 - 39 years old	40 - 64 years old	Total
Completion of Primary Education at most (ISCED 0-2)	37.8	8.4	19.2	20.6
Completion of Secondary Education at most (ISCED 3)	n.a.	n.a.	n.a.	n.a.
Of it: General secondary Education (ISCED 3)	61.1	79.8	70.9	71.1
Tertiary education (ISCED 5-7)	1.1	11.7	9.9	8.3

Source: Czech Statistical Office

Table A6.6: Labour market, education and training of youth aged 16 - 25

Percentage of individuals	Total		Women		Men	
	1993	1997	1993	1997	1993	1997
In full time education/training 1)	32.7	36.4	32.2	37.6	33.1	35.2
Employed 1)	56.3	49.7	53.1	40.0	59.3	58.8
Unemployed 1)	4.0	3.5	4.1	3.2	4.0	3.9
Others 1)	7.0	10.4	10.5	19.2	3.7	2.0
Age goup	100.0	100.0	100.0	100.0	100.0	100.0

Source: Key Indicators, Czech Republic
Notes: 1)The definition of activity groups is according to the ILO definition used by Labour Force Survey

Table A6.7: Vocational training by age groups (% of population in given age group)

	Vocational Education				All Education			
Year	1993		1997		1993		1997	
	CR[1)]	EU average	CR	EU average[2)]	CR	EU average	CR	EU average[2)]
14-19 years old	43.5	.	34.0	24.0	57.3	.	68.6	84
20-24 years old	n.a.	.	n.a.	.	n.a.	.	n.a.	.

Source: Key Indicators, Czech Republic
1) Included post-secondary education and higher professional schools
2) Year 1996

Table A6.8: Labour market, education and training (% of population 25-59 years of age)

	Total		Women		Men	
Year	1993	1997	1993	1997	1993	1997
In full time education/training	0.0	0.1	0	0.1	0	0.1
Employed	82.6	84.4	74.2	75.9	91	91.9
Unemployed	2.5	2.6	3.1	3.2	1.9	2.1
Others	14.9	12.9	22.7	20.9	7	5.9
Total population (25-59 years of age)	100	100	100	100	100	100

Source: Key Indicators, Czech Republic
Notes: The definition of activity groups is according to the ILO definition used by Labour Force Survey

Table A6.9: Total employment by educational attaintment (in %)

Educational attainment	Total		Women		Men	
	1993	1998	1993	1998	1993	1998
Total employment (th.)	5250.6	4852.9	2446.8	2101.4	2803.8	2751.5
Shares of total (%)	100.0	100.0	100.0	100.0	100.0	100.0
Unfinished primary school	0.1	0.5	0.1	0.5	0.1	0.4
Finished primary school	13.6	8.9	18.5	11.8	9.3	6.6
Finished vocational school (1)	45	45.4	36.2	36.6	52.6	52.2
Finished grammar or technical school (2)	31.1	34.2	37.3	41.3	25.8	28.8
With tertiary level degree	10.2	11.1	7.9	9.9	12.2	12

Source: Employment and Unemployment in the CR as measured by the Labour Force Survey
1993 - December 1993 to February 1994
1998 - October to December 1998
Notes:
1) Secondary vocational school without maturita + secondary technical school without maturita
2) Gymnasia + secondary vocational school with maturita + secondary technical school with maturita

Table A6.11: Expenditure on retraining (mil.CZK)

Year	1993	1994	1995	1996	1997	1998
Total expenditures on active labour market policy	749.4	718.3	631.9	552.5	544.8	544.6
Expenditures on retraining courses	73.4	103.2	100.1	91.7	90.4	147.3
Share on total (%)	9.8	14.4	15.8	16.6	16.6	27.0

Source: Ministry of Labour and Social Affairs

Table A6.12: Number of participants in retraining courses

Year	1993	1994	1995	1996	1997
Number of registered job seekers (th.)	155.2	172.1	155.6	160.7	219.5
Number of participants in retraining courses (th.)	12.1	14.8	13.5	12.1	11.4
Share of registered job-seekers (%)	7.8	8.6	8.6	7.5	5.2

Source: Active Labour Market Policy in CR, Ministry of Labour and Social Affairs, Prague 1998.

Table A8.1: State budget expenditures on the employment policy (in th. CZK)

Year	1991	1992	1993	1994	1995	1996	1997	1998
Expenditures on employment policy	2450270	3145028	2166077	2562588	2416637	2664493	3972035	5096712
Passive employment policy	1677270	1423352	1416669	1844265	1781846	2106406	3420038	4193698
Active employment policy	773000	1721676	749408	718323	634791	558087	551995	903014
Active employment policies								
Jobs for graduates								
created jobs	18994	25996	8178	7025	5502	5094	3757	9464
Placed graduates	14398	21907	7380	6853	5292	4971	3515	9232
expenditures	47740	325528	245190	127053	117754	100334	101759	177777
Publicly useful jobs								
created jobs	42006	67793	9547	9436	5963	3612	2626	8805
Placed people	33868	60370	12250	9874	6603	4025	2931	8178
expenditures	496800	968620	217855	241482	163636	102427	66193	201514
Socially purposeful jobs								
created jobs	20077	29028	12095	13432	11446	9838	11760	11024
Placed people	18414	25503	11760	12927	10821	10259	11888	11905
expenditures	78390	223027	159605	183741	189470	199069	224926	280828
Retraining								
Newly acquired	7967	17590	12095	14814	13454	12107	11448	16381
finished	3662	18435	12521	15167	14034	12133	11918	15488
expenditures	40000	97602	73359	103248	100091	91727	90418	147325
Special workplaces for disabled								
created jobs	n.a.	1415	1005	851	824	622	533	920

Table A8.1: continued

Year	1991	1992	1993	1994	1995	1996	1997	1998
Placed people	n.a.	1308	947	748	724	562	493	853
expenditures	7088	55 699*	48 667*	61 630*	26510	17683	15881	50505
Operational expenditures	n.a.	n.a.	n.a.	n.a.	33351	39749	44005	76533
Other expenditures	102656	51200	4732	1169	3979	7099	8814	28492

Source: Ministry of Labour and Social Affairs
**) Expenditures include the means for operation of protected workplaces for disabled individuals*
Notes:
Active employment policy includes publicly useful jobs, socially purposeful jobs, jobs for graduates, individuals in retraining and special workplaces for disabled.
Passive employment policy includes social assistance to those who seek jobs.

Table A8.2: Active labour market measures towards the unemployed (mil. CZK)

Year	1991	1992	1993	1994	1995	1996	1997	1998
1. Public employment services and administration	615.9	691.6	938.1	1105.0	1292.3	1382.0	1386.9	1453.4
2. Labour market training	40.0	94.0	73.4	103.2	100.1	91.7	90.4	147.3
a) Training for unemployed adults and those at risk	40.0	94.0	73.4	103.2	100.1	91.7	90.4	147.3
b) Training for employed adults								
3. Youth measures	47.7	324.0	245.2	127.1	117.8	100.3	101.8	117.8
a) Measures for unemployed and disadvantaged youth	47.7	324.0	245.2	127.1	117.8	100.3	101.8	117.8
b) Support of apprenticeship and related forms of general youth training	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4. Subsidised employment	575.5	1194.0	377.5	425.2	353.1	301.5	291.1	482.3
a) Subsidies to regular employment in the private sector	330.3	739.0	170.6	197.1	123.2	73.7	44.6	147.0
b) Support of unemployed persons starting enterprises	166.8	232.0	47.3	44.4	40.4	28.7	21.6	54.5
c) Direct job creation (public or non-profit)	78.4	223.0	159.6	183.7	189.5	199.1	224.9	280.8
5. Measures for the disabled	7.1	55.7	48.7	61.6	59.9	57.4	59.9	127.0
a) Vocational rehabilitation	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
b) Work for the disabled	7.1	55.7	48.7	61.6	59.9	57.4	59.9	127.0
6. Unemployment compensation	1680.0	1430.0	1416.7	1844.3	1781.9	2106.4	3420.0	4193.7

Table A8.2: continued

Year	1991	1992	1993	1994	1995	1996	1997	1998
7. Early retirement for labour market reasons	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	2966.2	3789.3	3099.5	3666.5	3705.1	4039.3	5350.1	6521.5
Active measures (1 - 5)	1286.2	2359.3	1682.8	1822.2	1923.2	1932.9	1930.1	2327.8
Passive measures (6 and 7)	1680.0	1430.0	1416.7	1844.3	1781.9	2106.4	3420.0	4193.7

Source: Ministry of Labour and Social Affairs

Table A8.3: Active labour market measures towards the unemployed (participants)

Year	1991	1992*	1993*	1994*	1995*	1996*	1997*	1998*
1. Public employment services and administration								
2. Labour market training	4300	3700	3300	3000	2400	2400	2000	2900
a) Training for unemployed adults and those at risk	4300	3700	3300	3000	2400	2400	2000	2900
b) Training for employed adults	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3. Youth measures	14400	21900	7000	6500	5100	4800	3500	8500
a) Measures for unemployed and disadvantaged youth	14400	21900	7000	6500	5100	4800	3500	8500
b) Support of apprenticeship and related forms	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
of general youth training	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4. Subsidised employment	40100	95900	79100	47500	28300	21800	14800	19100
a) Subsidies to regular employment in the private sector	21700	64200	56400	35400	20000	13600	7800	10800
b) Support of unemployed persons starting enterprises	12000	26000	19500	9000	5000	3500	2200	2600
c) Direct job creation (public or non-profit)	6200	5700	3200	3100	3300	4700	4800	5700
5. Measures for the disabled	n.a.	1400	1000	700	720	620	530	850
a) Vocational rehabilitation	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
b) Work for the disabled	n.a.	1400	1000	700	720	620	530	850
6. Unemployment compensation	164000	62300	93400	78300	67600	93400	138100	190400
7. Early retirement for labour market reasons	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	78100
Total	222800	185200	183800	136000	104120	123020	158930	377950
Active measures (1 - 5)	58800	122900	90400	57700	36520	29620	20830	109450
Passive measures (6 and 7)	164000	62300	93400	78300	67600	93400	138100	268500

Source: Ministry of Labour and Social Affairs / Note: Data as of last day of year

Table A8.4: Comparison of labour and non-labour income alternatives

Minimum Living Standard (MLS) (since 1.4.1998)		Minimum wage 2,650CZK (since1.1.1998) 3,250CZK (since 1.1.1999)
1.Example: Household of 4 [2 adults + 2 children 12 and 16 years of age]	2,110+2*2,130+2,050+ +2,250 10,670CZK Total	Average unemployment Benefit paid 2,247CZK (September '98)
2.Example: Single person household	1,300+2,130 3,430CZK Total	Average monthly wage (1Q'98) 11,508CZK (commercial sector) 9,816CZK (public sector)
Components of minimum living standard		
Household component: 1 member 2 members 3-4 members	1,300CZK 1,700CZK 2,110CZK	
Nutrition component: Child years of age Child 6-10 y. of age Child 10-15 y. of age Child 15-26 y. of age Adults	1,560CZK 1,730CZK 2,050CZK 2,250CZK 2,130CZK	

Source: Socialni politika 11/'98, pp.22-23.

Table A8.5: Average percentage of sick-leave absence (by earnings level)

Year	1994	1995	1996	1997	1997*	1998*
Average gross monthly wage (CZK)	6896	8172	9676	10696	n.a.	n.a.
Average gross daily wage (CZK)	227	269	318	352	n.a.	n.a.
Wage range						
0 - 4 000	5.5	6.3	5.3	4.7	5.1	4.7
4 001 - 8 000	6.3	8.2	8.1	7.9	8.6	8
8 001 - 12 000	4.1	5.8	6.3	6.8	7.5	7.4
12 001 - 16 000	2.3	3.3	3.8	4.4	5.1	5
16 001 - 20 000	2.1	2.8	3	3.4	4.1	4.1
20 000 +	1.1	2	1.4	1.7	2.1	4.9
Total	5.4	6.6	6.1	6	6.7	6.5

Source: Statistical yearbook of the CR 1994, 1995.
Statistical information of the CSO 1996, 1997, "Pracovni neschopnost pro nemoc a uraz v CR"
** First half of a year*

Table A8.6: Annual unemployment flows (registry data)

Year	Inflow into unemploy -ment	Outflow from unemploy -ment	Total outflows to jobs	Found job with DLO help	Found job by other means	Outflow due to non-compliance	Outflow due to other reasons
1991	461616	278513	183374	n.a.	n.a.	n.a.	n.a.
1992	387787	474748	330958	n.a.	n.a.	n.a.	n.a.
1993	429832	379404	272913	132296	148746	38509	59853
1994	386974	405710	300411	128771	172168	37170	67601
1995	352221	365660	263478	109708	153757	31507	70678
1996	376763	343465	251965	102007	150150	29316	61992
1997	498546	415983	304377	111166	193211	32259	79272
1998	638583	520567	363360	105134	258226	52101	105311

Source: District Labour Office Data Registry.

Annexes

Annex A: Sources of the Czech Economic Recession

Synchronisation of investment Under-investment of communism resulted in a large investment wave starting in 1992 (see Table A2.2). The most highly demanded was investment into infrastructure, which is however also the type of investment with the longest payoff period. Positive supply effects of this investment usually take place with a much longer time lag than its effects on demand, because only a part of such investment spills over through wages to other parts of the economy. This leads to alternation of periods of rapid growth and periods of decline.

Synchronisation of demand for durables Households were under-stocked in durable consumption roughly to the same extent as the whole economy was under-capitalised. After the initial surplus demand was satisfied, mainly through imports, there was a decline in demand for durables.

Foreign capital volatility The supply of finance for the needed investment in the Czech economy depends significantly on the strategies of investors in financial markets. These strategies are only loosely related to the development of the domestic economy.Especially in the short run, they are determined autonomously and they can be a source of "overshooting" of the type observed during the monetary turbulence of mid-1997 or in the beginning of 1999. During this period, the exchange rate of the Czech Crown (koruna) depreciated by 9 % (more than the estimated fundamental overvaluation of the currency) within a few weeks.

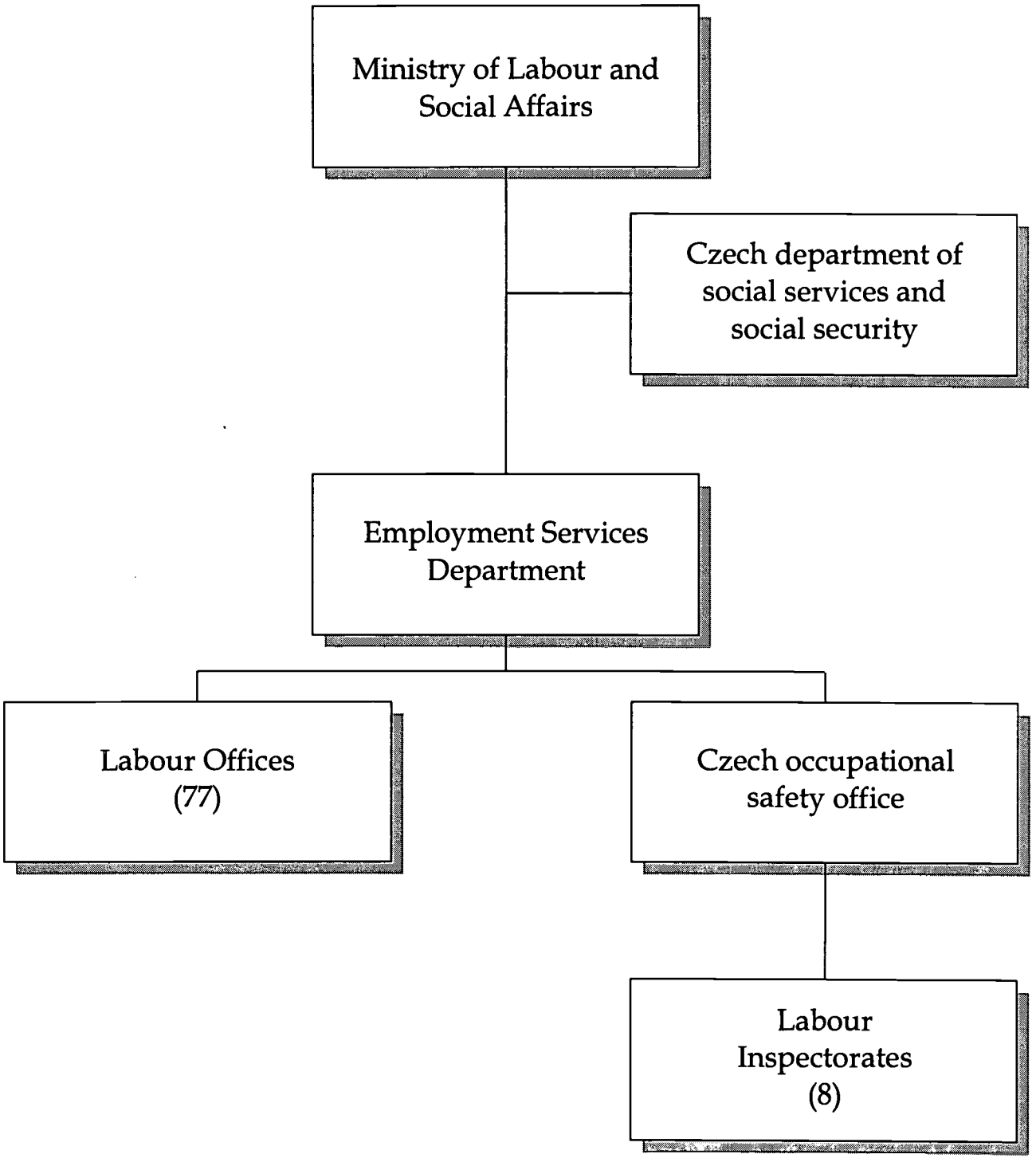
Stabilisation policy mismanagement Macroeconomic stabilisation policy in the Czech Republic appears to have been subject to serious mistakes. Some economists now believe it had a role in de-stabilising the economy. Government initiated two restrictive policy packages in 1997 leading to a decline in aggregate demand. The high-interest policy of the Czech National Bank then undoubtedly deepened the economic downturn.

Credit crunch The overall economic fluctuation has been deepened by a credit crunch. The emergence of a market economy made financial intermediaries learn by means of trial-and-error. The lack of sufficiently long business history and a stable outlook makes a serious evaluation of business plans very difficult. In the current period of decline, banks became very prudent, making the nominal volume of credit decline.

Fluctuation in real wages The development of real wages in the Czech Republic has differed from most Western European countries, where real wages are relatively stable vis-à-vis GDP fluctuations (see Table 2.1). In the Czech Republic in 1994-1996, the trade unions were successful in putting through the growth of wages as a "compensation" for higher inflation that took place in the early period of transition. As a result, real wages and consumption grew much faster than output, creating serious internal and external imbalances in the economy. The restrictive policy measures of 1997 and 1998 were an attempt at eliminating this trend. They succeeded especially in curbing growth of real wages, which declined more rapidly than GDP. The problem was that the restrictive effect on inflation appeared with a longer delay, and is now culminating in 1999, while nominal wages are showing a strong momentum, since trade unions are again successfully using the argument that nominal wages should adjust for the past, i.e. higher, inflation. As a result, real wages in 1999 will likely grow faster than output, potentially lifting consumption and creating new imbalances and a new GDP cycle.

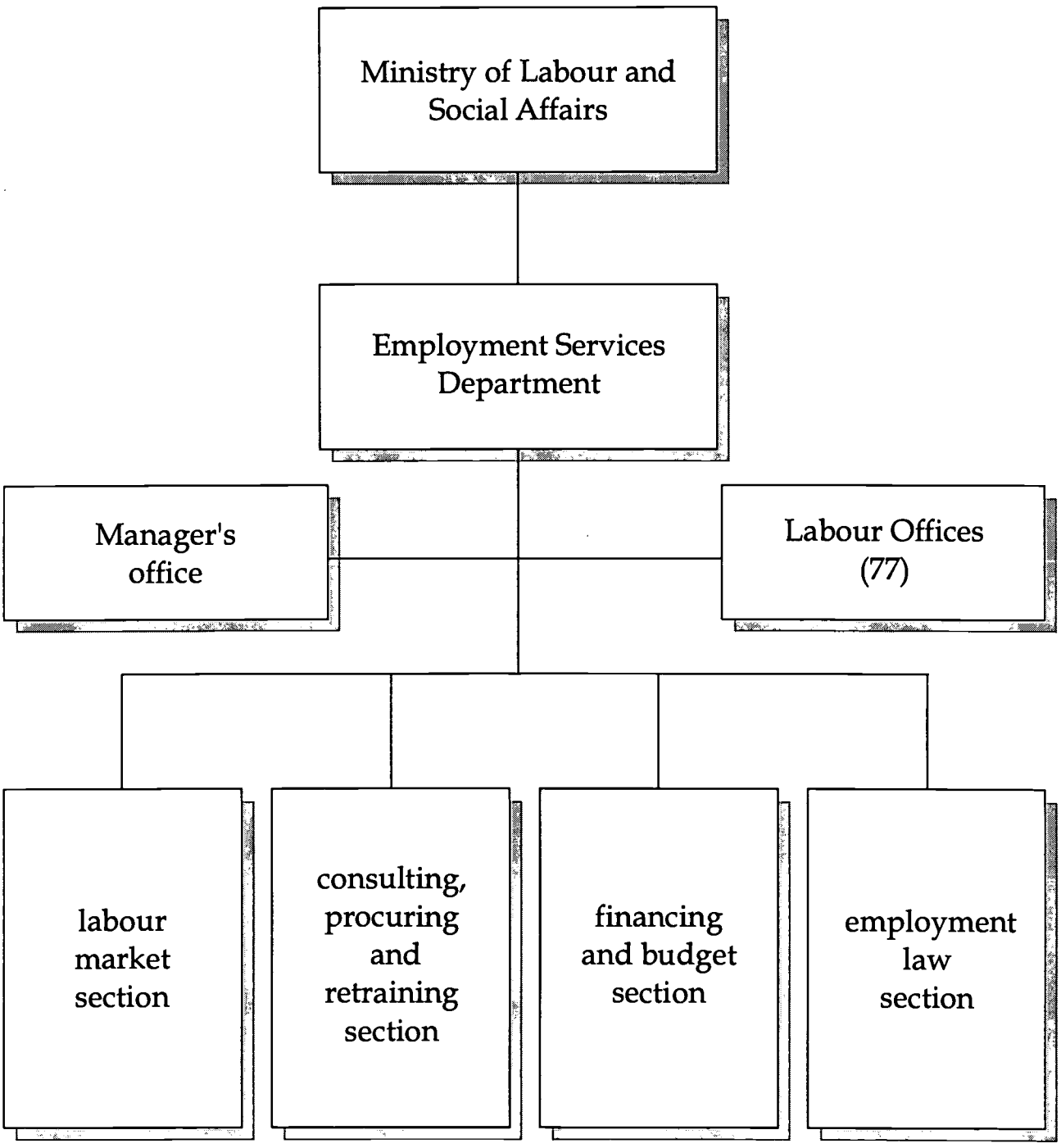
Annex B: Scheme of Labour Market Administration

Labour Administration - Czech Republic



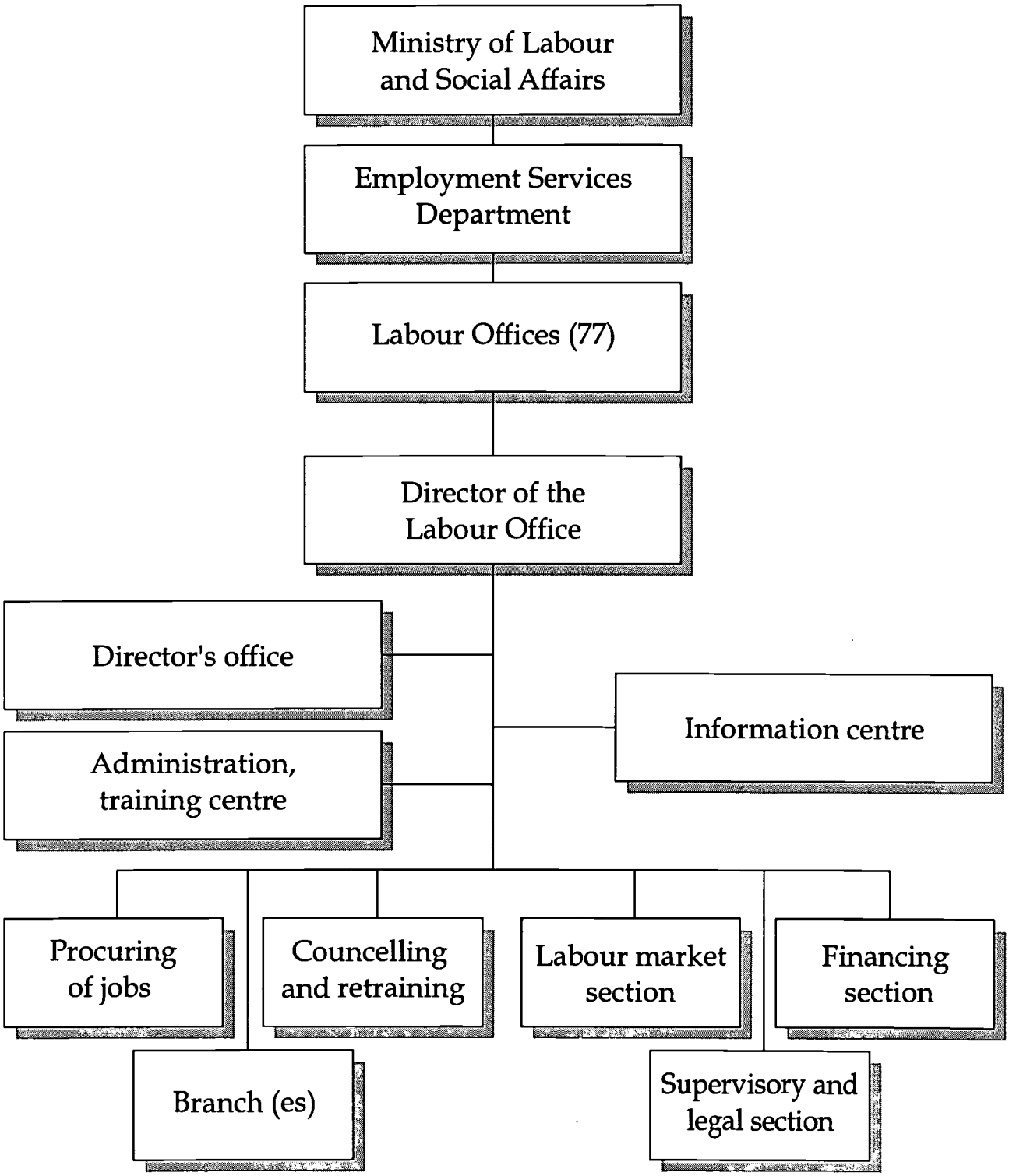
Annex C: Scheme of Labour Market Administration

Public Employment Services - Czech Republic



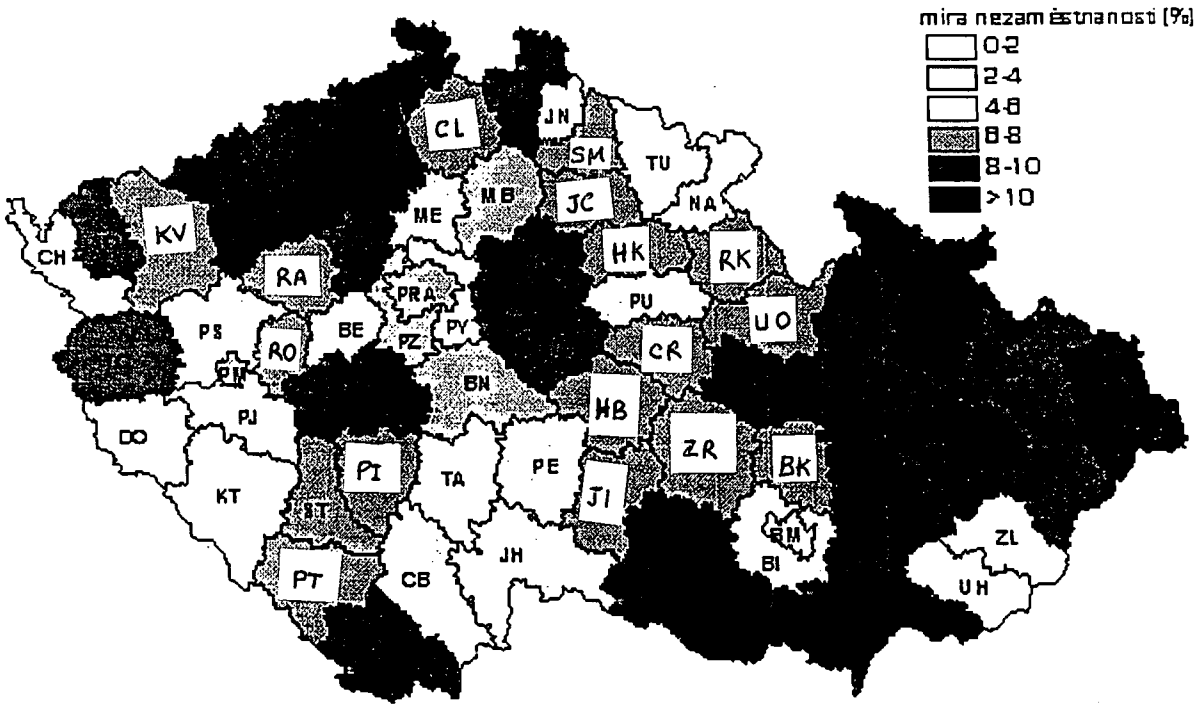
Annex D: Scheme of Labour Market Administration

Labour Offices - Czech Republic



Information centres, administration section and training centres are only in several Labour Offices (job centres)

Annex E: Registry Unemployment Rate by Districts by December 1998



Source: Ministry of Labour and Social Affairs.

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