

# Employment and labour market in Central European countries



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3

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**Yves Franchet**  
**Director-General**

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## Introduction

This publication on "Employment and labour market in Central European countries" is designed to present information on the respective developments in the ten Candidate Countries (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia) as well as three additional countries participating in the PHARE programme (Albania, Bosnia and Hercegovina, the Former Yugoslav Republic of Macedonia), together here referred to as CECs. It is the continuation of a series which was originally started by Eurostat in 1999 under the title "Central European Countries' Employment and Labour Market Review" on a semi-annual basis.

Unlike its predecessor, the present publication produces three issues per year, each with the same basic structure, and the information presented in all of them is primarily derived from the national labour force surveys (LFS) carried out in 11 of the 13 countries involved, the exceptions being Albania and Bosnia and Hercegovina.

The use of data from the national LFSs ensures that the analyses are based on a standardized source providing a consistent and comparable set of statistics. The reference period for these analyses normally is the second quarter of each year, because it is common statistical practice to use this quarter for annual reports and LFS results are available for it even from countries with only one or two surveys per year.

However, due to the fact that data for previous years are presently not available for all countries and recent changes in administrative structures could not be taken into account retroactively, national comparisons at this stage had to be limited to the years 1999 and 2000, and the regional analysis to the year 2000 only. For earlier national data the reader is referred to the two issues of the "Review", which have a fairly complete coverage until 1998, or to the annual publication on "Employment in Europe". Information on selected regional labour markets for either 1998 or 1999 also can be found in the second issue of the "Review".

The section on "Data sources and methods" included in each issue of this publication describes the nature of labour force surveys, the EU LFS standards, basic concepts and definitions, as well as their implementation by the CECs.

The three analytical sections "Recent labour market trends", "Regional labour markets", and "Special topic" treat different aspects of employment and the labour market in each issue, including separate data annexes. In issue 1/2001 the national and regional analyses gave a general overview, and the special topic was "Youth unemployment". In issue 2/2001 both the sections on "Recent labour market trends" and "Regional labour markets" focussed on the structure of the employed and unemployed by their present or previous economic activity, and the special topic was devoted to the analysis of "Long-term unemployment".

In the present issue 3/2001 the section on "Recent labour market trends" analyses the development of employment and unemployment in the CECs on a quarter-by-quarter basis for the years 1999 and 2000, while both the section on "Regional labour markets" and the special topic investigate the educational levels and the occupational structure of the labour force.

Rather than structuring their analyses in the form of country reports, all of these sections generally take a comparative approach, discussing the various aspects of employment and labour market trends across nations and regions.

The national time series and the regional data presented toward the end of this publication and containing indicators and distributions of principal variables on macroeconomic, demographic, employment and unemployment developments have remained unchanged since issue 2/2001.

This generally also applies to the following "Abbreviations and methodological notes" except for the removal or addition of some abbreviations which only appear in the given issue and the list of errata referring to necessary corrections in previous issues.

Thus, it is hoped that each individual issue of this publication provides valuable information on specific aspects and all three of them together present a coherent and comprehensive picture of the most recent employment and labour market developments in the CECs to policy makers, researchers, business, interest groups and the general public.

### Executive summary

“Employment and labour market in Central European countries” covers relevant trends in 13 CECs (the ten CCs BG, CZ, EE, HU, LT, LV, PL, RO, SI, SK and the three PHARE participants AL, BA, FYROM). Rather than presenting separate country reports, however, this publication takes a comparative approach, discussing various aspects of employment and labour market developments across nations and regions. This is the last of three issues for the year 2001.

The information used is primarily based on national LFSs, which all CECs (except AL and BA) introduced within the last decade. A brief description of the nature of labour force surveys, the EU LFS standards, basic concepts and definitions, as well as their implementation by the CECs is included in each issue, as is an annex with statistical tables containing national time series for the years 1999 and 2000 and regional data for the year 2000 only, which remain basically the same throughout a given year except for updates providing newly available data.

The core of this publication are three analytical sections on “Recent labour market trends”, “Regional labour markets” and a “Special topic”. In issue 1/2001 the national and regional analyses gave a general overview, and the special topic was “Youth unemployment”. In issue 2/2001 both the sections on “Recent labour market trends” and “Regional labour markets” focussed on the structure of the employed and unemployed by their present or previous economic activity, and the special topic was devoted to the analysis of “Long-term unemployment”.

In the present issue 3/2001 the section on “Recent labour market trends” analyses the development of employment and unemployment in the CECs on a quarter-by-quarter basis for the years 1999 and 2000, while both the section on “Regional labour markets” and the special topic investigate the educational levels and the occupational structure of the labour force. The main results of these three sections are summarized below.

#### Recent labour market trends

While in previous issues the analyses of this section only referred to one quarter (the second) for each year, an attempt is made here to utilize LFS data from all available quarters of 1999 and 2000. The two main purposes of such an approach are to monitor current developments in employment and unemployment and to discover possible seasonal variations in them.

With the exception of Lithuania and Latvia all Central European Candidate Countries provided data for all four quarters in 2000, and five (the Czech Republic, Hungary, Romania, Slovenia and Slovakia) also did so for 1999.

In the year 2000 five of the eight CECs providing quarterly data (BG, EE, PL, RO and SI) exhibit the classical seasonal

pattern of employment, being lowest in the first quarter of the year, rising in the middle two and tailing off again towards the end. The main difference in the three countries deviating from this pattern (CZ, HU and SK) is the absence of a drop-off in the employment rate at the end of the year, so that the highest value is reached in the fourth quarter. However, the overall variation is fairly moderate in all cases with a maximum span of just over 5 percentage points in Romania, about 2.5 percentage points in Bulgaria and Slovenia, and 0.5–1.5 percentage points in the rest of the countries.

The development of unemployment normally is a mirror image of that in employment, though in a mitigated form. Generally the share of unemployed is not reduced as much as one might hope with the increase of employment, nor does it rise as much as one might fear with a corresponding decrease.

However, the most striking aspect of this analysis probably is the far-reaching agreement in the direction of quarterly developments, particularly in view of the fact that the levels of activity, employment and unemployment vary considerably between the CECs, extending from hardly 60 to almost 71% in the activity rate, from under 50 to over 65% in the employment rate, and from a minimum of 6 to a maximum of about 19% in the unemployment rate.

The changes in employment and unemployment in the CECs between 1999 and 2000 reflect the trends in overall economic growth which at first was characterized by a more or less pronounced slack and a distinct recovery thereafter. In the year 2000 the number of employed was lower than in the preceding year throughout most quarters in all countries except Hungary and Slovenia. As a rule, the growth of employment always remains below the corresponding GDP figure. In other words, it takes a relatively higher rate of economic growth to bring about a positive development in employment. Unemployment, in contrast, seems to react more sensitively to changes in GDP, but in the opposite direction. However, after the period of slackening economic growth with negative effects on the labour force in most countries in 1999, employment and unemployment have begun to turn in a more favourable direction, particularly in the last two quarters 2000.

To assess the contribution of various sectors of the economy to the overall development of employment and unemployment in the year 2000 the economic activity of persons currently or previously working in them are classified into seven combined groups based on the NACE 1-digit code.

In three of the five countries with a classical pattern of seasonal employment – Romania, Bulgaria and Poland – this mainly results from the variation in agricultural activities, and a less pronounced seasonal tendency usually also is found in construction. In Estonia the seasonal pattern largely derives from the variation in manufacturing, while

most economic sectors contribute to the overall seasonal pattern in Slovenia. Tendencies opposite to the classical seasonal pattern are observed particularly in public & personal services.

The three countries which deviate from the classical seasonal pattern of employment – the Czech Republic, Hungary and Slovakia – are characterized by a relative absence of marked differences in sectoral developments throughout the year, i.e. all sectors share about equally in the overall trend or do not exhibit any significant quarterly variation.

The analysis of changes in employment between 1999 and 2000 shows that the contribution of manufacturing to the overall trend was negative in all CECs, and this is also true for agriculture except in Romania. In contrast, in every country the contribution of public & personal services was positive, and this also applied to finance & business, though in Romania only in the last quarter.

The manufacturing sector also dominates the quarterly development of unemployment in all CECs, not only producing the largest group of unemployed, but also determining the overall unemployment trend in each country. Correspondingly, most other sectors experience underproportional unemployment levels, particularly agriculture, public & personal services and finance & business. A seasonal pattern of unemployment is found only in agriculture and partly in construction, which also is the only sector apart from manufacturing with overproportional unemployment levels.

The only clearly discernible trend with regard to changes in sectoral unemployment between 1999 and 2000 is the positive direction in manufacturing where the respective levels have either become less unfavourable from quarter to quarter or already are lower than in the preceding year.

### Regional labour markets

In this issue the regional analysis focuses on the qualification level of the labour force and the occupational structure of the employed, thus characterizing the human capital available in the regions and describing the inherent potential of the regional labour supply. Based on the International Standard Classification of Education (ISCED) the LFS measures qualification as the highest completed level of general education or occupational training in three combined categories: low, middle and high.

In the Baltic States Lithuania and Estonia the share of high qualifications in the labour force is far greater than that of low qualifications, with the middle qualification segment being relatively narrow. To a lesser extent this also applies to Latvia. The Czech Republic and Slovakia exhibit a broad middle qualification segment, while the shares of high and low qualifications are about equal. In Hungary, too the qualifications are distributed symmetrically, but the middle segment is distinctly narrower. In Bulgaria, Slovenia and

Poland the share of low qualifications in the labour force is higher than that of high qualifications, in Romania substantially higher.

The regional qualification structures deviate more or less from the national pattern because the secondary and tertiary educational institutions and the demand for certain qualification levels are not equally distributed over the regions. Within the countries the qualification levels of the capital regions, which characteristically are service centres with the dominant employment in the tertiary sector, are more favourable than the respective country average. Regions with a comparatively low qualification level largely have an agricultural character. Thus the regional qualification level seems to be largely determined by the sectoral structure.

In almost all regions the share of high qualifications among the employed is higher than among the unemployed, while the share of low qualifications is higher among the unemployed than among the employed except in Romania and four regions of Poland. Also in almost all regions the unemployment rate of high qualifications was less than half of the average, while the unemployment rate for low qualifications generally was higher, reaching at least double the average in regions of the Czech Republic and Slovakia.

In countries and regions with a sizeable agriculture the qualification structure among employees was more favourable than among the self-employed. In countries and regions with a higher share of employment in industry or a character as service centres the self-employed on the average had a higher qualification level.

In all countries and regions with the exception of the Czech Republic and Romania there were more women than men in the high qualification segment. In all regions except Prague and Bucharest there are relatively more men than women in the middle qualification segment. In the low qualification segment men are overrepresented in Bulgaria, Lithuania and Latvia as well as in some regions of Poland, while in the Czech Republic, Hungary, Romania, Slovenia and Slovakia women are overrepresented in this segment. The overall result of these sex differences is a hierarchical structure in favour of either men (CZ, RO, SK) or women (HU, PL, SI) or a polarized structure in favour of women (BG, EE, LT, LV).

The employed with high qualifications are concentrated in the service sector, specifically in "Other services", "Financial intermediation, Business activities" and "Public administration", though not always in this order in all regions, while the share is extremely low in "Agriculture and Fishing". The general tendency is that the greater the share of employed with high qualifications in a region, the higher also is the qualification level in all individual economic sectors.

The occupational structure supplements the information on the sectoral and qualification structure of the regions. The qualified service occupations (managers, professionals,



technicians) are concentrated in the service centres, where they can account for 40 to more than 50% of the employed. Together with the clerks and service & sales workers these occupations in all countries account for more than half of the employed in all countries except Romania and Poland.

The shares of occupations in handicraft and industrial production in the regions extended from 10.3–29.2% and 5.1–20.4%, respectively, with their combined share being mostly high in the pronounced industrial and mixed regions.

The share of “Skilled agricultural and fishery workers” in the CEC regions ranged from almost 0 to 60%, and in Bulgaria, Poland, Romania and Slovenia it was only slightly lower than the overall sectoral employment share of agriculture.

### **Educational levels and occupational structure of the labour force**

The formal education and occupational qualification of a country’s population is not only of cultural, but also of economic importance. In the EU LFS these two aspects are measured on the basis of the International Standard Classification of Education (ISCED) and the International Standard Classification of Occupations (ISCO), with the former here being combined into three categories, while the 1-digit version is used for the latter.

The majority of the working age population in the CECs is classified on the middle educational level, with the highest shares of about 70% in the Czech Republic and Slovakia, followed by Poland and Latvia. High qualifications are most prevalent in the Baltic States, particularly in Lithuania with a share of one third, while they only account for around 10% or less in most other countries. With 30% or more Bulgaria, Romania, Hungary and Poland have the greatest number of

persons with low qualifications, but their share also reaches 20–25% in the other countries.

The shares of the two upper qualification levels rise throughout the CECs if one only looks at the employed, with a corresponding shift away from the low qualifications. The share of women with high qualifications exceeds that of men except in the Czech Republic and Romania, on the middle qualification level men have the greater share in all countries, while there is no uniform pattern with regard to low qualifications. As expected, the educational level shows a marked drop for the unemployed and is even lower for the inactive.

In most countries men are predominantly employed in craft and related trade occupations or as plant & machine operators & assemblers, while women are mainly found in service & sales jobs and among technicians & associate professionals. Furthermore, women are more strongly represented among professionals and clerks, while men dominate among legislators, senior officials & managers.

Depending on the national school and training system, the qualification structure of the individual occupations varies considerably between the CECs, showing a wide range of values within each group particularly for the middle and high level of education.

However, if the overall country distribution is taken into account and the educational qualification for the main occupational classes is expressed as their deviation from the national average, then the resulting picture is fairly uniform. In all countries the qualification of legislators, senior officials & managers, professionals and technicians & associate professionals is above average. Clerks are more or less right on the average with only small deviations in the upward or downward direction. All remaining occupational groups generally lie below the country averages.

## Data sources and methods

The primary source of statistical information presented in this publication are the national labour force surveys which are carried out in all CCs and the FYROM. For Albania, the limited data available largely come from administrative records, while none could yet be made available from Bosnia and Hercegovina; but even in these countries there are plans to introduce a national LFS as early as next year.

Supplementary figures for all CECs on GDP growth (Statistics in focus, Theme 2–5/2001) and total or regional area were provided by Eurostat. Special circumstances concerning data sources or methods in individual countries are noted in the text or in the section on “Abbreviations and methodological notes”. The discussion following here only is designed to describe some of the more important aspects of national labour force surveys.

### The nature of labour force surveys

A labour force survey characteristically involves personal interviews carried out in a sample of households to periodically obtain relevant information for a given reference week. This approach has certain advantages in comparison with other sources of information.

Thus, statistics from civil registers or social insurance records are by-products of administrative processes which may widely differ in their definition and coverage of employment and unemployment according to the legal and organisational provisions of the respective systems. Establishment-based surveys are restricted to the persons and activities in individual sectors and do not provide data on the not employed. A census, finally, with its complete and comprehensive coverage of the basic statistical parameters requires resources which can be mobilised only at greater intervals.

National LFSs, in contrast, are designed for the specific purpose of collecting information on employment and unemployment across the entire economy and at minimal costs. Due to their inherent flexibility, they also can be more easily harmonized in terms of topical content, concepts, defini-

tions, data processing and analysis to ensure comparability according to internationally accepted standards.

However, the sample base of LFSs also is their main limiting factor. In general, the reliability of results derived from a sample decreases with its size as well as with the frequency with which the measured characteristic occurs and the evenness with which it is distributed in the population. Thus, there are limits to the use of LFSs on relatively rare phenomena, in detailed regional or sectoral disaggregation, and for monitoring trends over small time intervals or involving only minor movements.

### CECs' labour force surveys

In the CECs, LFSs only were introduced during the transition process from a planned to a market-oriented economy within the last decade. Since then, however, the LFS has become the main instrument for assessing the characteristics and developments of their national labour markets.

After starting with an initial pilot or annual survey in the first year(s), all CECs except Latvia, Lithuania and the FYROM, which still were on a semi-annual schedule, conducted their year 2000 LFS on a continuous, monthly or quarterly basis. Details on the introduction of national LFSs in the CECs as well as their periodicity and sample sizes in the year 2000 are listed in Table 1. More information on the history and methodology of LFSs in the ten Central European CCs can be found in the Eurostat publication “Labour Force Survey in Central and Eastern European Countries: Methods and Definitions, 1999”.

That publication also documents the efforts of the CECs to adapt their LFSs to EU standards. These efforts have since been intensified through the “PHARE Multi-Beneficiary Programme for Statistical Cooperation: Pilot Projects on Statistics”, which assessed the compliance of national LFSs with EU regulations, provided some assistance with data transmission, and made recommendations for further harmonisation.

Table 1: **Main data on CECs' LFSs**

Country	Starting date	Type of survey	Frequency of results	Sample size in the year 2000
BG	1993	quarterly	quarterly	24000 households
CZ	1992	continuous	quarterly	26000 households
EE	1995	continuous	quarterly	2000 households
HU	1991	monthly	quarterly	37000 dwellings
LT	1994	semi-annually	semi-annually	3000 households
LV	1995	semi-annually	semi-annually	8000 households
PL	1992	continuous	quarterly	24000 dwellings
RO	1993	continuous	quarterly	18000 dwellings
SI	1993	continuous	quarterly	7000 households
SK	1993	continuous	quarterly	10000 dwellings
MK	1996	semi-annually	semi-annually	7200 households

### EU LFS standards

The first attempt to carry out a LFS in its member states was already made by the then EC in 1960, but it was not until 1983 that a harmonised LFS was instituted. The latest regulations applying to the time period covered in this publication are the Council Regulation (EC) No. 577/98 of 9 March 1998 and the corresponding Commission Regulation (EC) No. 1571/98 of 20 July 1998.

The technical aspects of these regulations are determined by Eurostat in cooperation with representatives from the NSIs (incl. CECs) at meetings of the Employment Statistics Working Party. The main EU LFS standards set in this process apply to:

- type, frequency and reference period of the survey (continuous survey providing quarterly and annual results, with the reference week preceding the interview week),
- units and scope of the survey, observation method (persons in private/collective households, interviews),
- sample (relative sampling error, rotation, weighting),
- survey characteristics (list of questions and response categories, definitions and classifications),
- transmission of data to Eurostat (individual records within 12 weeks for continuous surveys and 9 months for an annual spring survey).

The principal definitions and classifications used in the EU LFS represent international or EU conventions and include:

- employment and unemployment (ILO, 13th ICLS),
- international classification of status in employment, ICSE (ILO, 15th ICLS)
- international classification of occupations, ISCO-88 (ILO)
- statistical classification of economic activities, NACE Rev. 1 (EU, adaptation of ISIC Rev. 3, UN),
- international standard classification of education, ISCED 1997 (UNESCO),
- regional classification, NUTS 2 (EU).

A detailed presentation of the EU LFS standards can be found in the Eurostat publication "Labour force survey: Methods and definitions, 1998 edition".

The implementation of these standards largely falls under the responsibility of the NSIs. They design their own survey sample and a national questionnaire, conduct the interviews, compute the weighting factors, and convert the data to the prescribed record structure for transmission to Eurostat. Eurostat, in turn, checks and processes the data for EU Member States, CECs and other cooperating countries and makes the results available for dissemination.

### Basic concepts and definitions

While the LFS is intended to cover the whole resident population of a country, the results are compiled only for persons living in private households (but excl. persons in compulsory military or community service surveyed in these households), because some countries do not cover collective households.

The central distinction in any LFS is the classification of persons aged 15 years or more by their labour status:

**Employed** are those who, during the reference week:

- did any work for pay or profit, or
- were not working but had jobs from which they were temporarily absent.

Family workers are included.

**Unemployed** are those who:

- had no employment during the reference week, and
- had actively sought employment during the previous four weeks, and
- were available to start work within the next two weeks.

Persons who already had found a job which was to start later are also classified as unemployed.

**Inactive** are all those not classified as either employed or unemployed.

Graph 1 shows a flowchart classifying the population according to these definitions. In this context, persons temporarily absent from work present certain difficulties. The accepted criterion for their classification as employed is a formal attachment to their job, which in turn is defined by:

- the continued receipt of pay,
- the assurance of return to work, or
- the elapsed duration of absence.

Another problem is the classification of unemployed by LFSs as opposed to the registration in public employment offices. Due to differences in the criteria used, the respective figures for a given country can differ considerably, and while the definition applied to all CECs' LFSs is the same, the figures on registered unemployment are rarely comparable between countries due to different national regulations. The latter are therefore excluded from this publication. For a discussion of the differences involved the reader is referred to the first issue of the "Review", p. 13ff and to "Employment in Europe", 1999, p. 51.

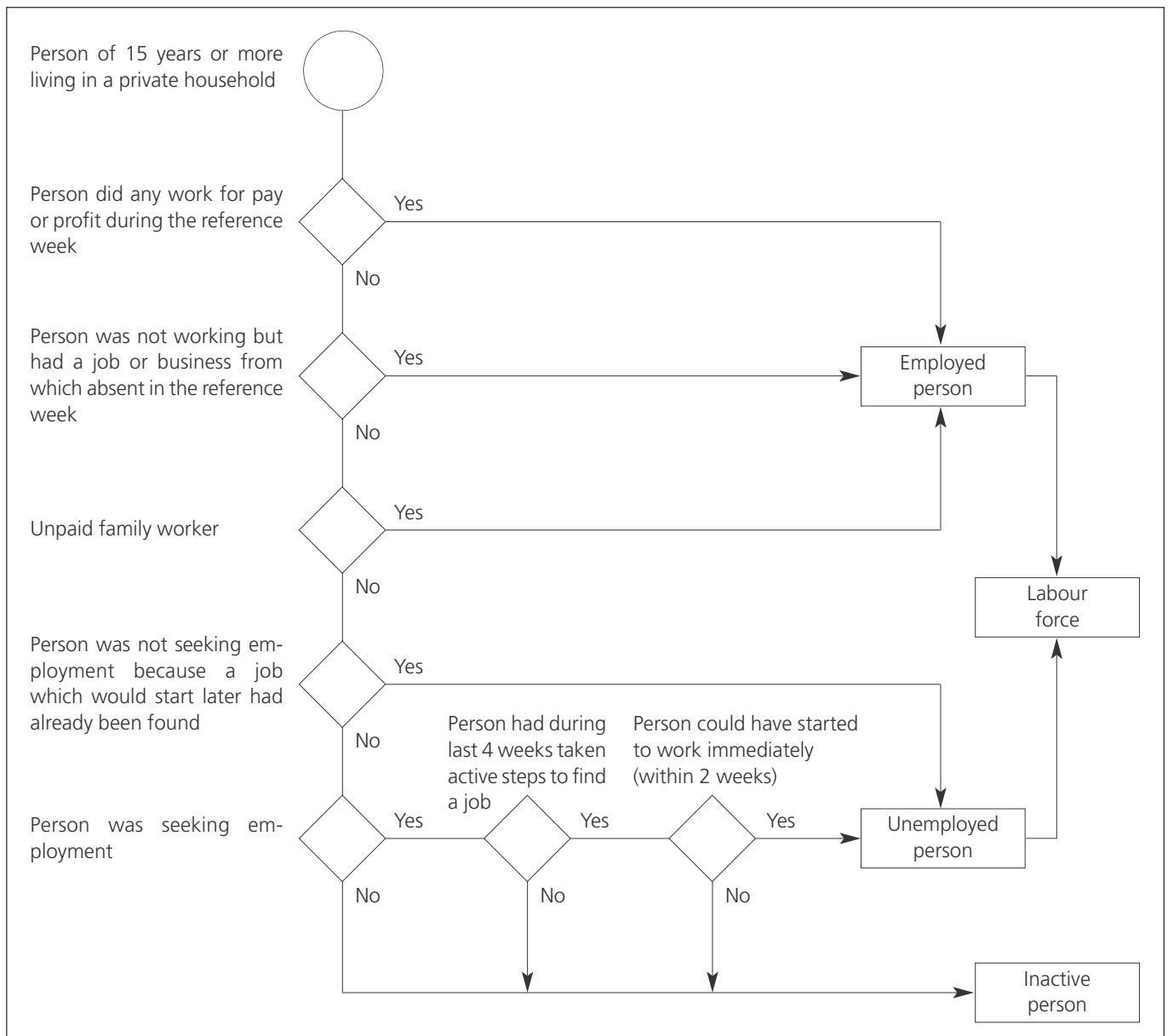
Based on age and labour status, a number of groups and rates are derived:

- **Working age population:** 15–64
- **Youth dependency rate:** under 15/15–64
- **Old age dependency rate:** 65+/15–64
- **Effective dependency rate:** not working 15+/employed
- **Labour force:** employed + unemployed
- **Activity rate:** labour force 15–64/working age population
- **Employment rate:** employed 15–64/working age population
- **Unemployment rate:** unemployed/labour force

In addition, there are a number of concepts relating to specific conditions of employment, unemployment, or inactivity:

**The permanency of a job** only refers to employees. Temporary employment, work contracts of limited duration or fixed-term contracts are characterized by the agreement

Graph 1: **Labour force classification in the European Union Labour Force Survey**



between employer and employee on objective conditions under which a job ends, such as a specific date, the completion of a task or the return of another employee who has been temporarily replaced. In particular, this applies to:

- persons with seasonal employment,
- persons engaged by an agency or employment exchange and hired to a third party to perform a specific task (unless there is a written contract of unlimited duration with the agency or employment exchange),
- persons with specific training contracts.

If there are no objective criteria for the end of a job or work contract, then this is considered as permanent or of unlimited duration.

**The distinction between full-time and part-time work** is based on the subjective declaration of the respondent. A more precise, objective definition is not possible since

working hours differ from country to country and from one branch of activity to the next.

**Involuntary part-time work** is assumed for persons who declare that they work part-time because they were unable to find a full-time job.

**The number of hours usually worked per week** in the LFS only refers to the usual number of hours in the main job, including paid or unpaid overtime, but excluding travelling time between home and workplace or time for the main meal break. Apprentices or trainees should exclude any time spent at college or in other special training centres. Persons unable to provide a figure for their usual working hours may replace it by the average number of hours actually worked per week over the past four weeks. Some persons, particularly self-employed and family workers may not have a usual timetable because their

working hours vary widely from one week or month to the next.

**The duration of unemployment** is operationally defined by the shorter of the following two periods:

- the duration of search for work, or
- the length of time since last employment.

**Youth unemployment** refers to the unemployment of persons aged 15–24.

**Long-term unemployment** is defined by a duration of 1 year or more.

**Discouraged workers** are defined as persons who are not employed and not seeking work because they believe that none is available.

**Willingness to work** refers to persons who are not employed and not seeking employment, but would nevertheless like to have work.

**In education or training** only applies to persons who attended any course or programme during the previous four weeks regardless of its relevance for the respondents' present or possible future job. Thus, this includes initial and further education, continuing and further training, training within the company, apprenticeship, on-the-job training, seminars, distance learning, evening classes, self-learning, etc. as well as any courses followed out of personal interest and all forms of education and training in such subjects as languages, data processing, management, art and culture, health and medicine.

### Problem areas in CECs' LFS data

While the guidelines given by the EU LFS standards, concepts and definitions are quite clear, their implementation in the national LFS of CECs still is far from complete.

A first problem area is the **survey coverage**. In some countries the LFS excludes the population under 15 or over 74 so that the necessary figures for computations involving the whole population have to be derived from other sources. Several countries also include persons living in collective households through their private household of

origin but cannot identify them as such due to the lack of corresponding questions or response categories. In some CECs persons in compulsory military or community service, who should be omitted from LFS results, are excluded from the national LFS from the very outset, in others they are included, but not identifiable.

A second problem area are **missing items or responses**. In the years 1999 or 2000 none of the CECs with a national LFS covered all EU items. Such gaps exist, among others, with regard to the willingness to work of persons without employment, persons in education or training, the full-time/part-time distinction, the permanency of jobs, the number of hours usually worked, or the situation of unemployed before they started their job search. But it also happens that responses are missing even though an item is included in the questionnaire, because some persons simply are not asked that question due to the filter applied to it.

Another area of concern is the basic classification of respondents by their **labour status**. There are considerable differences from country to country in terms of the type and number of questions as well as the criteria used to determine this status.

General methodological discrepancies also occurred with respect to:

- the **professional status**, where members of co-operatives have been variably coded as employees and self-employed with or without employees;
- the **methods used to find work**, which according to the EU standard are supposed to be taken up in separate questions, but instead were reduced to response categories in one question of which only a limited number (sometimes only one) could be selected, thus changing the character of the resulting distributions and possibly affecting the classification of unemployed or inactive.

In sum, it should be reiterated, however, that despite all of these reservations the CECs' LFSs still provide the most consistent and comparable set of statistical data for the analysis of employment and the labour market – if properly treated with the necessary caution.

## Recent labour market trends

In issue 1/2001 of this publication, the section on „Recent labour market trends“ was devoted to a general overview and characterization of employment and unemployment in the CECs. In issue 2/2001, the focus of this section was shifted to comparisons of national economic structures with regard to the distribution of employment across individual sectors and the composition of the employed by sex, age, and qualification as well as the inherent risk of unemployment.

The data used for the analysis in both cases were those from the second quarter national LFSs for the years 1999 and 2000. The main reason for this choice is the availability of LFS results even for countries with only one or two surveys per year and it subsequently has become common statistical practice also to use this quarter for annual reports. The basic difference in the approach applied to this section in the present issue lies in the reference periods of the information subjected to analysis. Instead of drawing on only one quarter (the second) for each year, an attempt will be made here to utilize LFS data from all available quarters of a given year.

The two main purposes of such an approach are to monitor current developments in employment and unemployment and to discover possible seasonal variations in them. In a second stage of analysis, one then may be in a position to correct short-term trends by making adjustments for repetitive seasonal variations or to detect changes in these patterns themselves.

However, a few notes are in place at this point with regard to the data basis required for analyses of this kind. So far only two of the Central European Candidate Countries (the Czech Republic and Slovakia) have supplied LFS data to Eurostat from all four quarters for the absolute minimum of three years necessary to establish any seasonal patterns, five (the Czech Republic, Hungary, Romania, Slovenia and Slovakia) provided data for all four quarters in 1999, and all except Lithuania and Latvia did so for the year 2000. Bulgaria carried out three LFS rounds in 1999, but was not yet able to retroactively transmit the data to Eurostat in the standard format. Latvia transmitted their LFS data for both its spring and fall survey rounds in 1999 and 2000, but the fall data for each year have not been checked yet by Eurostat. Lithuania only provided LFS data for the second quarter 1999 and 2000, as did Estonia in 1999. Also in 1999, Poland carried out its national LFS only in the first and fourth quarter. Of the other three countries participating in the Phare programme and therefore included in this publication, the Former Yugoslav Republic of Macedonia has not yet transmitted LFS data to Eurostat from any of its semi-annual surveys, while Albania and Bosnia and Herzegovina have not carried out a national LFS up to now.

On account of the data availability the analyses of this section are limited to the ten Central European Candidate

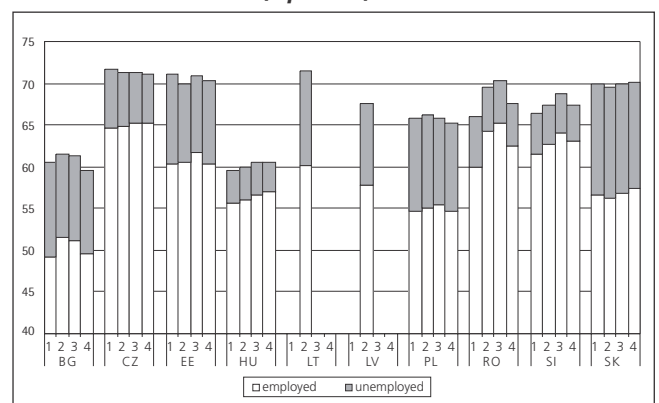
Countries (BG, CZ, EE, HU, LT, LV, PL, RO, SI and SK) and the years 1999 and 2000, and for the sake of comparability only persons of working age (15–64) are included. Apart from existing data gaps this time limitation means, of course, that any description of seasonal variations will at best be provisional and seasonal adjustments impossible, and even the information on employment and unemployment for countries providing a complete set of quarterly LFS data may not always be directly comparable as many of them switched from a quarterly survey in 1999 to a continuous survey in the year 2000, unless the reference week is evenly spread over the corresponding quarters in both cases.

### Quarterly development of employment and unemployment

The quarterly development of the labour force usually follows a distinct seasonal pattern, with employment being lowest in the first quarter of the year, rising in the middle two and tailing off again towards the end, while the opposite applies to unemployment. However, these complementary tendencies do not completely offset each other because many persons entering or leaving employment directly come out of or go back into inactivity, bypassing the status of unemployment. As a consequence, the labour force as a whole as measured by the activity rate generally exhibits less variation than either of its components, but most of the time its size and direction still is determined more by the changes in employment rather than those in unemployment.

In the year 2000 five of the eight CECs providing quarterly data (BG, EE, PL, RO and SI) exhibit the classical seasonal pattern of employment development (Graph 1; for more details see Section Annex). The greatest variation is found in Romania, where the employment rate extends from 59.9% in the first quarter to 65.2% in the third. In comparison, the span between the lowest and highest value only amounts to about 2.5 percentage points in Bulgaria and Slovenia and around 1 percentage point in Estonia and Poland.

Graph 1: **Activity rates by employment and unemployment shares, qu. 1–4, 2000**



The main difference in the three countries deviating from this pattern (CZ, HU and SK) is the absence of a drop-off in the employment rate at the end of the year, so that the highest value is reached in the fourth quarter. However, the overall increase remains fairly moderate in all cases, spanning only 0.5 percentage points in the Czech Republic, 1.0 percentage point in Slovakia and 1.4 percentage points in Hungary.

The development of unemployment generally presents itself as the mirror image of that in employment, though in a mitigated form. The share of unemployed is not reduced as much as one might hope with the increase of employment, nor does it rise as much as one might fear with a corresponding decrease. There are three major exceptions in each of these tendencies. On the one hand, the reduction of unemployment even surpassed the increase in employment in the second quarter 2000 in the Czech Republic and Estonia and in the third quarter in Poland. On the other hand, the share of unemployed did not rise in the third and fourth quarters 2000 in Bulgaria and the fourth quarter in Slovenia regardless of the simultaneous decreases in employment.

Despite these deviations from the seasonal pattern and the exceptions from the complementary tendencies, which as a rule only concern one quarter in each given country, the most striking aspect of this analysis probably is the far-reaching agreement in the direction of quarterly developments, particularly in view of the fact that the levels of activity, employment and unemployment vary considerably between the CECs, extending from hardly 60% in Bulgaria and Hungary to almost 72% in the Czech Republic and Lithuania in the activity rate, from under 50% in Bulgaria and 55% in Hungary and Poland to over 65% in the Czech Republic and Romania in the employment rate, and from between 6 and 7% in Hungary and Slovenia to more than 19% in Slovakia in the unemployment rate.

At the same time, these deviations and exceptions indicate that the quarterly development of the labour force also is influenced by current economic trends which may reinforce or counteract seasonal factors. Unfortunately, the available data for most CECs is not yet sufficient to allow seasonal adjustments so that the analysis will have to be limited to a comparison between 1999 and 2000 to identify basic similarities and major differences.

### Changes in employment and unemployment from 1999 to 2000

In evaluating the development of the labour force between 1999 and 2000 one has to take into account the seasonal variations in each country in both of these years as well as their overall economic growth. Since the latter only takes effect on employment and unemployment with a delay of about half a year, the GDP growth rates in Graph 2a–f and the Section Annex have been lagged by two quarters, i.e. the figure given for quarter 1/1999 really represents quarter

3/1998, the figure given for quarter 2/1999 really represents quarter 4/1998, etc.

Before discussing the results for the individual countries, a few general observations should be made. Thus, in all CECs the relevant economic development exhibited a more or less pronounced slack in 1999, particularly in the second and third quarters. In Bulgaria the low point already was reached in the first quarter of 1999, while in Lithuania and Romania the negative trend even extended until mid-2000. Except for a slight deviation in Romania, the growth of employment always remains below the corresponding GDP figure. In other words, it takes a relatively higher rate of economic growth to bring about a positive development in employment. Unemployment, in contrast, seems to react more sensitively to changes in GDP, but in the opposite direction. The seasonal patterns in the development of the labour force, finally, apart from some modifications generally are the same for the five countries providing quarterly data for both 1999 and 2000.

In 1999 the Czech Republic was affected by recessionary tendencies throughout the whole year, as a result of which employment slightly declined and unemployment rose, both reaching their extreme only in the first quarter 2000. In 2000 both of these trends were reversed in the light of a return to economic growth. But while the employment situation continued to improve throughout the year, it remained below the level of each of the corresponding quarters in 1999 (Graph 2a). Unemployment, in contrast, only remained above the 1999 levels in the first half of the year, clearly dropping below them in the second.

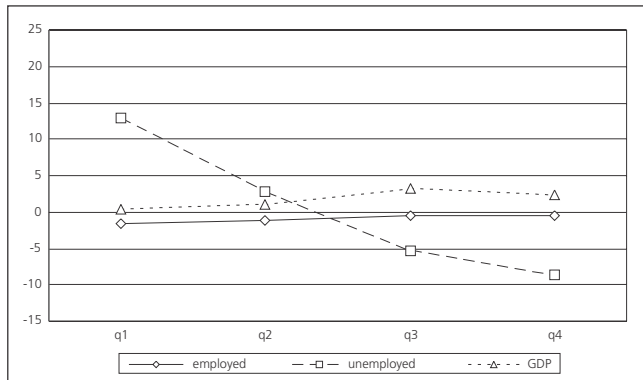
Hungary experienced a period of continued economic growth in both 1999 and 2000, accompanied by a slight increase in employment and a slight decrease of unemployment in each of these years. The level of employment in 2000 was about 1–1.5% higher in each quarter than in the preceding year, and the level of unemployment between 5–10% lower (Graph 2b).

In Romania the development of the labour force in 1999 and 2000 is marked by two distinct trends. On the one hand, it was affected by an extended period of economic decline that lasted until the middle of 2000. On the other hand, both years show a pronounced classical pattern of seasonal variation. In the annual comparison the situation of employment and unemployment – though still being worse than in 1999 – only begins to improve in the third quarter 2000, eventually reaching a higher level of employment and a lower level of unemployment at the end of the year (Graph 2c).

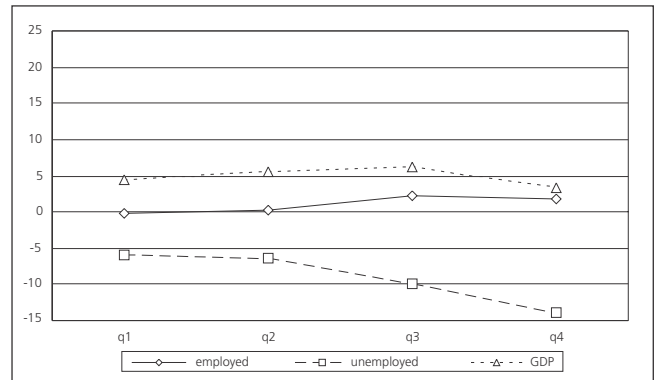
Like Hungary, Slovenia experienced a period of continued economic growth in both 1999 and 2000, but while the development of employment followed the classical seasonal pattern in each year, unemployment remained the same throughout 1999 and only then turned into a steady decline. Compared to 1999 the level of employment was about the same for the first two quarters of 2000, but

Graph 2a-f: **Change in employment, unemployment and GDP, qu. 1-4, 2000-1999**

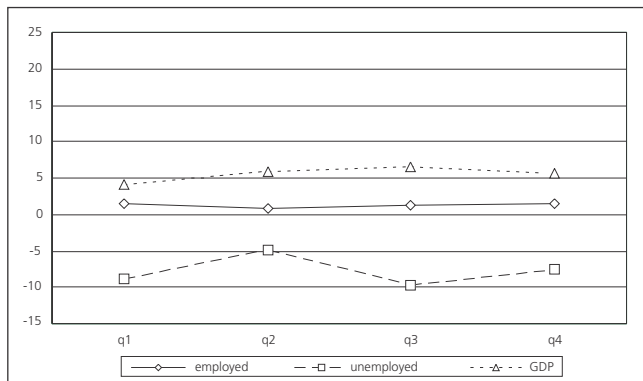
Graph 2a: **CZ**



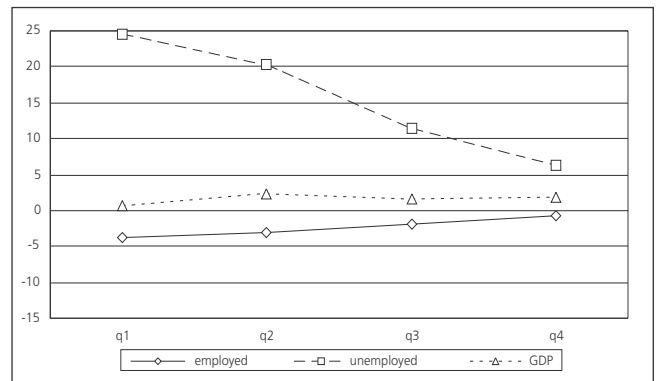
Graph 2d: **SI**



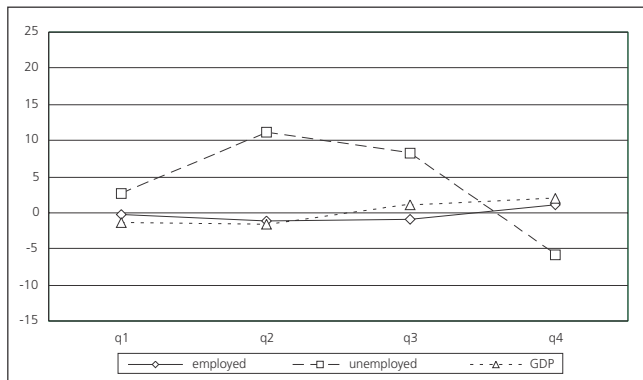
Graph 2b: **HU**



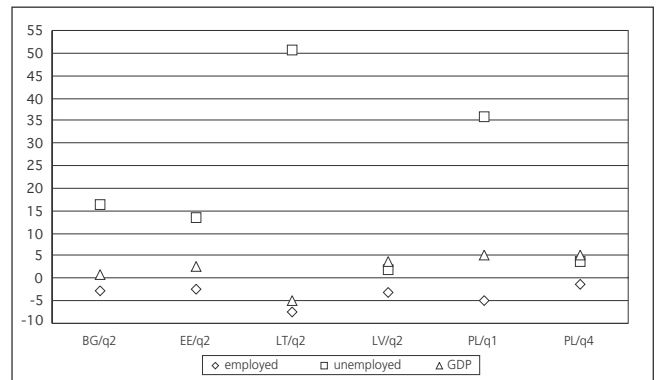
Graph 2e: **SK**



Graph 2c: **RO**



Graph 2f: **BG, EE, LT, LV, PL**



surpassed it in the last two by about 2%. The level of unemployment, in contrast, already was about 6% lower in the first two quarters of 2000 and fell even more by 10-14% in the last two (Graph 2d).

Although GDP growth in Slovakia stayed in positive figures in both 1999 and 2000, but with considerable fluctuation between quarters, it apparently was not strong enough to stop the negative development of the labour force (decrease of employment and increase in unemployment) which extended into the second quarter 2000 before showing first signs of improvement. While the level of employment in 2000 remained below and that of unemployment above the corresponding levels for 1999 in all four quarters,

the differences have continually become smaller in both cases (Graph 2e).

The evaluation of the development of the labour force in those countries not providing LFS data for all quarters of 1999 or 2000 (BG, EE, LT, LV and PL) is more difficult. Bulgaria and Poland were affected by moderate to substantial economic growth in most or all quarters of 1999 and 2000. The Baltic States, in contrast, had to cope with recessionary trends from the second quarter 1999 to the first quarter 2000, Lithuania even until the second quarter. In all countries the employment level for the respective quarter of 2000 was lower and that of unemployment higher than in 1999 (Graph 2e).



## Recent labour market trends

However, there are some signs of improvement even in these countries. Compared to 1999 the underlying economic trends in all of them have been more favourable in the last two quarters of 2000. In addition, unemployment in Bulgaria has continued to decrease throughout the year, and in Poland the differences in the employment and unemployment levels have been greatly reduced between the first and fourth quarters of 1999 and 2000.

In sum, the analysis of quarterly developments in the CECs for 1999 and 2000 has shown that after a period of slackening economic growth with negative effects on the labour force in most countries, employment and unemployment have begun to turn in a more favourable direction, particularly in the last two quarters 2000. In the following it will be attempted to specify some of these trends in terms of the economic sectors involved.

### Quarterly development of employment and unemployment by economic activity

To assess the contribution of various sectors of the economy to the overall development of employment and unemployment in the year 2000, the number of persons currently or previously working in them is expressed in terms of their absolute rather than their relative share in the respective activity rate in the individual countries, and the changes in the sectoral structure between 1999 and 2000 also are given as the absolute difference between the corresponding shares rather than on a percentage basis. The classification of economic sectors is based on the NACE 1-digit code, but certain methodological and analytical considerations as well as practical limitations of presentation made it necessary to combine smaller or similar sectors with others (see Box).

In three of the five countries with a classical pattern of seasonal employment – Romania, Bulgaria and Poland – this mainly results from the variation in agricultural activities (see Graphs 3a, e and f). There also is a less pronounced seasonal tendency in construction, while only Bulgaria exhibits a similar pattern in the hotels & restaurants sector. At the same time opposite tendencies can be observed in some other sectors of the economy, particularly in manufacturing and in Bulgaria and Poland also in public & personal services (L–Q), suggesting that there is a seasonal exchange of part of the work force according to the availability of jobs in the affected sectors.

In Estonia the classical pattern of seasonal employment mainly results from the variation in manufacturing and to a lesser degree in construction, with opposite tendencies again in public & personal services and, surprisingly, in agriculture (Graph 3c). In Slovenia, in contrast, most economic sectors contribute to the overall seasonal pattern with an increase in employment in the second and third quarter and a decline at the end of the year, the greatest variation occurring in agriculture, trade & repair and manufacturing, while opposite tendencies only are found in finance & business and public & personal services (Graph 3g).

This relative absence of marked differences in sectoral development throughout the year noted in Slovenia is even more pronounced in the three countries which deviate from the classical seasonal pattern of employment, the Czech Republic, Hungary and Slovakia (see Graphs 3b, d and h). In Hungary all sectors except one contribute to the gradual increase in employment, with the greatest progress being made by manufacturing in the final quarter. The only exception is agriculture with a slightly seasonal pattern.

#### Combination of economic sectors based on NACE 1-digit classification

##### **AB** Agriculture

- A Agriculture, hunting and forestry
- B Fishing

##### **CDE** Manufacturing

- C Mining and quarrying
- D Manufacturing
- E Electricity, gas and water supply

##### **F** Construction

- F Construction

##### **G** Trade & repair

- G Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods

##### **HI** Hotels & transport

- H Hotels and restaurants
- I Transport, storage and communication

##### **JK** Finance & business

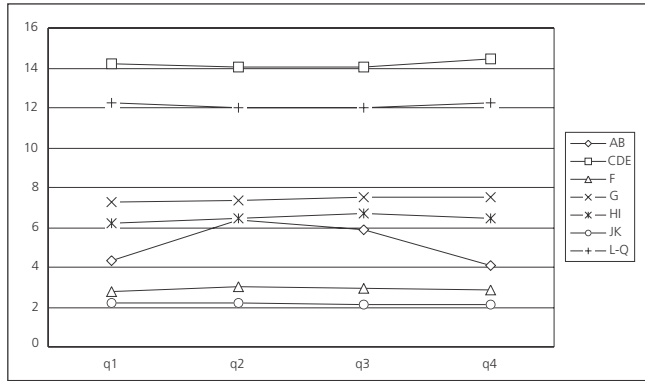
- J Financial intermediation
- K Real estate, renting and business activities

##### **L–Q** Public & personal services

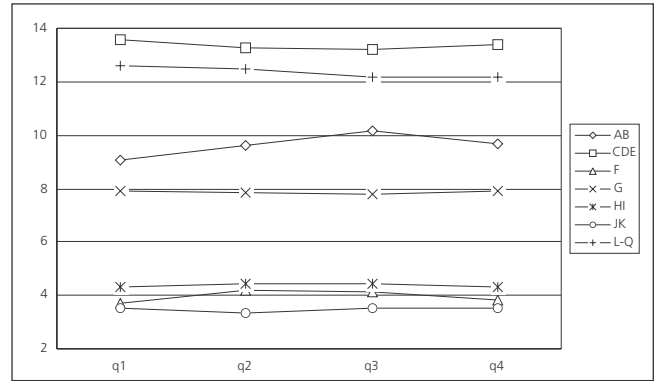
- L Public administration and defence; compulsory social security
- M Education
- N Health and social work
- O Other community, social and personal service activities
- P Private households with employed persons
- Q Extra-territorial organizations and bodies

Graph 3a-h: Employment shares by combined economic sectors qu. 1-4, 2000

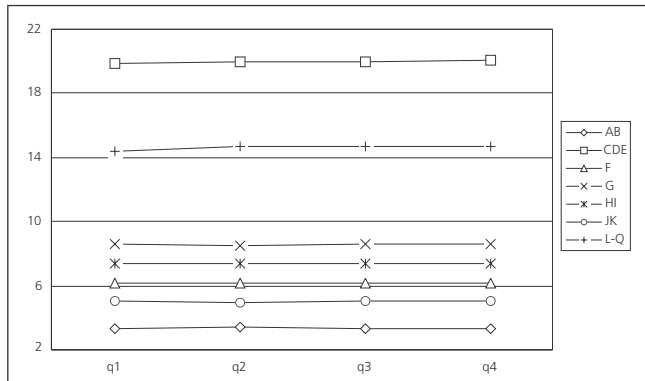
Graph 3a: BG



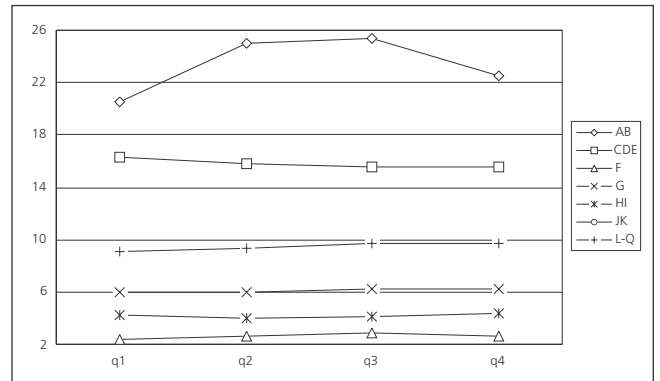
Graph 3e: PL



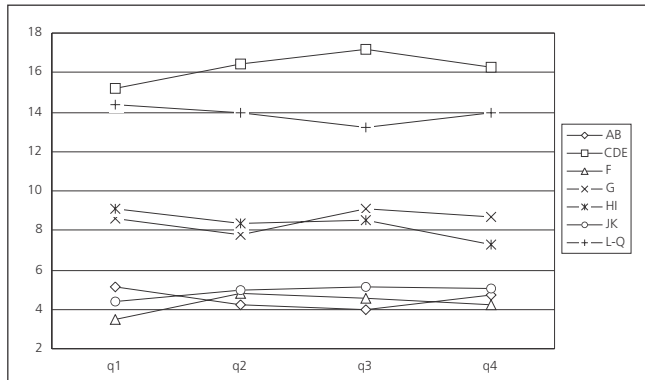
Graph 3b: CZ



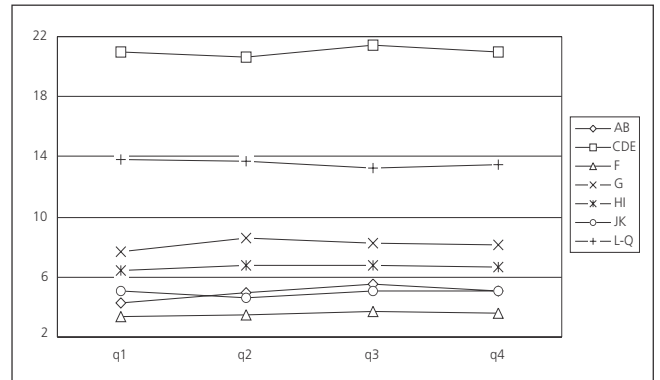
Graph 3f: RO



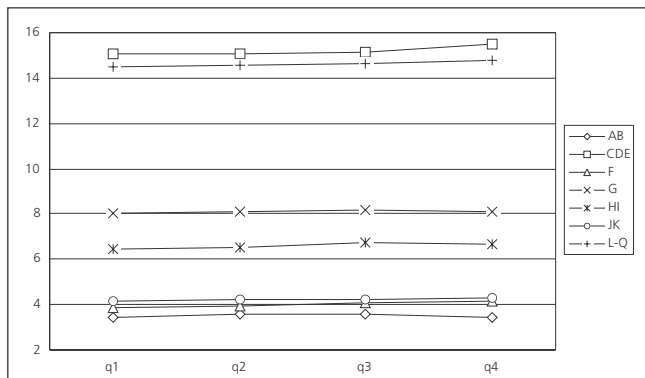
Graph 3c: EE



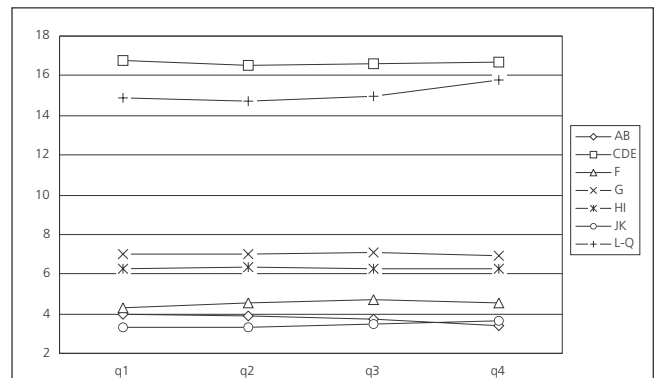
Graph 3g: SI



Graph 3d: HU



Graph 3h: SK



In the Czech Republic the seasonal pattern of agriculture is hardly noticeable, and in Slovakia this sector even registered a continuous decline in employment over all quarters of 2000. Indeed, none of the sectors in the Czech economy shows any significant quarterly variation in employment, while in Slovakia – apart from the decline in agriculture – construction also stands out somewhat by its moderate seasonal pattern and public & personal services as well as finance & business contribute most to the increased employment since the second quarter of 2000.

As the comparison of developments between 1999 and 2000 has shown, the number of employed remained below the corresponding figures for the preceding year throughout most quarters in all countries except Hungary and Slovenia, though the differences generally moved in a more favourable direction in the course of the year. The differentiation of these trends by economic sectors reveals some common tendencies and a few exceptional developments in the five countries which have provided quarterly data for both years (for detailed statistics see Section Annex).

In every country the contribution of manufacturing to the overall employment trend was negative, and this is also true for agriculture except in Romania. In contrast, in every country the contribution of public & personal services was positive, and this also applied to finance & business, though in Romania only in the last quarter. In Romania agricultural employment in 2000 actually remained above the 1999 level throughout the year and together with manufacturing determined the overall trend, while in Hungary and Slovakia the development in the primary sector ran counter the overall trend, falling increasingly below the levels of the preceding year.

It also may be noted that the second largest single sector, trade & repair, compared to 1999 employed substantially more persons in each quarter of 2000 in Hungary, but substantially fewer in the Czech Republic. In Slovakia the employment in construction remained below the levels of the preceding year for all quarters, though with a diminishing difference. In Slovenia, finally, the quarterly comparison between 1999 and 2000 produces such an erratic pattern

of results for all sectors that it raises some questions regarding the reliability of the underlying data.

The most outstanding feature in the quarterly development of unemployment is the dominant role of manufacturing. In all CECs this sector not only produces the largest group of unemployed, its size also exceeds by far what might be expected on the basis of corresponding employment shares (see Graphs 4a–h). In addition, the development in manufacturing largely determines the overall unemployment trend in each country, being partly counterbalanced or outweighed in this respect by developments in other sectors only in Romania (agriculture), Slovenia (construction, trade & repair, hotels & transport) and Slovakia (agriculture, construction).

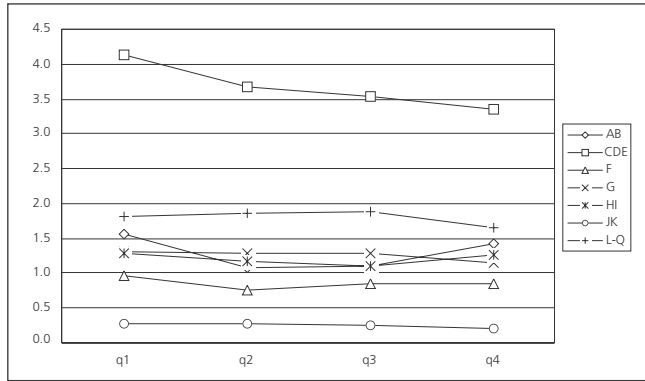
Correspondingly, most other sectors experience underproportional levels unemployment, particularly agriculture, public & personal services and finance & business. In agriculture this is due to the greater prevalence of self-employed who hardly lose their job, in public service to the relative safety of state employment, and in finance & business as well as in public & personal services to the good economic prospects of these activities.

A clear seasonal pattern of unemployment is found in agriculture only in Bulgaria and Romania, in a weaker form in the Czech Republic, Slovakia and Hungary. Construction is the only other sector showing a decrease in unemployment particularly after the first quarter, but not always an increase toward the end of the year. It also is the only sector apart from manufacturing with overproportional unemployment levels.

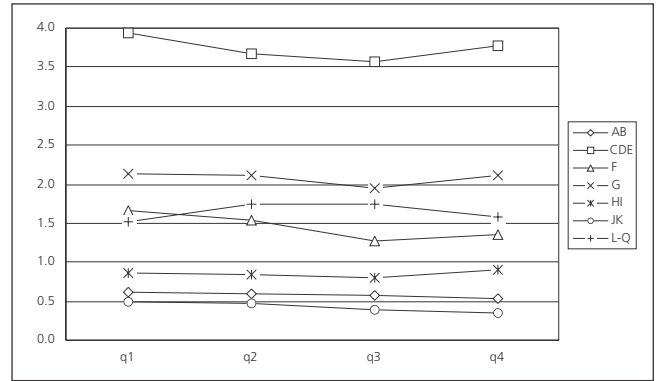
In comparison to employment the analysis of changes in sectoral unemployment between 1999 and 2000 is confronted with both a smaller data base and smaller quarterly differences so that it is more difficult to identify and comment on consistent development patterns. The only clearly discernible trend is the positive direction in manufacturing where the comparative unemployment levels either become less unfavourable from quarter to quarter or already are lower than in the preceding year (for details see Section Annex).

Graph 4a-h: Unemployment shares by combined economic sectors qu. 1-4, 2000

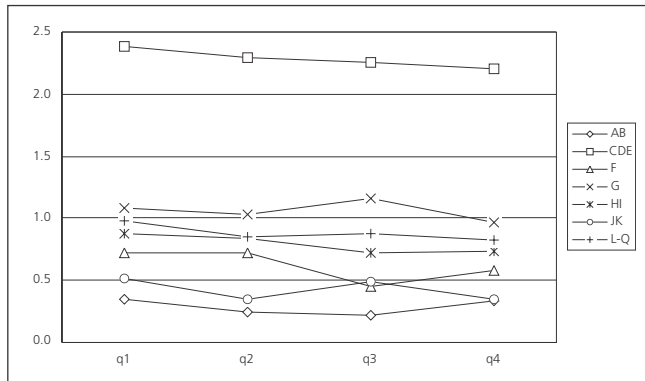
Graph 4a: BG



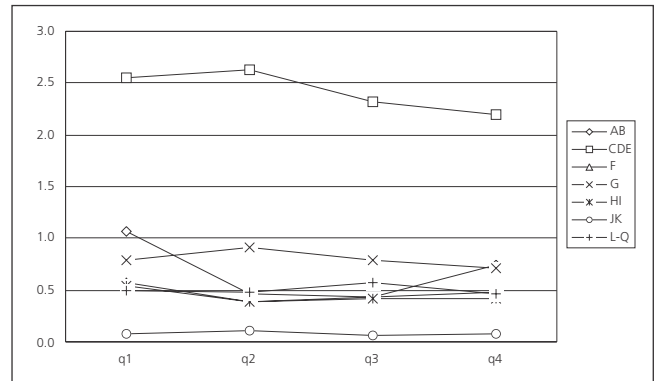
Graph 4e: PL



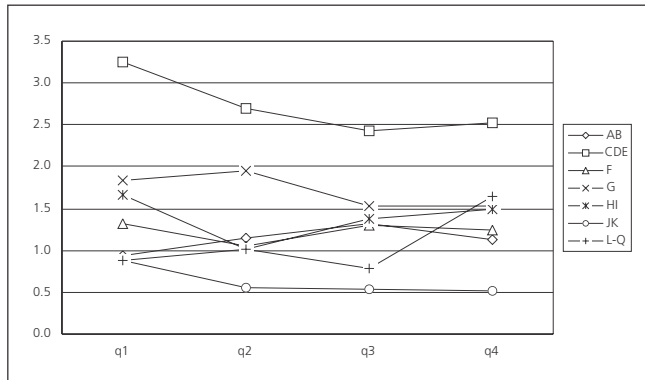
Graph 4b: CZ



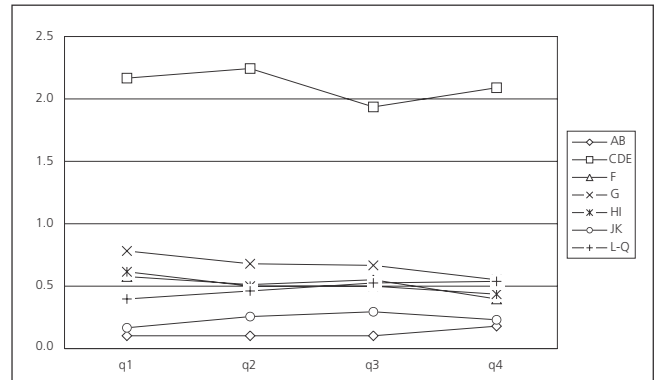
Graph 4f: RO



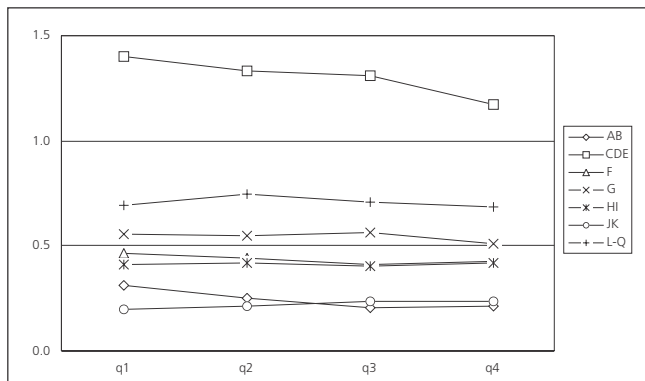
Graph 4c: EE



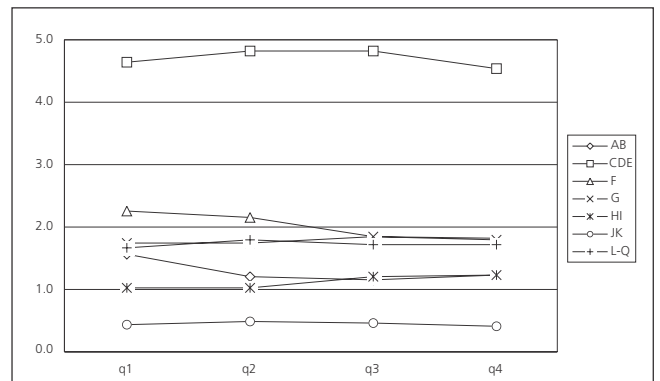
Graph 4g: SI



Graph 4d: HU



Graph 4h: SK



## Recent labour market trends

Table 1: *Employment, unemployment and activity rates, qu. 1–4, 1999 and 2000*

Country	Subject	1999				2000			
		q1	q2	q3	q4	q1	q2	q3	q4
BG	employment rate		52.9			49.2	51.5	51.2	49.7
	unemployment rate		14.1			18.7	16.4	16.3	16.6
	activity rate		61.6			60.6	61.6	61.2	59.6
CZ	employment rate	65.8	65.6	65.5	65.6	64.7	64.9	65.1	65.2
	unemployment rate	8.5	8.5	9.1	9.1	9.6	8.8	8.7	8.4
	activity rate	71.9	71.8	72.0	72.1	71.6	71.2	71.3	71.2
EE	employment rate		62.0			60.3	60.6	61.6	60.3
	unemployment rate		11.8			15.1	13.5	13.1	14.3
	activity rate		70.3			71.0	70.0	70.9	70.4
HU	employment rate	54.8	55.4	55.9	56.1	55.5	55.9	56.6	56.9
	unemployment rate	7.5	7.0	7.1	6.6	6.8	6.6	6.3	6.0
	activity rate	59.2	59.6	60.2	60.1	59.6	59.9	60.5	60.6
LT	employment rate		65.0				60.1		
	unemployment rate		10.4				15.9		
	activity rate		72.6				71.5		
LV	employment rate		59.5				57.7		
	unemployment rate		13.9				14.5		
	activity rate		69.1				67.5		
PL	employment rate	57.5			55.4	54.6	55.1	55.5	54.7
	unemployment rate	12.6			15.6	17.0	16.6	15.7	16.2
	activity rate	65.8			65.6	65.9	66.1	65.8	65.3
RO	employment rate	60.1	65.0	65.8	61.9	59.9	64.2	65.2	62.5
	unemployment rate	9.0	6.9	6.6	8.0	9.2	7.7	7.1	7.5
	activity rate	66.0	69.8	70.4	67.3	66.0	69.6	70.2	67.6
SI	employment rate	61.7	62.5	62.7	61.9	61.6	62.7	64.1	63.0
	unemployment rate	7.7	7.5	7.5	7.7	7.2	7.1	6.7	6.6
	activity rate	66.8	67.6	67.8	67.0	66.4	67.4	68.7	67.4
SK	employment rate	58.8	58.0	57.9	57.7	56.6	56.3	56.9	57.3
	unemployment rate	15.4	16.0	16.8	17.2	19.1	19.1	18.7	18.2
	activity rate	69.5	69.0	69.7	69.7	69.9	69.5	70.0	70.1

Table 2: *Change in employment, unemployment and GDP, qu. 1–4, 2000–1999*

Country	Subject	q1	q2	q3	q4
BG	employment		-2.7		
	unemployment		16.3		
	GDP		1.0		
CZ	employment	-1.6	-1.1	-0.6	-0.6
	unemployment	13.0	2.8	-5.4	-8.6
	GDP	0.4	1.1	3.2	2.4
EE	employment		-2.3		
	unemployment		13.5		
	GDP		2.5		
HU	employment	1.4	0.9	1.2	1.4
	unemployment	-8.9	-4.9	-9.7	-7.6
	GDP	4.2	5.9	6.5	5.6
LT	employment		-7.6		
	unemployment		50.6		
	GDP		-4.8		
LV	employment		-3.0		
	unemployment		1.8		
	GDP		3.9		
PL	employment	-5.0			-1.2
	unemployment	35.9			3.9
	GDP	5.0			5.0
RO	employment	-0.2	-1.2	-0.9	1.0
	unemployment	2.7	11.1	8.3	-5.9
	GDP	-1.3	-1.5	1.2	2.0
SI	employment	-0.2	0.2	2.3	1.8
	unemployment	-6.0	-6.4	-10.0	-13.9
	GDP	4.5	5.5	6.2	3.4
SK	employment	-3.8	-3.0	-1.8	-0.7
	unemployment	24.6	20.3	11.4	6.2
	GDP	0.6	2.3	1.5	1.9

## Recent labour market trends

Table 3a: *Employment shares by combined economic sectors, qu. 1–4, 1999 and 2000*

Country	Sector	1999				2000			
		q1	q2	q3	q4	q1	q2	q3	q4
BG	AB		5.7			4.3	6.4	5.9	4.1
	CDE		15.1			14.2	14.0	14.0	14.4
	F		3.2			2.8	3.1	3.0	2.9
	G		7.7			7.3	7.3	7.5	7.5
	HI		6.3			6.2	6.5	6.7	6.4
	JK		2.2			2.2	2.2	2.1	2.1
	L–Q		12.7			12.3	12.0	12.0	12.2
CZ	AB	3.5	3.5	3.4	3.4	3.3	3.4	3.4	3.3
	CDE	20.8	20.6	20.5	20.4	19.8	20.0	20.0	20.0
	F	6.1	6.3	6.3	6.2	6.1	6.1	6.1	6.2
	G	9.0	9.0	8.9	8.9	8.6	8.5	8.6	8.6
	HI	7.4	7.4	7.3	7.4	7.4	7.4	7.4	7.4
	JK	4.9	4.8	4.8	4.9	5.0	4.9	5.0	5.1
	L–Q	14.1	14.1	14.3	14.4	14.4	14.7	14.7	14.7
EE	AB		5.4			5.1	4.2	4.0	4.7
	CDE		15.9			15.2	16.4	17.2	16.3
	F		4.1			3.5	4.8	4.6	4.2
	G		9.1			8.6	7.8	9.1	8.7
	HI		7.0			9.1	8.3	8.5	7.3
	JK		4.9			4.4	5.0	5.2	5.1
	L–Q		15.6			14.4	14.0	13.2	14.0
HU	AB	3.6	3.8	3.9	3.8	3.5	3.6	3.6	3.5
	CDE	15.4	15.4	15.4	15.5	15.1	15.0	15.1	15.5
	F	3.5	3.8	3.9	3.9	3.9	3.9	4.1	4.2
	G	7.6	7.7	7.8	7.8	8.0	8.1	8.2	8.1
	HI	6.4	6.5	6.6	6.5	6.5	6.5	6.8	6.7
	JK	3.7	3.8	3.9	4.1	4.2	4.2	4.2	4.3
	L–Q	14.5	14.4	14.5	14.5	14.5	14.6	14.6	14.8
LT	AB		13.5				10.4		
	CDE		13.1				13.2		
	F		4.3				3.6		
	G		9.1				8.5		
	HI		5.4				5.3		
	JK		2.6				2.4		
	L–Q		17.0				16.8		
LV	AB		9.8				7.9		
	CDE		11.9				12.1		
	F		3.7				3.5		
	G		8.8				9.0		
	HI		6.4				6.4		
	JK		3.2				3.6		
	L–Q		15.8				15.2		
PL	AB				9.3	9.0	9.6	10.2	9.7
	CDE				13.8	13.6	13.3	13.2	13.4
	F				3.9	3.7	4.2	4.1	3.8
	G				8.0	7.9	7.8	7.8	7.9
	HI				4.3	4.3	4.4	4.5	4.3
	JK				3.3	3.5	3.3	3.5	3.5
	L–Q				12.8	12.6	12.4	12.2	12.1
RO	AB	19.5	24.5	25.4	21.9	20.5	25.0	25.4	22.5
	CDE	17.2	17.0	16.9	16.6	16.3	15.8	15.6	15.6
	F	2.6	2.6	2.8	2.4	2.4	2.7	2.8	2.7
	G	6.1	6.0	6.1	6.1	5.9	5.9	6.2	6.3
	HI	4.1	4.0	4.1	4.2	4.2	4.0	4.1	4.4
	JK	1.5	1.6	1.4	1.5	1.5	1.5	1.4	1.5
	L–Q	9.1	9.4	9.1	9.1	9.0	9.3	9.7	9.7
SI	AB	4.8	5.3	5.2	5.1	4.3	4.9	5.5	5.1
	CDE	21.2	21.0	20.9	20.6	21.0	20.6	21.4	20.9
	F	3.4	3.2	3.2	3.6	3.4	3.5	3.7	3.6
	G	7.9	7.9	8.2	8.1	7.6	8.6	8.3	8.1
	HI	6.5	6.3	6.7	6.4	6.4	6.8	6.8	6.6
	JK	4.8	5.0	5.1	4.9	5.1	4.6	5.0	5.1
	L–Q	13.0	13.7	13.3	13.0	13.8	13.7	13.3	13.5
SK	AB	4.0	4.2	4.5	4.5	4.0	3.9	3.7	3.4
	CDE	17.6	17.1	17.1	17.0	16.8	16.5	16.6	16.7
	F	5.4	5.2	5.2	4.9	4.3	4.5	4.7	4.6
	G	7.3	7.2	7.0	7.0	7.0	7.0	7.1	6.9
	HI	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.2
	JK	3.2	3.1	3.0	3.3	3.3	3.3	3.5	3.7
	L–Q	15.0	14.9	14.9	14.7	14.9	14.7	15.0	15.8

Table 3b: Unemployment shares by combined economic sectors, qu. 1–4, 1999 and 2000

Country	Sector	1999				2000			
		q1	q2	q3	q4	q1	q2	q3	q4
BG	AB		1.2			1.6	1.1	1.1	1.4
	CDE		3.3			4.1	3.7	3.5	3.4
	F		0.7			1.0	0.8	0.9	0.8
	G		1.0			1.3	1.3	1.3	1.1
	HI		1.0			1.3	1.2	1.1	1.3
	JK		(0.2)			0.3	0.3	0.3	(0.2)
	L–Q		1.3			1.8	1.9	1.9	1.7
CZ	AB	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.3
	CDE	2.2	2.4	2.7	2.6	2.4	2.3	2.3	2.2
	F	0.8	0.7	0.6	0.6	0.7	0.7	0.5	0.6
	G	0.9	0.9	1.0	1.1	1.1	1.0	1.2	1.0
	HI	0.7	0.7	0.7	0.7	0.9	0.8	0.7	0.7
	JK	0.2	0.3	0.3	0.3	0.5	0.3	0.5	0.4
	L–Q	0.9	0.8	0.8	0.8	1.0	0.8	0.9	0.8
EE	AB		1.0			0.9	1.1	1.3	1.1
	CDE		2.8			3.2	2.7	2.4	2.5
	F		1.0			1.3	1.1	1.3	1.2
	G		1.3			1.8	2.0	1.5	1.5
	HI		0.8			1.7	1.0	1.4	1.5
	JK		0.5			0.9	0.6	0.5	0.5
	L–Q		0.9			0.9	1.0	0.8	1.6
HU	AB	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2
	CDE	1.4	1.4	1.5	1.3	1.4	1.3	1.3	1.2
	F	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4
	G	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.5
	HI	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
	JK	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	L–Q	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
LT	AB		0.9				0.8		
	CDE		2.4				3.8		
	F		1.0				2.0		
	G		1.5				2.2		
	HI		0.9				1.1		
	JK		.				0.3		
	L–Q		0.7				1.2		
LV	AB		0.7				0.8		
	CDE		3.3				2.8		
	F		0.9				0.9		
	G		1.9				2.0		
	HI		1.0				1.5		
	JK		(0.5)				(0.4)		
	L–Q		1.2				1.4		
PL	AB					0.6	0.6	0.6	0.5
	CDE					3.9	3.7	3.6	3.8
	F					1.7	1.5	1.3	1.4
	G					2.1	2.1	2.0	2.1
	HI					0.9	0.8	0.8	0.9
	JK					0.5	0.5	0.4	0.4
	L–Q					1.5	1.7	1.7	1.6
RO	AB	1.2	0.4	0.4	0.9	1.1	0.5	0.4	0.7
	CDE	2.5	2.4	2.4	2.5	2.6	2.6	2.3	2.2
	F	0.7	0.4	0.4	0.5	0.6	0.4	0.4	0.5
	G	0.6	0.7	0.6	0.6	0.8	0.9	0.8	0.7
	HI	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4
	JK	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	L–Q	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5
SI	AB	(0.1)	.	(0.1)	(0.1)	.	.	.	(0.2)
	CDE	2.5	2.6	2.6	2.4	2.2	2.2	1.9	2.1
	F	(0.3)	(0.3)	(0.3)	0.4	0.6	0.5	0.6	(0.4)
	G	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.6
	HI	0.7	0.6	0.7	0.6	0.6	0.5	0.5	0.4
	JK	(0.3)	(0.3)	(0.3)	(0.2)	(0.2)	(0.3)	(0.3)	(0.2)
	L–Q	(0.3)	0.4	(0.4)	0.5	0.4	0.5	0.5	0.5
SK	AB	1.3	1.3	1.3	1.3	1.6	1.2	1.2	1.2
	CDE	3.4	3.7	4.0	4.2	4.6	4.8	4.8	4.5
	F	1.9	1.9	1.9	1.8	2.3	2.2	1.9	1.8
	G	1.3	1.3	1.5	1.6	1.8	1.7	1.8	1.8
	HI	0.9	0.8	1.0	0.9	1.0	1.0	1.2	1.2
	JK	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.4
	L–Q	1.5	1.7	1.7	1.8	1.7	1.8	1.7	1.7



## Regional labour markets

The present issue of this publication continues the regional analysis of the ten Central European countries (CECs) on the basis of the labour force survey (LFS) from the second quarter 2000. In issue 1/2001 the structure of level-2 regions (NUTS) was analyzed according to three sectors and the extent of self-employment. Employment and unemployment rates by age and sex and the extent of long-term unemployment were used to draw a picture of the employment chances in the year 2000. By typifying the regions according to their sectoral structure it was possible to elaborate first patterns regarding their stage of development.

In issue 2/2001 the economic structure of the regions was portrayed in greater detail according to 1-digit or combined 2-digit NACE classes. Important or dominant branches of the economy and industrial sectors were identified, thus outlining the potential for economic development or structural difficulties in the reform process. The regional service density and the distribution of self-employed by sectors provide indicators which can give clues regarding the development potentials. The comparison between the economic structure of employment with the sector of origin of the unemployed gave some indication as to the focal points of structural changes in the regions.

In this issue the regional analysis focusses on the qualification level of the labour force and the occupational structure of the employed, thus characterizing the human capital available in the regions and describing the inherent potential of the regional labour supply. This supplements the demand for labour determined by the economic structure.

### Qualification level of the labour force

In the LFS the qualification level is measured by the highest completed level of general education or occupational training. It is based on a combination of categories of the International Standard Classification of Education (ISCED) to which the national levels of education and training are assigned. Due to differences in national educational systems, the duration of individual curricula and the variety of certificates, comparisons between countries create problems which can only be partly overcome by the combination of qualification levels in three categories:

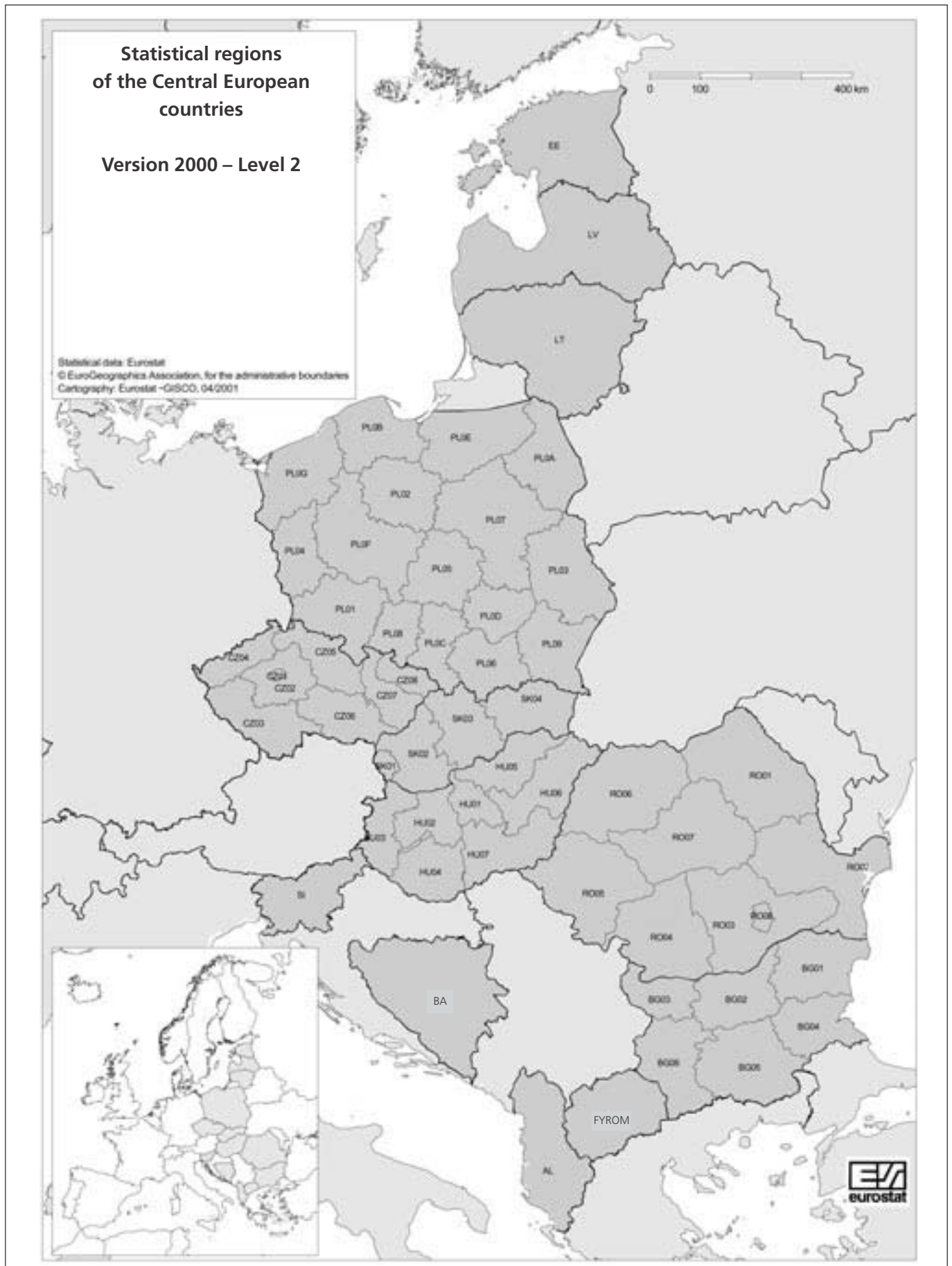
- low: less than upper secondary (ISCED 1–2),
- middle: upper secondary (ISCED 3–4),
- high: tertiary (ISCED 5–6).

However, for the following structural comparison this combination is an absolute necessity.

The qualification level of the labour force (15 years and older), i.e. the labour supply, is determined by the national educational and training systems and the corresponding assignment according to the ISCED classification. The national qualification structures, of course, also shape those in the regions. But the regional structures deviate more or less from the national pattern because the secondary and

Table 1: CEC level 2 regions

Country Capital	Regions level 2	Code Map	Area sq. km	Population density	Service density/ 1000 pop.	Type of region	
<b>Bulgaria</b>	<b>6 regions</b>	<b>BG</b>	<b>110910</b>	<b>73</b>	<b>190</b>		
	North-East	BG01	19972	60	178	AG	
	North Central	BG02	17921	68	162	AG	
	North-West	BG03	10601	68	151	SM	
	South-East	BG04	14642	68	182	SM	
	South Central	BG05	27496	75	158	AG	
Sofia	South-West	BG06	20276	96	256	SC	
<b>Czech Republic</b>	<b>8 regions</b>	<b>CZ</b>	<b>78860</b>	<b>130</b>	<b>251</b>		
	Prague	Praha	CZ01	496	2378	399	SC
		Stredni Cechy	CZ02	11014	100	248	IN
		Jihozapad	CZ03	17616	67	240	IN
		Severozapad	CZ04	8650	130	238	IN
		Severovychod	CZ05	12440	119	234	IN
		Jihovychod	CZ06	13987	118	235	IN
		Stredni Morava	CZ07	9103	135	212	IN
	Ostravsko	CZ08	5554	230	214	IN	
<b>Estonia</b>	<b>Estonia</b>	<b>EE</b>	<b>43431</b>	<b>33</b>	<b>247</b>	<b>SM</b>	
Tallinn							
<b>Hungary</b>	<b>7 regions</b>	<b>HU</b>	<b>93029</b>	<b>107</b>	<b>229</b>		
	Budapest	Közep-					
		Magyarország	HU01	6918	406	300	SC
		Közep-Dunántul	HU02	11263	97	208	IN
		Nyugat-Dunántul	HU03	11182	87	228	IN
		Del-Dunántul	HU04	14169	68	209	SM
		Eszak-					
	Magyarország	HU05	13428	94	187	SM	
	Eszak-Alföld	HU06	17755	85	184	SM	
	Del-Alföld	HU07	18314	72	202	AG	
<b>Lithuania</b>	<b>Lithuania</b>	<b>LT</b>	<b>65300</b>	<b>57</b>	<b>223</b>	<b>AG</b>	
Vilnius							
<b>Latvia</b>	<b>Latvia</b>	<b>LV</b>	<b>64589</b>	<b>38</b>	<b>235</b>	<b>AG</b>	
Riga							
<b>Poland</b>	<b>16 regions</b>	<b>PL</b>	<b>312685</b>	<b>121</b>	<b>192</b>		
		Dolnoslaskie	PL01	19948	140	198	SM
		Kujawsko-					
		Pomorskie	PL02	17970	119	186	AG
		Lubelskie	PL03	25114	95	166	AG
		Lubuskie	PL04	13984	74	188	SM
		Lodzkie	PL05	18219	162	222	AG
		Malopolskie	PL06	15144	219	197	AG
		Mazowieckie	PL07	35598	141	233	AG
		Opolskie	PL08	9412	114	168	AG
		Podkarpackie	PL09	17926	116	166	AG
		Podlaskie	PL0A	20180	57	170	AG
		Pomorskie	PL0B	18293	105	207	SM
	Slaskie	PL0C	12294	325	159	IN	
	Swietokrzyskie	PL0D	11672	118	164	AG	
	Warminsko-						
	Mazurskie	PL0E	24203	63	198	SM	
	Wielkopolskie	PL0F	29826	119	180	AG	
	Zachodniopomorskie	PL0G	22902	71	217	SC	
<b>Romania</b>	<b>8 regions</b>	<b>RO</b>	<b>238391</b>	<b>94</b>	<b>141</b>		
		Nord-Est	RO01	36850	104	115	AG
		Sud-Est	RO02	35762	82	143	AG
		Sud	RO03	34453	100	123	AG
		Sud-Vest	RO04	29212	82	103	AG
		Vest	RO05	32033	63	153	AG
		Nord-Vest	RO06	34161	83	145	AG
		Centru	RO07	34100	77	136	AG
Bucharest	Bucuresti	RO08	1821	1229	246	SM	
<b>Slovenia</b>	<b>Slovenia</b>	<b>SI</b>	<b>20273</b>	<b>98</b>	<b>236</b>	<b>SM</b>	
Ljubljana							
<b>Slovakia</b>	<b>4 regions</b>	<b>SK</b>	<b>49035</b>	<b>110</b>	<b>216</b>		
	Bratislava	Bratislavsky kraj	SK01	2053	299	379	SC
		Zapadne Slovensko	SK02	14993	125	198	IN
		Stredne Slovensko	SK03	16243	83	196	IN
	Vychodne Slovensko	SK04	15746	98	191	SM	



## Regional labour markets

tertiary educational institutions and the demand for certain qualification levels by business, administration and state institutions are not equally distributed over the regions.

The middle qualifications constitute the biggest group in all countries. On the CEC-10 average (which is strongly influenced by Poland and Romania, the largest of these ten countries) 65.9% of the labour force are assigned to this group (cf. Section Annex and Graph 1). In the countries this share extends from 44.9% in Lithuania to 80% in Slovakia. The range in the regions is hardly greater. Apart from Slovakia this group of the labour force also is quite large in the Czech Republic (77.8%) and Poland (71.9%). The qualification in these three countries thus is based on a broad system of intermediate educational and occupational training which only a small part of the labour force does not reach or surpass. The smaller the share of the middle level, the greater is the inequality of qualification. Apart from Lithuania the middle segment of qualification also is relatively narrow for the labour force in Bulgaria (54.9%) and Romania (55.9%). While the middle qualification segment in Lithuania is complemented by a wide segment of high qualification, an above-average part of the labour force in Romania and Bulgaria only reach the low qualification level.

On the CEC-10 average 13.7% of the labour force have a high qualification level. In the countries this share extends from 42.6% in Lithuania to 8.4% in Romania. This extreme range probably is not only caused by the national educational systems, but also by respective statistical classifica-

tions. Large shares of the labour force with high qualifications also are exhibited by Estonia (29.1%), Bulgaria (20.4%) and Latvia (19.4%). Apart from Romania, below-average shares of the labour force with high qualifications also are exhibited by Slovakia (10.6%), the Czech Republic (11.8%) and Poland (12.3%).

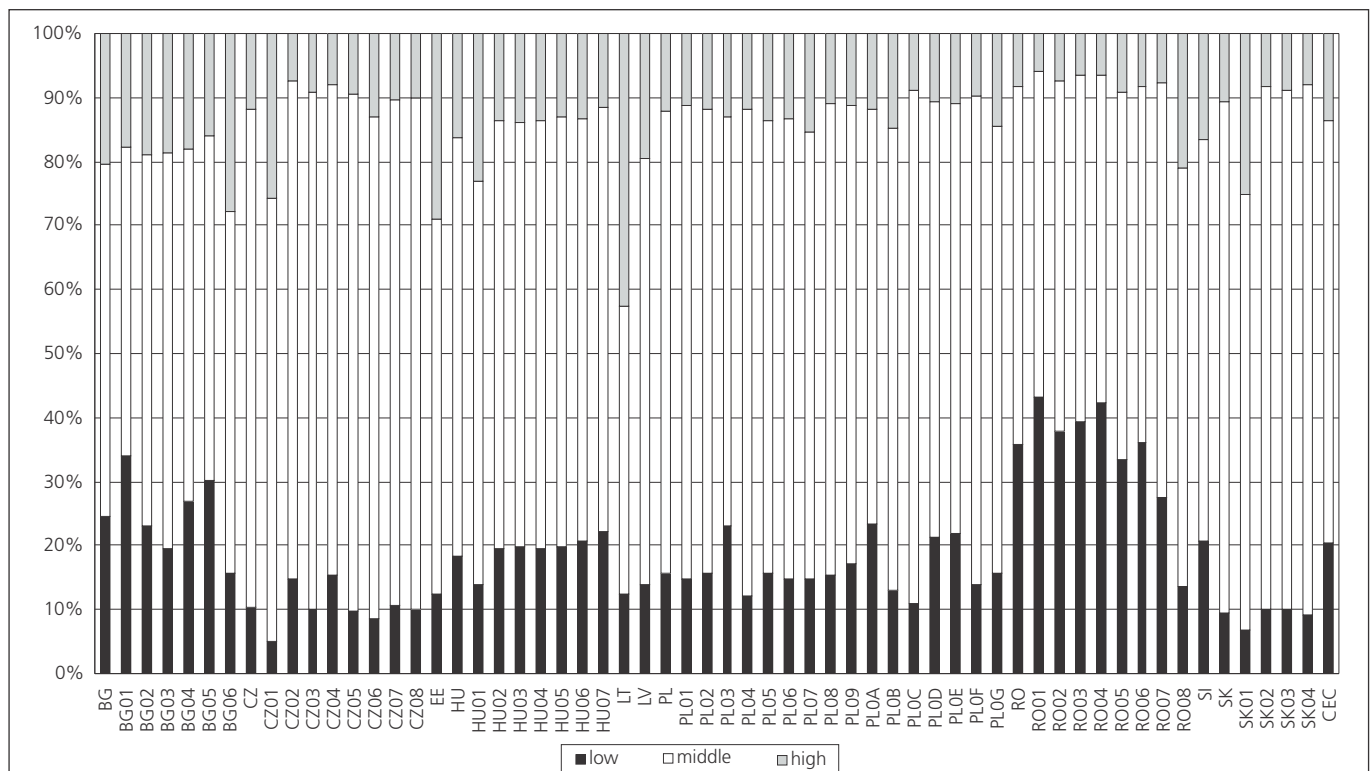
On the CEC-10 average the share of the labour force with low qualifications lies at 20.4%. On the country level it extends from 9.4% in Slovakia to 35.7% in Romania. Between regions it varies between 5.0% in Prague and 43.2% in North-East Romania (RO01).

In sum, the CECs can be grouped as follows according to the qualification structure of their labour force:

- In the Baltic States Lithuania and Estonia the share of high qualifications in the labour force is far greater than that of low qualifications, with the middle qualification segment being relatively narrow. To a lesser extent this also applies to Latvia.
- The Czech Republic and Slovakia exhibit a broad middle qualification segment, while the shares of high and low qualifications are about equal. In Hungary, too the qualifications are distributed symmetrically, but the middle segment is distinctly narrower.
- In Bulgaria, Slovenia and Poland the share of low qualifications in the labour force is higher than that of high qualifications, in Romania substantially higher.

Within the countries with a regional subclassification the qualification levels of the capital regions are more favourable than the respective country average. The share of high

Graph 1: **Qualification level of the labour force, 2000**



qualifications in the labour force is higher and that of the low and middle qualifications accordingly lower. Except for Mazowieckie (PL07) with Warsaw, the capital regions were characterized as service centres due to the dominant employment in the tertiary sector. The location of educational institutions, on the one hand, and the demand for labour with tertiary education, on the other, lead to a concentration of human capital in these regions.

Regions with a comparatively low qualification level largely have an agricultural character. Thus, North-East and South-Central Bulgaria (BG01, BG06) or Lubelskie (PL03), Podlaskie (PLOA), Swietokrzyskie (PLOD) and Warminsko-Mazurskie (PLOE) in Poland as well as the outlying regions of Romania exhibit higher shares of low qualifications in the labour force. With the exception of Warminsko-Mazurskie (PLOE) which has a mixed sectoral structure, these regions have a pronounced agricultural character. It becomes clear that the regional qualification level is determined by the sectoral structure.

### Employed and unemployed

Up to now the qualification structure of the labour force was used as an indicator for the human capital available in the regions. The demand for and the utilization of qualifications also can be characterized by comparing the qualification levels of employed and unemployed as well as of employees and self-employed.

In almost all regions the share of high qualifications among the employed is higher than among the unemployed. In

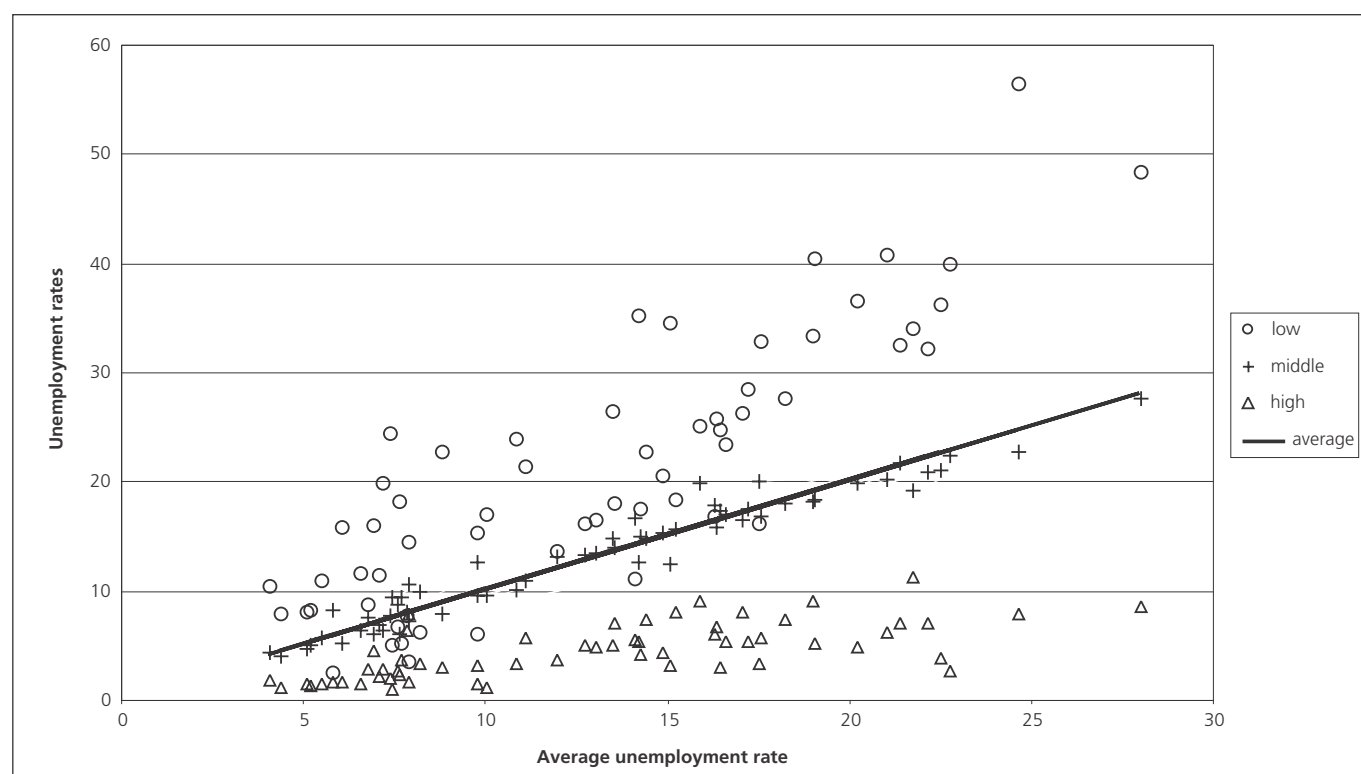
contrast, the share of low qualifications is higher among the unemployed than among the employed except in Romania and four regions of Poland (PL03, PL09, PLOA, PLOD). In these regions one finds above-average employment rates for persons over 64 years of age and high shares of self-employed in agriculture. This regional particularity in agriculture overrides the normally observed pattern of overproportional unemployment among those with low qualifications.

### Unemployment rates

The demand for labour according to qualification is best demonstrated by means of the corresponding unemployment rates. For the purpose of comparability the qualification-specific unemployment rates are computed for the age group 15–64 (see Section Annex). Graph 2a shows that the qualification-specific unemployment rates largely rise and fall proportionally with average unemployment. Since the middle qualification group is the biggest in all countries, the regional unemployment rates are determined by the level of the rate for middle qualifications. In the second quarter 2000 the unemployment rates for middle qualifications largely lay within a range of  $\pm 2.5\%$  around the average regional rate. In other words, there generally was a linear relation between the average rate and that of the middle qualification segment.

In all regions the unemployment for high qualifications was underproportional compared to the overall rate. In almost all regions the unemployment rate of high qualifications

Graph 2a: **Qualification-specific unemployment rates by average level, 2000**



## Regional labour markets

was less than half of the average one. The range of unemployment rates for high qualifications extended from 1.1% in Nyugat-Dunantul (HU03) to 11.3% in South-East Bulgaria (BG04). With this exception they lay below 10% in all regions. In Hungary the unemployment in this segment was almost insignificant with less than 2%.

In contrast, the unemployment rate for low qualifications rises overproportionally with the average unemployment. Only in the regions of Romania (excluding Bucharest) the unemployment rates of low qualifications lay below the average. The unemployment rates of low qualifications varied in the regions from 2.5% in South-West Romania (RO04) to 56.4% in Vychodne Slovensko (SK04). In the regions of the Czech Republic and Slovakia the unemployment in the segment of low qualifications is at least double the average (cf. Graph 2b).

### Self-employed and employees

A comparison of the qualification structure of self-employed (without contributing family members) and employees indicates the extent to which a new middle class can contribute to innovative development of the regions. The countries fall into two different groups. In Bulgaria, Lithuania, Latvia, Poland, Romania and Slovenia the qualification structure among the employees was more favourable than among the self-employed. Here the share of high qualifications were higher and that of low qualifications clearly lower than for the self-employed. In the Czech Republic, Estonia, Hungary and Slovakia, in contrast,

the self-employed on the average had a higher qualification level. While the first group of countries still is characterized by a sizeable agriculture, the second group as a rule has a higher employment share in industry. Thus, it seems that the difference in the qualification level between self-employed and employees is largely determined by the extent of self-employment in agriculture.

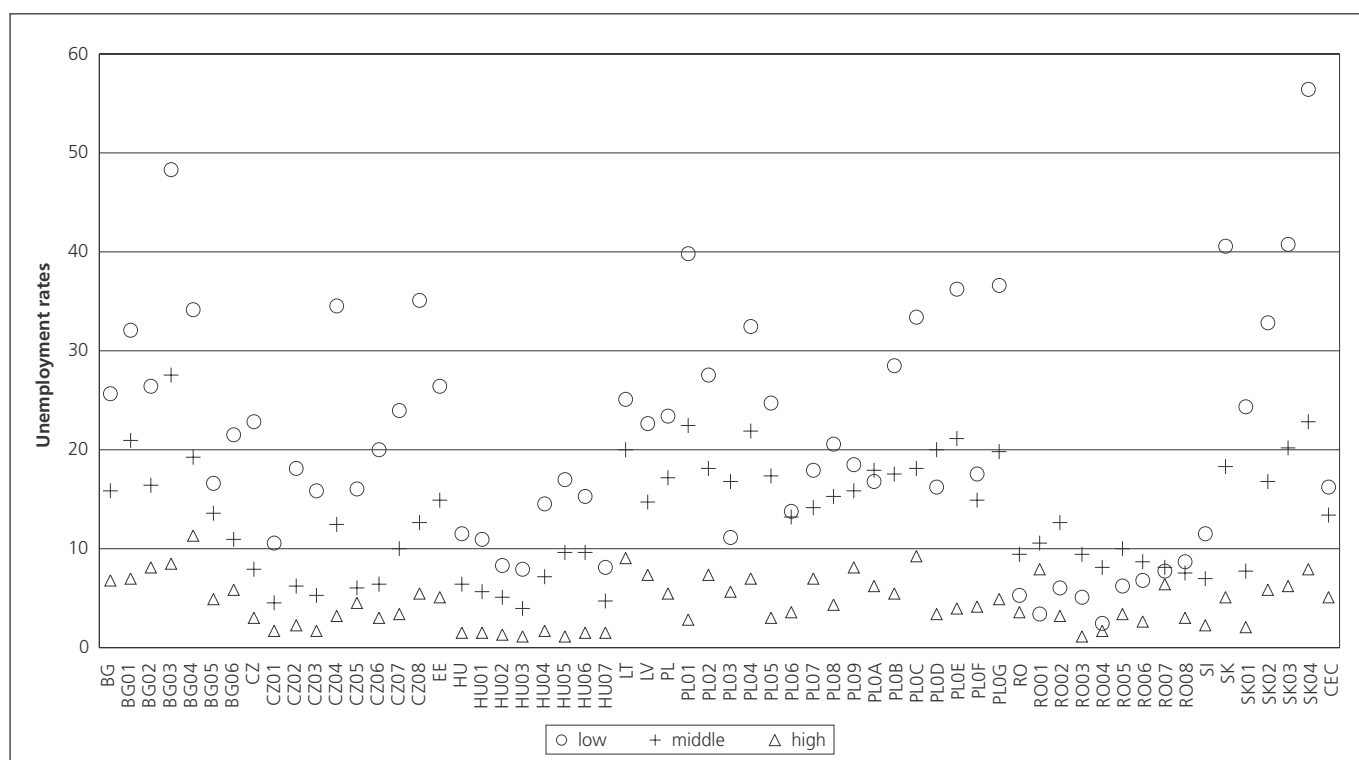
Similar patterns can be observed between regions in each country. In the capital regions with their character as service centres the qualification structure of self-employed seems to be a little more favourable compared to the other regions of the respective country, though this is not very pronounced.

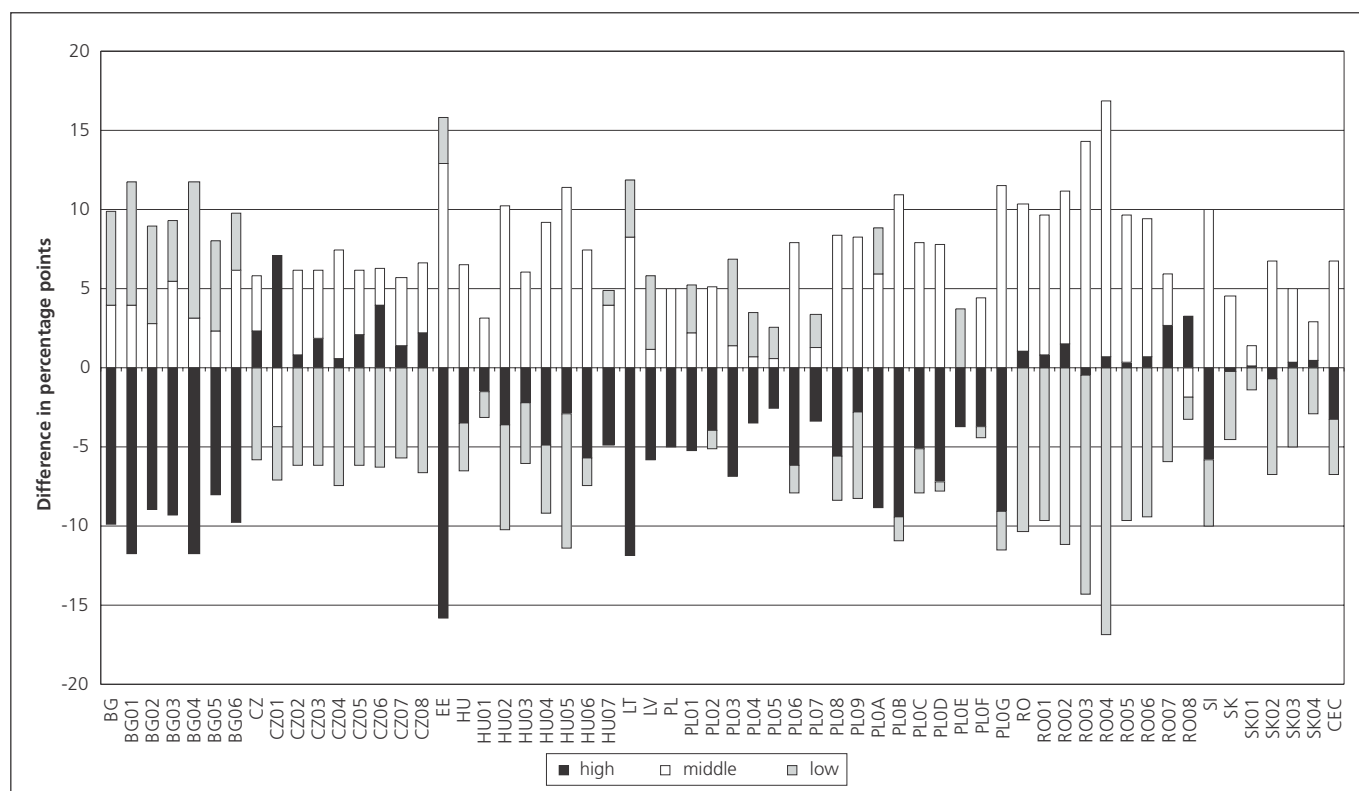
### Qualification of employed by sex

Traditionally the participation in education and the labour force differ between men and women. This probably also applies to the Central European countries included here, even though equal rights at work were propagated in the past under socialism. In addition it seems quite likely that certain segmentations developed in the labour market, letting some occupations or economic sectors appear more suitable or accessible either for men or for women and thus resulting in sex-specific qualification patterns. Therefore the qualification structures of the employed in the regions will be scrutinized for sex-specific differences.

The analysis is based on the structure of the employed according to the three qualification levels in the second quarter 2000 which was separately determined for men and women.

Graph 2b: **Qualification-specific unemployment rates by regions, 2000**



Graph 3: *Difference of qualification structure, men-women, 2000*

Graph 3 presents the differences between men and women in the shares of high, middle and low qualifications. Columns above 0 mean that men are overproportionally represented in the respective qualification segment. Columns below 0 indicate an overproportional share of women.

Graph 3 shows country-specific patterns in the qualification differences. In all countries and regions with the exception of the Czech Republic and Romania there were more women than men in the high qualification segment. In Estonia the advantage of women amounted to more than 15 percentage points, in Lithuania 12 percentage points and in Bulgaria about 10 percentage points. In Latvia and Slovenia the share of women was about 6 percentage points higher than that of men, while the advantage oscillated around 5 percentage points in the regions of Poland and around 3 percentage points in Hungary. In contrast, men had a slightly better qualification level in this segment in the Czech Republic (+2.4 percentage points) and Romania (+1.1 percentage points).

In all regions except Prague (CZ01) and Bucharest (RO08) there are relatively more men than women in the middle qualification segment.

In the low qualification segment men are overrepresented in Bulgaria, Lithuania and Latvia as well as in some regions of Poland. In the Czech Republic, Hungary, Romania, Slovenia and Slovakia women are overrepresented in this segment. The smaller the stacked columns, the smaller are the deviations in the qualification structure. In terms of qualification

levels there are for example no noteworthy sex-specific differences in Bratislava (SK01), Budapest (HU01) or Lodzkie (PL05). In contrast, they are quite large particularly in Estonia (EE) and South-West Romania (RO04).

Depending on the direction in which columns for the individual segments point, this results in a hierarchical or polarized deviation in the qualification structures. In the Czech Republic and Romania the qualification differences turn out to be hierarchical in favour of men because men are overproportionally represented in the upper and middle segment. In Slovakia there are hardly any deviations in the upper qualifications, but more men attain middle qualifications, while women more frequently have lower qualifications, i.e. the educational hierarchy affects only the last two levels. In Bulgaria and the Baltic States the qualification structure is hierarchical in favour of women because women are overproportionally represented in the upper segment. In Hungary, Slovenia and some regions of Poland the qualification structures are polarized because women outweigh men both in the upper and the lower qualification segment.

#### Qualification level of the employed by economic sectors

In issue 2/2001 the sectoral structure of employment was described in detail to point out the regional concentration of individual economic sectors. For that purpose the 17 1-digit codes of NACE were combined into 9 economic sectors (see Box).

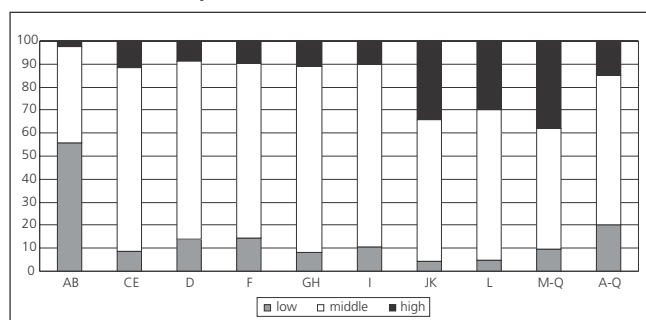
Combined economic sectors		1-digit ISCO	
Description	NACE 1	ISCO-Code	Description
Agriculture & Fishing	A, B	1	Legislators, senior officials and managers
Mining & quarrying, Energy	C, E	2	Professionals
Manufacturing	D	3	Technicians and associate professionals
Construction	F	4	Clerks
Trade & repair, Hotels & restaurants	G, H	5	Service workers and shop and market sales workers
Transport, storage & communication	I	6	Skilled agricultural and fishery workers
Financial intermediation, Business activities	J, K	7	Craft and related trades workers
Public administration and defence; compulsory social security	L	8	Plant and machine operators and assemblers
Other Services	M-Q	9	Elementary occupations
		0	Armed forces

In the following the qualification structure of the employed will be analyzed for these 9 combined economic sectors. Thus it will be possible to compare the different utilization of "human capital" in the economic sectors between the regions. Although the classification in the individual countries is influenced by national peculiarities, this analysis will nevertheless give some indications about the sectors to which the educational and training systems are geared and where the qualifications are utilized.

On the CEC-10 average 14.8% of the employed had a high qualification level. The qualified employed are concentrated in the service sector, specifically in the combined sector "Other services" with an average share of high qualifications of 38%, in "Financial intermediation, Business activities" (33.9%) and in "Public administration" (29.6%). In the two remaining service sectors "Trade & repair, Hotels & restaurants" and "Transport, storage & communication" as well as in the three areas of the industrial sector the share of high qualifications reached between 11.3 and 8.5% on the CEC-10 average. In "Agriculture, Fishing" the share was extremely low with 2.3% (cf. Graph 4).

Since the qualification level varies strongly between countries and hence between regions it can be expected

Graph 4: **Qualification structure by economic sectors, CEC-10, 2000**



that there also are large deviations between regions within the economic sectors.

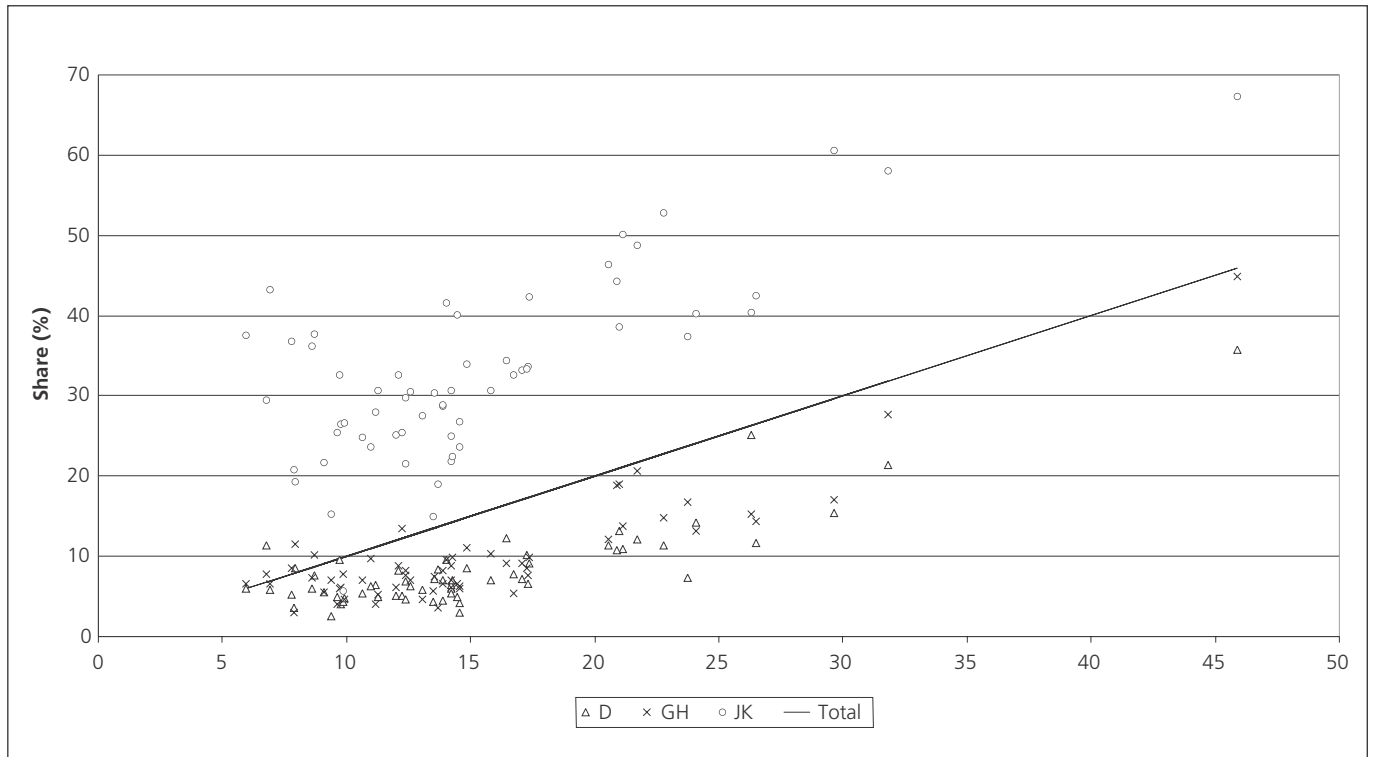
The general tendency is that the higher the qualification level in the regions, as measured by the share of employed with high qualifications, the higher also is the qualification level in all individual economic sectors (cf. Graphs 5a and 5b which show this at the example of three combined sectors). It therefore would seem that the qualification level in the regions also reflects the availability of educational institutions. However, countries and regions differ in the demand for qualifications by sector.

In almost all regions the share of high qualifications is highest in the economic sectors "Other services", "Financial Intermediation, Business activities" and "Public administration", though not always in this order. In Bulgaria, Hungary and Poland (excluding the region around Warsaw, PLO7) most highly qualified employed work in the area of "Other services", i.e. largely in the education and health sectors. In most regions of the Czech Republic, Romania and three of the four regions in Slovakia as well as in Estonia and Latvia "Financial intermediation, Business activities" is the most qualified sector. Only in Lithuania, the region Mazowieckie (with Warsaw, PLO7), South-East Romania (RO02) and in Slovenia the greatest demand for high qualifications comes from the sector "Public administration and defence, compulsory social insurance".

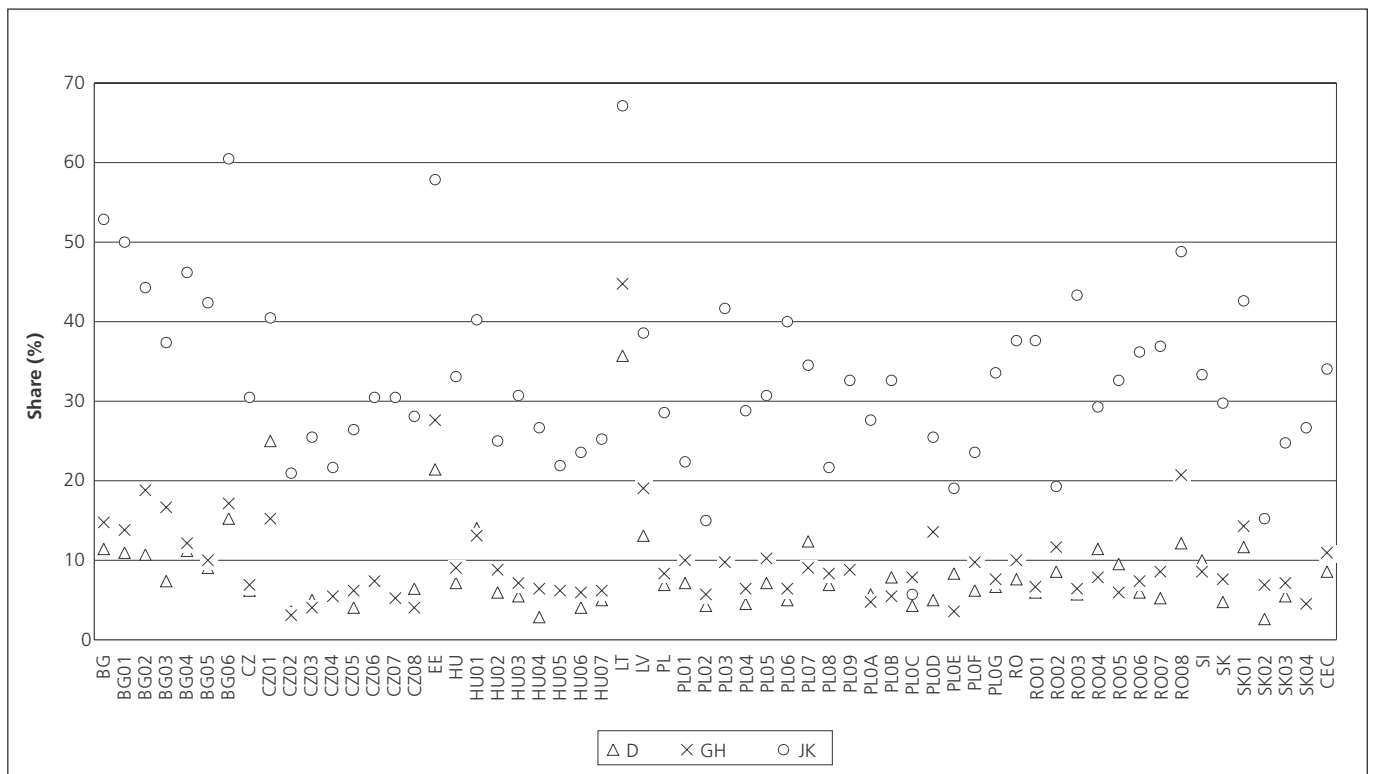
The share of high qualifications generally is clearly lower in agriculture, industry and consumption-oriented services ("Trade & repair, Hotels & restaurants" or "Transport, storage & communication"). In almost all regions agriculture has the lowest demand for employed with a high qualification level. Exceptions are the Czech Republic, Hungary and Slovakia where "Trade & repair, Hotels & restaurants" or "Transport, storage & communication" even rank behind agriculture.

The demand for qualifications in agriculture, industry and consumption-oriented services is largely directed at the

Graph 5a: *Share of high qualifications in selected economic sectors by average share, 2000*



Graph 5b: *Share of high qualifications in selected economic sectors by regions, 2000*



middle level. In agriculture the share of employed with middle qualifications lay at 41.7% on the CEC-10 average, in industry and consumption-oriented services around 80% (cf. Graph 4).

A more differentiated discussion of individual regions or economic sectors is not possible here because the country-specific qualification levels and their distribution cannot be compared with each other. Moreover, the figures for indi-



vidual sectors become so small that a classification by qualification levels would go beyond the reliability limits of the LFS samples.

### Occupational structure of the employed

The occupational structure of the employed reflects the human capital in the regions obtained through professional specialization and sector-specific activity. The International Standard Classification of Occupations (ISCO) takes into account both the qualification level and the sectoral affinity of occupations which also find expression on the 1-digit level used for the regional analysis. Thus the occupational structure supplements the information on the sectoral and qualification structure of the regions. It makes it possible to check the classifications regarding regional type and qualification potential that were undertaken earlier.

The occupational classification used by ISCO on the 1-digit level is shown in the Box. The groups 1–3 must be considered as service occupations with higher qualifications. Codes 4 and 5 refer to middle or simple service occupations. The occupations under code 6 belong to the agricultural sector. Codes 7 and 8 refer to occupations in handicrafts or industrial production. Code 9 comprises the elementary workers of all sectors, and code 0 is assigned to members of the armed forces. The groups 1–3 consist in large part of employed with a high educational level according to ISCED. Persons with low qualification levels are concentrated in groups 9, 0 and partly 6. The section annex shows the shares of occupational groups among the employed in the regions.

On the CEC-10 average 5.5% of the employed were classified as managers, 9.9% as professionals, and 12.2% as technicians in the second quarter 2000. In the regions these shares varied by the factor 10 for managers, the factor 5 for professionals and technicians (cf. the minimum

and maximum values in the table). These qualified service occupations are concentrated in the service centres. In Prague and Bratislava they account for more than half of the employed, in Budapest and Sofia (BG06) they lay around 40%. In the agricultural regions of Romania, in contrast, the shares only reached about 15%.

The groups 1–5 can be roughly considered as service occupations. As one might expect, their volume correlates with the regional sectoral structure, but is not identical with the service sector. For such service functions also are fulfilled within industry or agriculture. More than half of the employed worked in these occupations in all countries with the exception of Romania (26.6%) and Poland (47.7%).

The groups 7 and 8 are occupations in handicrafts and industrial production in which 17.5 and 10.5% of the employed were working on the CEC-10 average. The shares in the regions extended from 10.3 to 29.2% for the occupations in handicraft and from 5.1 to 20.4% for the occupations in industrial production. Their combined share was mostly high in the pronounced industrial and mixed regions.

Agricultural occupations of group 6 “Skilled agricultural and fishery workers” were pursued by 18.7% of the employed on the CEC-10 average with a regional range from almost 0 to 60% (RO04). Under definitional aspects it is interesting that Bulgaria, Poland, Romania and Slovenia report a share of skilled agricultural workers which is only slightly lower than the sectoral employment share of agriculture. In the Czech Republic, Estonia, Hungary and Slovakia, in contrast, the share of skilled workers is only about half as big as the sectoral share. The question is whether almost every employed in the first group of countries has an occupational qualification and more elementary workers are used in the second or whether the classification and coding practices differ in the two groups of countries.

Table 1: Occupational structure of the employed, 2000

Code Map	Country/Region	total (1000)	1-digit ISCO (%)										No answer
			1	2	3	4	5	6	7	8	9	0	
<b>BG</b>	<b>Bulgaria</b>	<b>2872</b>	<b>6.2</b>	<b>11.9</b>	<b>12.3</b>	<b>6.2</b>	<b>13.9</b>	<b>8.7</b>	<b>14.9</b>	<b>13.6</b>	<b>10.9</b>	<b>1.1</b>	<b>(0.3)</b>
BG01	North-East	449	.	10.7	11.6	6.5	13.0	12.1	14.2	11.9	13.1	0.7	.
BG02	North Central	417	.	8.9	11.5	6.6	12.7	8.1	16.9	14.1	12.3	0.8	.
BG03	North-West	154	.	11.2	14.3	9.0	13.8	(4.4)	16.7	12.5	9.3	0.4	.
BG04	South-East	257	(5.5)	10.2	10.9	8.3	14.6	(8.0)	14.6	14.8	10.4	2.8	.
BG05	South Central	736	(4.3)	9.2	10.9	4.2	13.6	14.8	16.0	14.3	10.5	1.2	(1.0)
BG06	South-West	859	(6.8)	17.0	14.5	6.6	15.0	2.9	13.2	13.4	9.7	0.9	.
<b>CZ</b>	<b>Czech Republic</b>	<b>4675</b>	<b>6.2</b>	<b>10.9</b>	<b>18.6</b>	<b>7.7</b>	<b>12.0</b>	<b>2.1</b>	<b>20.8</b>	<b>13.0</b>	<b>8.2</b>	<b>0.4</b>	<b>0.1</b>
CZ01	Praha	607	8.7	22.6	23.4	9.1	11.7	0.2	13.0	5.1	5.8	0.1	0.2
CZ02	Stredni Cechy	515	7.1	7.6	15.6	9.1	12.6	1.9	22.6	13.8	9.3	0.4	.
CZ03	Jihozapad	560	7.0	6.6	19.6	6.0	12.5	3.1	21.1	14.9	8.6	0.5	.
CZ04	Severozapad	484	6.0	8.6	17.0	8.0	12.3	1.3	21.2	14.2	10.7	0.6	.
CZ05	Severovychochod	689	5.6	8.9	17.4	7.4	12.2	2.5	21.9	14.4	9.1	0.4	0.2
CZ06	Jihovychochod	757	4.6	11.3	18.9	8.3	10.9	3.4	21.1	13.3	7.7	0.5	.
CZ07	Stredni Morava	538	4.8	7.6	18.5	6.8	12.4	2.4	23.1	15.9	8.0	0.4	.
CZ08	Ostravsko	525	6.0	12.1	17.8	6.3	12.1	1.6	23.1	12.9	7.5	0.1	0.4
<b>EE</b>	<b>Estonia</b>	<b>604</b>	<b>12.2</b>	<b>13.9</b>	<b>12.2</b>	<b>4.9</b>	<b>10.8</b>	<b>3.6</b>	<b>16.9</b>	<b>14.5</b>	<b>11.0</b>	<b>0.1</b>	.
<b>HU</b>	<b>Hungary</b>	<b>3807</b>	<b>6.9</b>	<b>11.7</b>	<b>13.3</b>	<b>8.7</b>	<b>13.8</b>	<b>3.6</b>	<b>21.3</b>	<b>11.8</b>	<b>7.8</b>	<b>1.2</b>	.
HU01	Közep-Magyarország	1180	8.7	16.3	16.5	10.0	14.2	0.9	18.4	7.4	6.2	1.3	.
HU02	Közep-Dunantul	449	6.8	10.1	11.5	7.7	13.0	2.8	22.6	17.4	6.9	1.3	.
HU03	Nyugat-Dunantul	423	6.7	9.5	11.5	9.0	13.4	2.7	24.1	14.6	7.7	0.9	.
HU04	Del-Dunantul	349	7.0	10.6	12.8	7.7	13.6	4.6	22.9	11.2	8.9	0.6	.
HU05	Eszak-Magyarország	417	6.9	9.9	11.3	8.0	13.8	3.0	22.5	13.2	10.2	1.2	.
HU06	Eszak-Alföld	491	5.1	9.9	12.3	7.6	14.0	4.5	22.2	13.9	9.1	1.3	.
HU07	Del-Alföld	497	4.8	7.9	11.7	8.7	13.8	10.1	21.4	11.8	8.2	1.6	.
<b>LT</b>	<b>Lithuania</b>	<b>1525</b>	<b>8.7</b>	<b>14.0</b>	<b>7.7</b>	<b>5.6</b>	<b>11.8</b>	<b>14.6</b>	<b>16.9</b>	<b>8.9</b>	<b>11.6</b>	.	.
<b>LV</b>	<b>Latvia</b>	<b>968</b>	<b>10.1</b>	<b>10.9</b>	<b>13.5</b>	<b>4.7</b>	<b>13.4</b>	<b>8.6</b>	<b>14.2</b>	<b>10.5</b>	<b>13.9</b>	.	.
<b>PL</b>	<b>Poland</b>	<b>14518</b>	<b>6.1</b>	<b>10.7</b>	<b>12.7</b>	<b>7.3</b>	<b>10.9</b>	<b>17.4</b>	<b>17.5</b>	<b>8.9</b>	<b>8.1</b>	.	<b>0.4</b>
PL01	Dolnoslaskie	972	5.6	11.6	15.1	7.2	13.2	8.3	17.9	12.4	8.4	.	(0.3)
PL02	Kujawsko-Pomorskie	785	5.8	9.5	11.7	7.4	12.3	15.4	19.9	8.4	9.1	.	(0.5)
PL03	Lubelskie	997	3.6	10.3	10.5	5.8	7.3	39.0	10.5	6.2	6.5	.	(0.3)
PL04	Lubuskie	359	9.4	9.7	12.4	10.7	12.1	7.8	16.9	10.6	8.7	.	(1.7)
PL05	Lodzkie	1202	7.3	12.6	15.2	6.2	11.7	14.1	17.0	7.0	8.6	.	.
PL06	Malopolskie	1350	6.8	11.7	12.1	7.1	10.2	20.6	16.5	8.4	6.4	.	.
PL07	Mazowieckie	2109	5.7	12.8	14.2	7.8	11.1	19.0	13.6	6.9	8.2	.	0.6
PL08	Opolskie	418	3.1	10.1	12.0	6.9	10.0	17.7	19.7	11.0	8.9	.	.
PL09	Podkarpackie	808	5.1	9.3	11.5	6.0	9.1	28.0	14.0	9.4	7.4	.	.
PL0A	Podlaskie	452	3.6	10.5	11.8	4.3	9.2	32.4	12.3	7.7	8.1	.	.
PL0B	Pomorskie	672	6.3	13.3	13.7	9.5	11.7	8.2	18.3	11.4	7.1	.	(0.4)
PL0C	Slaskie	1324	6.2	8.7	11.8	8.6	11.6	3.8	29.2	10.8	9.4	.	.
PL0D	Swietokrzyskie	527	7.3	7.0	8.8	6.9	10.0	29.7	15.1	7.2	7.9	.	.
PL0E	Warmińsko-Mazurskie	529	7.3	10.7	12.4	7.6	13.6	10.1	18.4	9.5	9.2	.	(1.3)
PL0F	Wielkopolskie	1434	7.8	7.9	11.8	7.4	10.0	18.7	19.2	8.7	8.3	.	(0.2)
PL0G	Zachodniopomorskie	578	5.3	13.2	13.3	7.6	12.7	4.2	20.2	12.0	9.3	.	2.2
<b>RO</b>	<b>Romania</b>	<b>10898</b>	<b>2.1</b>	<b>6.2</b>	<b>8.0</b>	<b>3.7</b>	<b>6.6</b>	<b>42.1</b>	<b>16.0</b>	<b>9.1</b>	<b>6.3</b>	.	.
RO01	Nord-Est	1975	1.2	4.4	5.9	2.5	5.5	57.0	12.2	5.3	5.9	.	.
RO02	Sud-Est	1377	2.3	5.4	8.5	4.1	6.3	42.4	12.9	13.0	5.1	.	.
RO03	Sud	1781	1.7	4.8	6.5	2.6	5.0	44.9	15.4	10.4	8.6	.	.
RO04	Sud-Vest	1324	1.4	5.1	4.9	1.9	4.4	60.0	12.2	5.5	4.6	.	.
RO05	Vest	936	3.1	7.1	8.7	4.4	8.8	36.2	17.1	8.2	6.4	.	.
RO06	Nord-Vest	1343	2.8	6.1	7.7	3.7	7.9	40.3	17.3	8.9	5.3	.	.
RO07	Centru	1188	2.1	5.4	10.7	4.1	8.3	28.7	22.8	10.5	7.3	.	.
RO08	Bucuresti	973	3.7	15.0	14.4	8.7	9.5	5.9	22.8	13.2	6.8	.	.
<b>SI</b>	<b>Slovenia</b>	<b>894</b>	<b>7.4</b>	<b>10.6</b>	<b>13.9</b>	<b>11.0</b>	<b>12.0</b>	<b>8.3</b>	<b>11.0</b>	<b>20.4</b>	<b>5.4</b>	.	<b>0.0</b>
<b>SK</b>	<b>Slovakia</b>	<b>2083</b>	<b>6.2</b>	<b>10.5</b>	<b>17.5</b>	<b>7.4</b>	<b>12.9</b>	<b>1.4</b>	<b>20.3</b>	<b>13.6</b>	<b>10.0</b>	.	.
SK01	Bratislavsky kraj	311	10.5	20.3	22.0	9.9	11.6	0.6	10.3	9.0	5.8	.	.
SK02	Zapadne Slovensko	731	6.2	8.7	15.1	7.0	12.6	1.7	22.7	14.8	11.1	.	.
SK03	Stredne Slovensko	505	5.6	8.2	18.4	6.7	12.8	1.8	23.0	14.1	9.2	0.3	.
SK04	Vychodne Slovensko	536	4.4	9.5	17.1	7.3	14.1	1.0	20.5	14.1	11.8	.	.
<b>CEC-10</b>		<b>42844</b>	<b>5.5</b>	<b>9.9</b>	<b>12.2</b>	<b>6.4</b>	<b>10.6</b>	<b>18.7</b>	<b>17.5</b>	<b>10.5</b>	<b>8.1</b>	<b>0.2</b>	<b>0.2</b>
	max		12.2	22.6	23.4	11.0	15.0	60.0	29.2	20.4	13.9	2.8	2.2
	min		1.2	4.4	4.9	1.9	4.4	0.2	10.3	5.1	4.6	0.0	0.0

## Regional labour markets

Table 2: *Qualification levels in the regions, 2000*

Code Map	Country/Region	labour force				employed				employees	
		1000	qualification level (%)			1000	qualification level (%)			1000	qualifica-high
			high	middle	low		high	middle	low		
<b>BG</b>	<b>Bulgaria</b>	<b>3428</b>	<b>20.4</b>	<b>54.9</b>	<b>24.7</b>	<b>2872</b>	<b>22.8</b>	<b>55.2</b>	<b>22.1</b>	<b>2388</b>	<b>24.5</b>
BG01	North-East	575	17.7	48.3	34.0	449	21.1	48.9	30.0	355	24.5
BG02	North Central	501	18.9	58.0	23.1	417	20.9	58.2	20.9	341	22.0
BG03	North-West	213	18.7	61.9	19.4	154	23.7	62.2	14.1	137	24.2
BG04	South-East	327	18.2	55.0	26.9	257	20.6	56.5	22.9	218	21.6
BG05	South Central	846	15.9	54.0	30.1	736	17.4	53.7	29.0	581	19.6
BG06	South-West	966	27.9	56.5	15.6	859	29.6	56.6	13.8	757	30.4
<b>CZ</b>	<b>Czech Republic</b>	<b>5124</b>	<b>11.8</b>	<b>77.8</b>	<b>10.3</b>	<b>4675</b>	<b>12.6</b>	<b>78.7</b>	<b>8.8</b>	<b>3973</b>	<b>11.7</b>
CZ01	Praha	632	25.7	69.3	5.0	607	26.3	69.0	4.7	482	25.0
CZ02	Stredni Cechy	557	7.4	77.9	14.7	515	7.9	79.1	13.0	432	7.2
CZ03	Jihozapad	596	9.2	80.8	10.0	560	9.6	81.5	8.9	477	9.6
CZ04	Severozapad	569	8.0	76.8	15.2	484	9.1	79.1	11.8	421	8.2
CZ05	Severovycho	739	9.6	80.6	9.8	689	9.8	81.4	8.8	582	9.1
CZ06	Jihovycho	815	13.0	78.3	8.7	757	13.6	78.8	7.5	650	12.6
CZ07	Stredni Morava	604	10.4	78.9	10.8	538	11.2	79.6	9.2	465	10.7
CZ08	Ostravsko	611	10.1	79.8	10.1	525	11.2	81.2	7.6	466	10.7
<b>EE</b>	<b>Estonia</b>	<b>696</b>	<b>29.1</b>	<b>58.4</b>	<b>12.5</b>	<b>604</b>	<b>31.8</b>	<b>57.4</b>	<b>10.7</b>	<b>551</b>	<b>31.5</b>
<b>HU</b>	<b>Hungary</b>	<b>4074</b>	<b>16.2</b>	<b>65.4</b>	<b>18.4</b>	<b>3807</b>	<b>17.1</b>	<b>65.5</b>	<b>17.4</b>	<b>3226</b>	<b>16.9</b>
HU01	Közep-Magyarország	1248	23.1	63.0	13.9	1180	24.1	62.8	13.1	996	23.4
HU02	Közep-Dunantul	473	13.7	66.8	19.5	449	14.2	66.8	18.9	389	14.4
HU03	Nyugat-Dunantul	443	13.8	66.3	19.9	423	14.2	66.6	19.2	367	14.0
HU04	Del-Dunantul	379	13.6	66.7	19.7	349	14.5	67.2	18.2	290	14.7
HU05	Eszak-Magyarország	463	12.9	67.2	19.9	417	14.2	67.4	18.4	363	13.6
HU06	Eszak-Alföld	544	13.3	66.0	20.7	491	14.5	66.1	19.4	427	14.8
HU07	Del-Alföld	523	11.6	66.2	22.2	497	12.0	66.4	21.6	393	12.4
<b>LT</b>	<b>Lithuania</b>	<b>1806</b>	<b>42.6</b>	<b>44.9</b>	<b>12.5</b>	<b>1525</b>	<b>45.9</b>	<b>42.6</b>	<b>11.4</b>	<b>1237</b>	<b>50.2</b>
<b>LV</b>	<b>Latvia</b>	<b>1136</b>	<b>19.4</b>	<b>66.7</b>	<b>13.8</b>	<b>976</b>	<b>21.0</b>	<b>66.3</b>	<b>12.7</b>	<b>826</b>	<b>21.8</b>
<b>PL</b>	<b>Poland</b>	<b>17348</b>	<b>12.3</b>	<b>71.9</b>	<b>15.8</b>	<b>14518</b>	<b>13.9</b>	<b>71.3</b>	<b>14.8</b>	<b>10542</b>	<b>16.8</b>
PL01	Dolnoslaskie	1257	11.4	73.8	14.8	972	14.3	74.0	11.7	761	14.8
PL02	Kujawsko-Pomorskie	960	11.9	72.3	15.8	785	13.5	72.4	14.1	590	16.4
PL03	Lubelskie	1154	12.9	64.2	23.0	997	14.0	61.9	24.0	534	22.4
PL04	Lubuskie	456	11.7	76.1	12.2	359	13.9	75.6	10.5	295	14.4
PL05	Lodzkie	1434	13.7	70.8	15.6	1202	15.8	69.8	14.4	886	18.3
PL06	Malopolskie	1528	13.3	72.0	14.7	1350	14.5	70.9	14.7	927	19.3
PL07	Mazowieckie	2433	15.3	69.8	14.9	2109	16.4	69.2	14.4	1487	21.1
PL08	Opolskie	489	11.0	73.5	15.5	418	12.4	73.0	14.7	310	14.3
PL09	Podkarpackie	946	11.2	71.7	17.1	808	12.1	70.8	17.2	534	16.5
PLOA	Podlaskie	536	11.7	65.0	23.3	452	13.1	63.4	23.5	268	18.4
PLOB	Pomorskie	811	14.7	72.3	13.1	672	16.7	71.9	11.3	547	18.7
PLOC	Slaskie	1632	8.8	80.2	10.9	1324	9.9	81.0	9.1	1133	10.3
PLOD	Swietokrzyskie	634	10.5	68.2	21.3	527	12.2	65.7	22.1	320	16.5
PLOE	Warmińsko-Mazurskie	682	11.0	67.1	21.8	529	13.7	68.3	18.0	427	15.5
PLOF	Wielkopolskie	1669	9.8	76.4	13.8	1434	11.0	75.7	13.4	1039	12.9
PLOG	Zachodniopomorskie	727	14.6	69.8	15.7	578	17.3	70.0	12.6	484	18.1
<b>RO</b>	<b>Romania</b>	<b>11714</b>	<b>8.4</b>	<b>55.9</b>	<b>35.7</b>	<b>10898</b>	<b>8.7</b>	<b>54.4</b>	<b>36.8</b>	<b>5873</b>	<b>15.0</b>
RO01	Nord-Est	2120	6.0	50.8	43.2	1975	5.9	48.8	45.3	781	14.0
RO02	Sud-Est	1512	7.5	54.6	37.9	1377	8.0	52.4	39.6	752	13.5
RO03	Sud	1906	6.6	54.2	39.2	1781	6.9	52.6	40.5	879	13.0
RO04	Sud-Vest	1393	6.5	51.3	42.2	1324	6.7	49.6	43.6	516	16.1
RO05	Vest	1013	9.3	57.3	33.4	936	9.7	55.9	34.4	537	15.9
RO06	Nord-Vest	1444	8.2	55.8	36.0	1343	8.6	54.8	36.7	747	14.2
RO07	Centru	1283	7.7	64.9	27.4	1188	7.8	64.5	27.8	777	10.2
RO08	Bucuresti	1042	20.9	65.4	13.7	973	21.7	64.7	13.6	883	22.9
<b>SI</b>	<b>Slovenia</b>	<b>960</b>	<b>16.4</b>	<b>62.8</b>	<b>20.7</b>	<b>894</b>	<b>17.3</b>	<b>62.8</b>	<b>19.9</b>	<b>750</b>	<b>19.0</b>
<b>SK</b>	<b>Slovakia</b>	<b>2574</b>	<b>10.6</b>	<b>80.0</b>	<b>9.4</b>	<b>2083</b>	<b>12.4</b>	<b>80.7</b>	<b>6.9</b>	<b>1916</b>	<b>11.9</b>
SK01	Bratislavsky kraj	336	25.1	68.2	6.7	311	26.5	68.0	5.5	278	25.7
SK02	Zapadne Slovensko	887	8.2	81.7	10.1	731	9.4	82.4	8.3	670	9.1
SK03	Stredne Slovensko	640	9.0	81.0	10.1	505	10.7	81.8	7.6	468	10.2
SK04	Vychodne Slovensko	711	8.1	82.7	9.2	536	9.9	84.7	5.3	500	9.7
<b>CEC-10</b>		<b>48860</b>	<b>13.7</b>	<b>65.9</b>	<b>20.4</b>	<b>42851</b>	<b>14.8</b>	<b>65.2</b>	<b>20.0</b>	<b>31283</b>	<b>17.9</b>
	max		42.6	82.7	43.2		45.9	84.7	45.3		50.2
	min		6.0	44.9	5.0		5.9	42.6	4.7		7.2

qualification level (%) middle low		self-employed (excl. contributing family members)				unemployed				unemployment rates (15-64)			
		1000	qualification level (%) high middle low			1000	qualification level (%) high middle low			total	qualification level high middle low		
<b>57.5</b>	<b>17.9</b>	<b>420</b>	<b>14.6</b>	<b>43.2</b>	<b>42.3</b>	<b>556</b>	<b>8.4</b>	<b>53.5</b>	<b>38.0</b>	<b>16.4</b>	<b>6.7</b>	<b>15.8</b>	<b>25.7</b>
51.6	23.9	84	(9.0)	38.5	52.6	126	(5.7)	46.1	48.2	22.2	7.0	20.9	32.1
61.1	16.9	69	16.0	44.4	39.6	84	(9.0)	56.6	34.4	17.1	8.1	16.4	26.4
63.8	12.0	15	.	(47.1)	.	59	.	61.2	33.1	28.0	8.6	27.6	48.4
57.8	20.6	35	.	49.6	35.9	70	(9.4)	49.1	41.4	21.7	11.3	19.3	34.1
57.6	22.8	123	9.0	39.7	51.3	110	(6.0)	56.4	37.6	13.1	4.9	13.5	16.6
57.5	12.1	94	25.0	47.9	27.0	107	14.5	55.6	29.9	11.1	5.8	10.9	21.5
<b>78.8</b>	<b>9.5</b>	<b>676</b>	<b>17.6</b>	<b>77.8</b>	<b>4.5</b>	<b>449</b>	<b>4.0</b>	<b>69.3</b>	<b>26.7</b>	<b>8.8</b>	<b>3.0</b>	<b>7.9</b>	<b>22.8</b>
70.0	5.0	121	32.3	64.4	3.3	25	11.8	75.6	12.6	4.1	1.8	4.4	10.5
79.1	13.8	80	12.0	79.0	9.0	42	.	62.8	34.9	7.6	2.3	6.1	18.2
80.7	9.7	80	10.0	85.9	4.1	36	.	70.9	25.9	6.1	1.8	5.3	15.8
79.1	12.7	61	14.8	80.4	4.8	85	1.7	63.5	34.8	15.1	3.2	12.5	34.5
81.1	9.8	101	13.9	82.7	3.4	51	6.3	70.7	23.0	6.9	4.5	6.1	16.0
79.0	8.3	105	19.4	77.6	3.0	58	5.2	70.6	23.9	7.2	2.9	6.4	19.9
79.4	9.9	71	14.6	81.0	4.5	66	3.2	72.8	24.0	10.9	3.4	10.0	24.0
81.4	7.8	57	15.4	78.5	6.1	86	3.8	71.2	24.9	14.2	5.4	12.7	35.1
<b>57.3</b>	<b>11.1</b>	<b>49</b>	<b>34.7</b>	<b>58.4</b>	<b>(6.9)</b>	<b>92</b>	<b>10.9</b>	<b>65.1</b>	<b>24.0</b>	<b>13.5</b>	<b>5.1</b>	<b>14.9</b>	<b>26.5</b>
<b>65.0</b>	<b>18.1</b>	<b>557</b>	<b>18.5</b>	<b>68.5</b>	<b>13.0</b>	<b>267</b>	<b>3.5</b>	<b>64.3</b>	<b>32.3</b>	<b>6.6</b>	<b>1.4</b>	<b>6.5</b>	<b>11.6</b>
62.6	14.0	179	28.1	64.3	7.6	68	(6.3)	65.9	27.9	5.5	1.5	5.7	11.0
65.4	20.2	60	13.4	75.7	10.8	24	.	65.6	30.9	5.2	1.4	5.1	8.2
65.7	20.3	55	15.8	72.8	11.4	19	.	60.5	36.0	4.4	1.1	4.0	8.0
66.7	18.6	57	13.9	69.5	16.6	30	.	60.6	36.5	7.9	1.7	7.2	14.5
66.8	19.6	53	18.3	71.5	10.2	46	.	65.0	33.4	10.0	1.2	9.7	17.0
65.4	19.8	61	13.0	71.4	15.6	53	.	65.7	32.4	9.8	1.4	9.7	15.4
66.9	20.7	94	11.4	65.3	23.2	26	.	61.5	35.0	5.1	1.5	4.7	8.1
<b>42.3</b>	<b>7.5</b>	<b>243</b>	<b>28.2</b>	<b>44.9</b>	<b>26.7</b>	<b>281</b>	<b>24.7</b>	<b>57.3</b>	<b>18.0</b>	<b>15.9</b>	<b>9.1</b>	<b>19.9</b>	<b>25.2</b>
<b>68.0</b>	<b>10.2</b>	<b>103</b>	<b>21.3</b>	<b>56.6</b>	<b>22.2</b>	<b>161</b>	<b>9.8</b>	<b>69.5</b>	<b>20.8</b>	<b>14.4</b>	<b>7.3</b>	<b>14.8</b>	<b>22.7</b>
<b>73.9</b>	<b>9.3</b>	<b>3271</b>	<b>7.1</b>	<b>67.5</b>	<b>25.3</b>	<b>2830</b>	<b>4.1</b>	<b>75.1</b>	<b>20.8</b>	<b>16.6</b>	<b>5.4</b>	<b>17.1</b>	<b>23.4</b>
74.7	10.6	192	12.6	73.4	14.0	285	.	73.2	25.4	22.8	2.8	22.5	39.9
73.2	10.4	169	(5.3)	72.2	22.5	175	(4.8)	71.8	23.4	18.2	7.4	18.1	27.6
70.1	7.5	327	(5.7)	56.6	37.7	157	(5.7)	78.3	16.1	14.1	5.6	16.7	11.1
76.6	9.0	57	(13.2)	71.0	(15.8)	97	.	77.7	(18.5)	21.4	7.0	21.8	32.5
72.5	9.2	278	10.2	65.4	24.4	232	(2.6)	75.8	21.7	16.5	3.1	17.3	24.8
73.9	6.8	346	(4.5)	66.6	28.9	178	(4.1)	80.5	15.4	12.0	3.7	13.1	13.7
70.9	8.0	499	6.5	68.8	24.6	324	8.1	73.4	18.5	13.6	7.1	14.1	18.0
74.4	11.3	75	(9.3)	70.1	(20.7)	71	.	76.3	(20.5)	14.9	4.4	15.3	20.5
76.9	6.6	201	(4.8)	63.4	31.8	137	(6.2)	77.0	16.8	15.2	8.1	15.8	18.5
69.8	11.7	152	(5.8)	58.5	35.6	84	.	73.6	(21.9)	16.3	6.1	17.9	16.8
71.9	9.4	108	(9.0)	73.7	(17.4)	139	(4.6)	73.9	21.5	17.2	5.4	17.6	28.6
81.5	8.2	168	(7.2)	80.5	12.4	308	(4.4)	76.9	18.7	19.0	9.2	18.1	33.4
72.5	11.0	185	(5.5)	56.2	38.3	107	.	80.6	(17.3)	17.5	3.4	20.0	16.2
69.1	15.4	84	(7.0)	66.9	26.1	153	.	63.1	35.0	22.5	3.9	21.1	36.3
77.0	10.2	343	6.4	74.6	19.0	235	(2.9)	80.7	16.5	14.3	4.2	14.9	17.5
69.0	12.9	89	(13.6)	75.2	(11.1)	148	(3.8)	68.7	27.5	20.2	4.8	19.8	36.5
<b>74.3</b>	<b>10.7</b>	<b>2767</b>	<b>2.1</b>	<b>30.7</b>	<b>67.1</b>	<b>816</b>	<b>4.4</b>	<b>75.7</b>	<b>20.0</b>	<b>7.7</b>	<b>3.6</b>	<b>9.5</b>	<b>5.3</b>
74.3	11.6	651	0.8	32.6	66.5	145	6.9	77.5	15.5	7.9	8.0	10.6	3.5
73.0	13.5	359	2.1	26.4	71.4	135	2.7	77.0	20.3	9.8	3.2	12.7	6.1
74.9	12.1	519	1.4	26.6	72.1	125	.	77.6	21.4	7.5	1.1	9.5	5.0
77.1	6.8	404	1.3	27.1	71.6	70	.	83.2	14.7	5.8	1.7	8.2	2.5
73.1	11.0	196	2.4	37.2	60.4	77	4.1	74.5	21.4	8.2	3.4	9.9	6.2
75.2	10.6	329	2.6	32.6	64.8	101	3.2	69.5	27.3	7.6	2.7	8.8	6.7
80.4	9.4	240	4.7	37.0	58.3	95	6.7	70.5	22.9	7.9	6.5	8.1	7.8
67.8	9.3	68	12.1	39.2	48.8	69	9.2	75.2	15.6	6.8	2.9	7.6	8.7
<b>64.7</b>	<b>16.3</b>	<b>100</b>	<b>11.4</b>	<b>60.4</b>	<b>28.2</b>	<b>66</b>	<b>(5.2)</b>	<b>63.1</b>	<b>31.7</b>	<b>7.1</b>	<b>2.2</b>	<b>7.0</b>	<b>11.5</b>
<b>80.9</b>	<b>7.2</b>	<b>162</b>	<b>18.1</b>	<b>78.3</b>	<b>3.5</b>	<b>491</b>	<b>2.9</b>	<b>77.2</b>	<b>19.9</b>	<b>19.1</b>	<b>5.2</b>	<b>18.4</b>	<b>40.5</b>
68.6	5.8	32	35.4	63.5	.	25	.	71.5	21.3	7.4	2.0	7.7	24.4
82.3	8.6	60	12.5	82.9	4.7	156	2.8	78.4	18.9	17.6	5.8	16.9	32.8
82.0	7.8	36	16.7	78.9	.	134	2.7	77.8	19.4	21.0	6.2	20.2	40.7
84.8	5.5	34	13.6	83.4	.	175	2.6	76.4	21.0	24.6	7.9	22.8	56.4
<b>70.9</b>	<b>11.2</b>	<b>8346</b>	<b>8.7</b>	<b>54.3</b>	<b>37.0</b>	<b>6009</b>	<b>5.6</b>	<b>71.1</b>	<b>23.2</b>	<b>12.7</b>	<b>5.1</b>	<b>13.3</b>	<b>16.2</b>
84.8	23.9		35.4	85.9	72.1		24.7	83.2	48.2	28.0	11.3	27.6	56.4
42.3	5.0		0.8	26.4	1.1		1.0	46.1	12.6	4.1	1.1	4.0	2.5

### Educational levels and occupational structure of the labour force

The qualification and education of a country's population is justly considered as a factor which has not only cultural, but increasingly also economic importance. The label of the "knowledge based society" also applies to the future economic development of the countries in Central and Eastern Europe. With regard to qualification one usually makes a distinction between formal or educational qualification, which conveys general and subject-specific knowledge, and occupational qualification. Due to the different systems for the attainment of qualifications comparisons between countries in this area are even more problematic than in the case of other economic factors.

The International Standard Classification of Education (ISCED) represents one tool which attempts to make the different national school and education systems comparable through the use of a common screen. Experience has shown, however, that so far this has been done with insufficient results for many countries. Thus, the findings for the ten countries included in this overview (BG, CZ, EE, HU, LT, LV, PL, RO, SI, SK) also should be interpreted with appropriate care. The information on educational qualification available from the EU Labour Force Survey summarizes the main ISCED groups in three classes as low, middle or high (see Box).

Levels of education and training		
Categories	Description	ISCED code
low	less than upper secondary	1, 2
middle	upper secondary	3, 4
high	tertiary	5, 6

The occupational qualification cannot be determined directly from the available data, but there is information about the countries' employment structure according to the International Standard Classification of Occupations (ISCO), i.e. by the activities performed by the employed. This does not correspond to the sectoral structure of a national economy since the majority of occupational classes consist of categories which are represented in several economic sectors. The analysis does not include members of the armed forces because this occupational group was not coded in all countries. The information on occupational qualifications used here is based on the 1-digit level of ISCO (see Box).

#### Educational qualification of the population

The group of main relevance in economic respects is the working age population between 15 and 64 (Graph 1). As

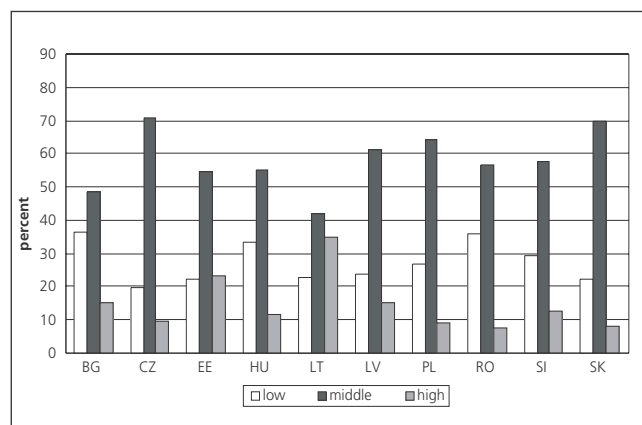
#### International Standard Classification of Occupations

1-digit code	Description
1	Legislators, senior officials & managers
2	Professionals
3	Technicians & associate professionals
4	Clerks
5	Service workers & shop & market sales workers
6	Skilled agricultural & fishery workers
7	Craft & related trades workers
8	Plant & machine operators & assemblers
9	Elementary occupations
0	Armed forces

expected, the distribution of the population according to the three educational levels do not exhibit a uniform structure in the ten countries. While the share of the population on a low educational level clearly lies above one third in Bulgaria and Romania, around one third in Hungary and not much lower in Slovenia, the remaining countries only reach shares of one quarter or one fifth, with the Czech Republic having the lowest share of persons with low qualifications.

On the middle educational level, in contrast, which as a rule comprises qualifications below the academic stage, the Czech Republic and Slovakia have the highest shares of a little over or under 70%. Poland and Latvia also reach more

Graph 1: **Educational levels of the working age population, 2000**



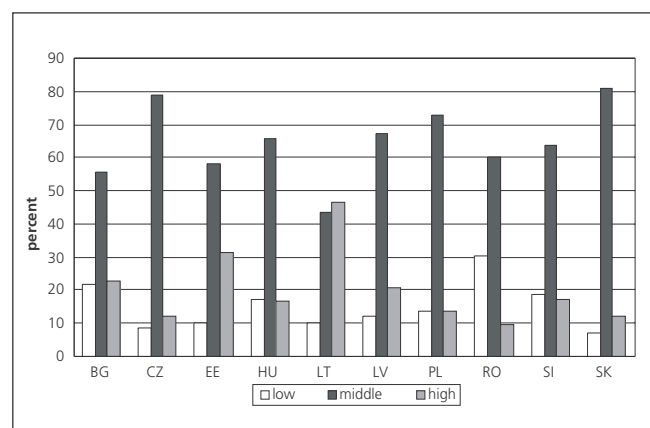
than 60%. Only Lithuania takes up an extreme position at the bottom of the middle qualification shares with 42%.

In contrast, no less than every third inhabitant of this country is classified as possessing high qualifications according to the national LFS. This exceeds the other countries by far. Thus, Estonia is the country with next highest share of high qualifications in the population with 23%, while the third Baltic State, Latvia, just as Bulgaria lies clearly behind with a share of 15%. In addition, Hungary and Slovenia also reach shares of more than 10%, while the share of high qualifications among the working age population in the remaining countries falls more or less short of 10%

## Educational qualification of the employed

It is no surprise that the shares of the two upper qualification levels rise throughout all countries if one only looks at the employed (Graph 2). Again Lithuania has the highest share of persons with high education in this group of the population with 46%, followed by Estonia with a little over 30%.

Graph 2: **Educational levels of the employed, 2000**



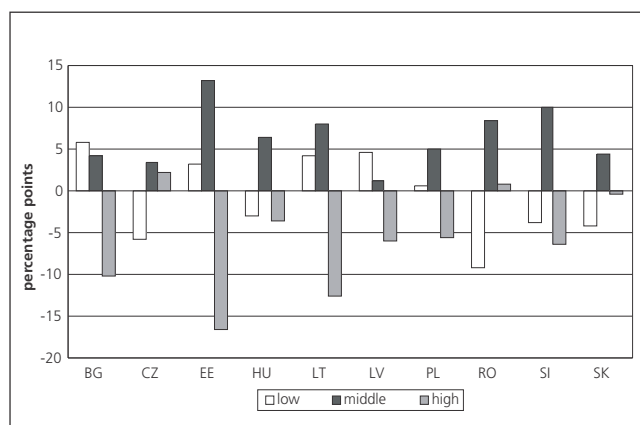
The comparison with the working age population also shows a shift away from the low qualifications in all countries. This difference is least pronounced in Romania as well as in Slovenia and Bulgaria, while in the other countries the share of low qualifications is reduced to about half or less. The lowest share of low qualifications among the employed is found in Slovakia with 7%, and the Czech Republic also reaches a value of less than 10%. The Baltic States and Poland lie around or just over 10%, while Romania has by far the highest share of low qualifications with 30%.

Correspondingly, the share of employed with middle qualifications differs widely between the countries, with the Czech Republic and Slovakia again taking up the top positions with shares of about 80%.

## Gender differences

As far as gender differences in the qualification structure of the employed are concerned, the various countries do not present a uniform picture (Graph 3).

Graph 3: **Differences in educational levels, men-women, 2000**



Thus, the share of women with high qualifications generally exceeds that of men except in the Czech Republic and Romania. This qualification advantage is particularly pronounced in Estonia, Lithuania and Bulgaria.

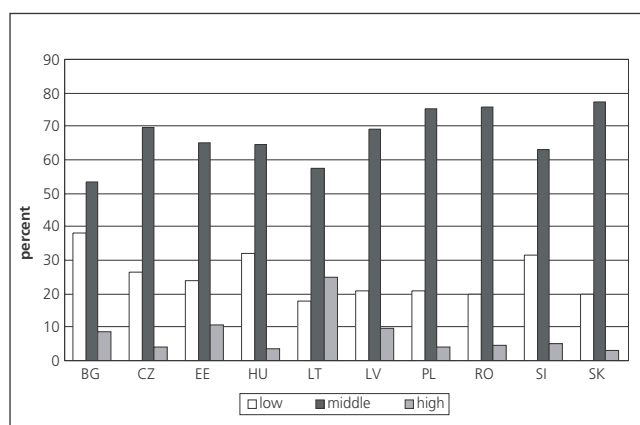
On the middle qualification level, in contrast, the share of men is greater than that of women in all countries.

Regarding low qualifications, the situation in the countries again is not uniform. While men have higher shares in this category in Bulgaria, Estonia, Lithuania, Latvia and Poland, women dominate more or less clearly in the remaining countries.

## Educational qualification of the unemployed and inactive

As might be expected, in all countries the unemployed have lower qualifications than the employed, indicating that the allocation and selection processes of the labour market are at least partly determined by the qualification factor and persons with less education have greater difficulties to hold on to their jobs or to find new employment. The only deviation from this pattern is found in Romania where the share of low qualifications among the unemployed is lower than among the employed (Graph 4).

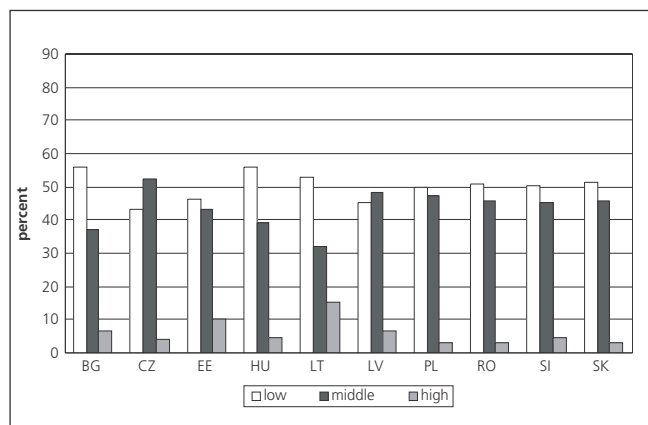
Graph 4: **Educational levels of the unemployed, 2000**



## Educational levels and occupational structure

The formal or educational qualification of the inactive at working age is even lower. In all countries the share of persons with low qualifications lies around 50%. For younger persons in almost all countries this is due to the fact that many of them have not yet finished their education (Graph 5).

Graph 5: *Educational levels of the inactive, 2000*



### Occupational structure of the employed

Among the civilian labour force in most countries men are predominantly employed in craft & related trades occupations with shares of 20–30%, followed by the more industrially oriented occupational group of plant & machine operators & assemblers (Graph 6).

In the case of women, in contrast, employment is concentrated mainly on service & sales jobs as well as technicians & associate professionals with shares between 10 and 20%

(Graph 7). Only in the Czech Republic and Slovakia the shares of the latter occupational group lie a little higher with almost one quarter.

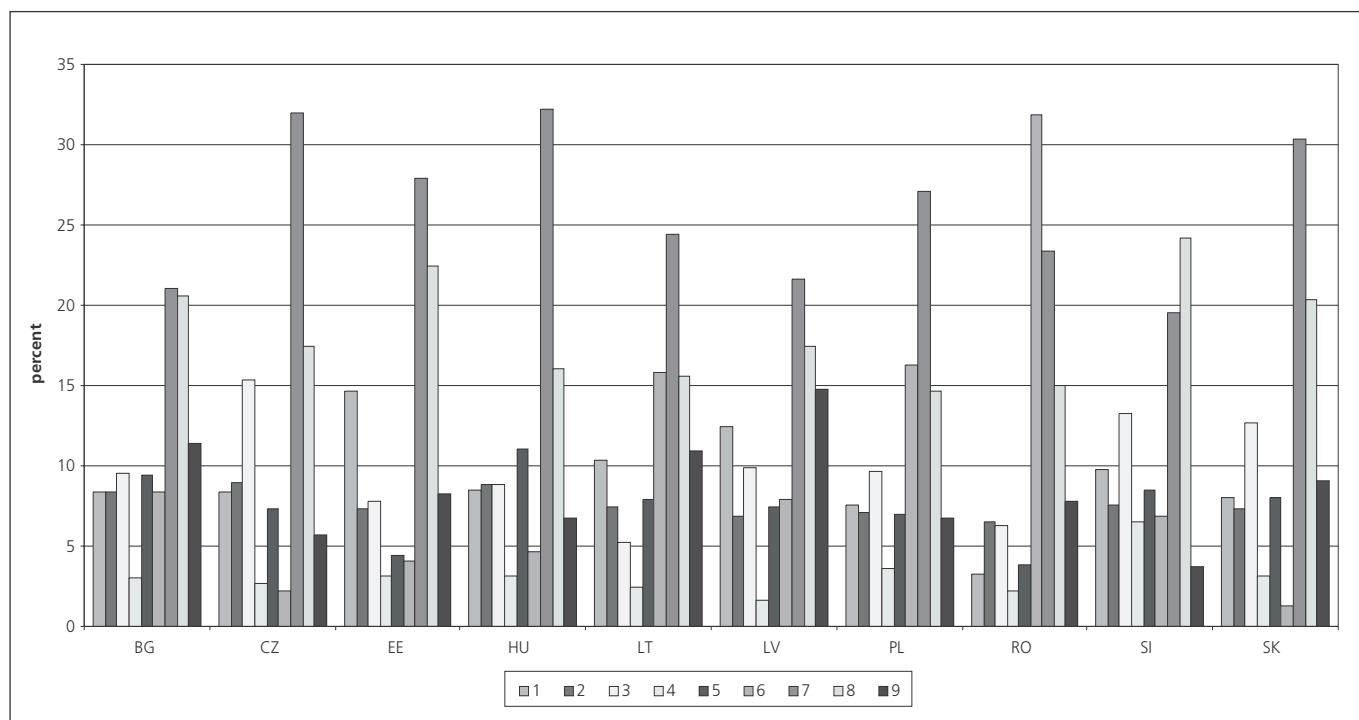
It also is noteworthy that in all countries women have higher, and in part even clearly higher shares of professionals than men, while the group of legislators, senior officials & managers in public administration and private business is generally dominated by men. Among clerks women are again more strongly represented than men. In contrast, the representation in elementary occupations is almost balanced. Only in the Czech Republic and Slovenia the share of women for this group is nearly twice as high as that of men. There also are no pronounced differences between the employment shares of men and women for the skilled agricultural & fishery workers.

### Educational qualification of occupational groups

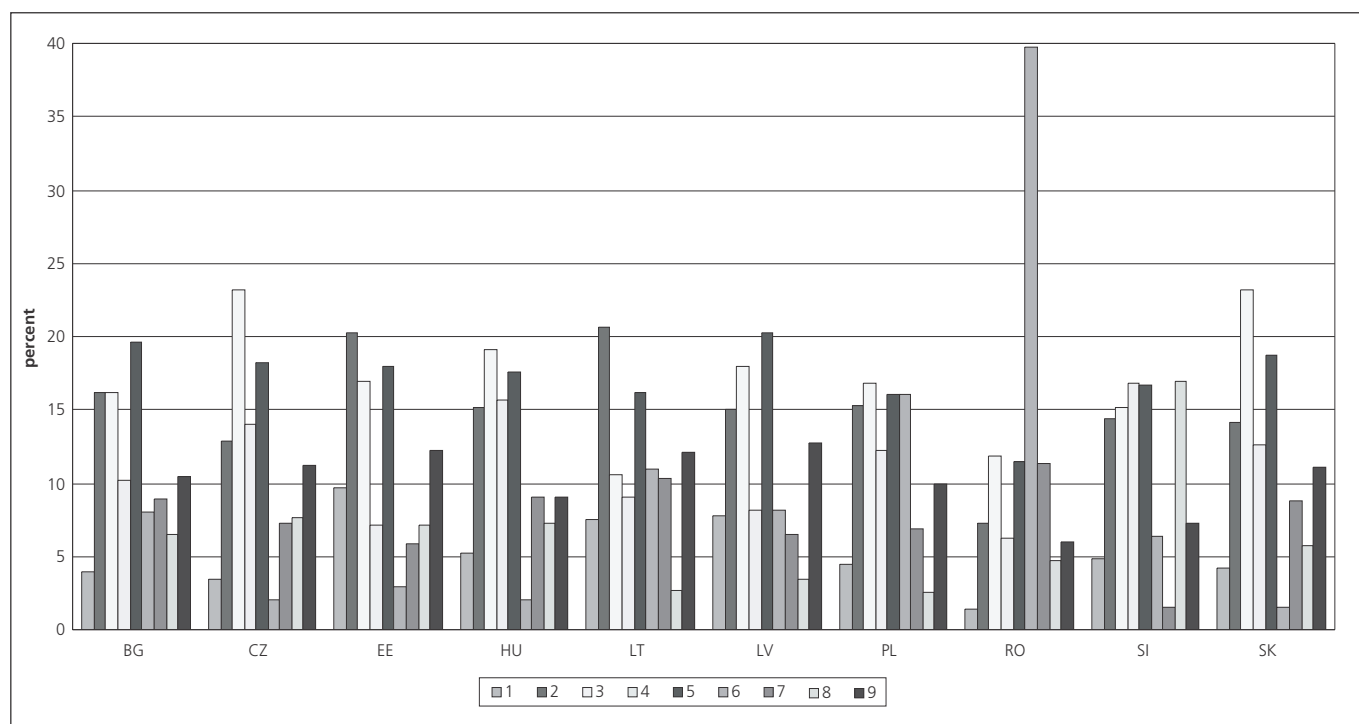
More detailed information about the actual qualification of the individual occupational groups can be obtained by further differentiating them by their level of education. For methodological reasons it seems advisable to forego comparisons between countries and to concentrate instead on the structure of qualifications between the individual activity groups within the countries. Again this analysis includes employed men and women aged between 15 and 64 while excluding members of the armed forces as well as those giving no concrete answer to the questions on either their education or occupation.

The data on the educational levels of occupations in Bulgaria largely corresponds to expectations. This applies in particular to the share of 90% with high qualifications

Graph 6: *Employed men by ISCO groups, 2000*



Graph 7: *Employed women by ISCO groups, 2000*

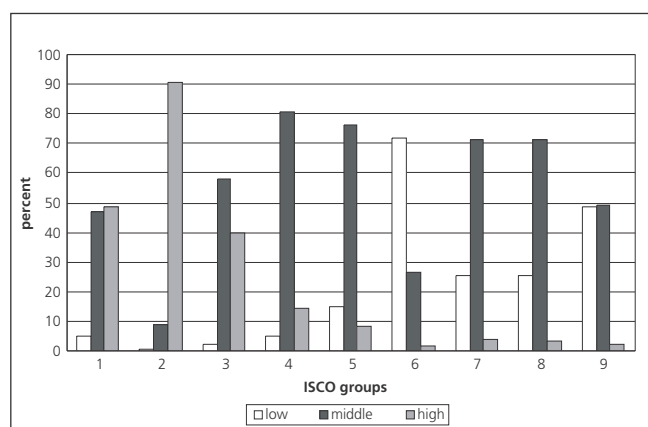


among professionals as well as to the concentration of middle qualifications among clerks, service & sales workers, craft & trades workers and plant & machine operators. With almost 40% technicians & associate professionals also have a relatively high share of high qualifications. It is in the nature of things that the share of low qualifications is highest among skilled agricultural & fishery workers and elementary occupations. At the same time, however, the latter group has practically an equal share of middle qualifications in Bulgaria. This also applies to the shares of middle and high qualifications among legislators, senior officials & managers. But this occupational group also has a share of 5% with only low formal qualifications (Graph 8).

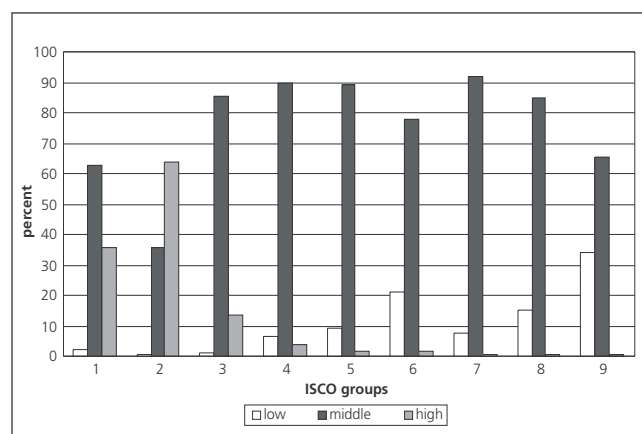
The qualification structure of the employed in the various occupational groups in the Czech Republic also corresponds

largely to expectations. However, the share of high qualifications among professionals is surprisingly low with just over 60%. In contrast, the traditionally well developed vocational training system of this country makes itself felt in the high shares of middle qualifications between about 85 to well over 90% among craft & trades workers as well as clerks, service & sales workers, technicians & associate professionals and plant & machine operators. To a lesser degree this also applies to skilled agricultural & fishery workers. Even legislators, senior officials & managers in the public and private sectors show a fairly high share of middle qualifications with more than 60%. This also applies to elementary occupations, where about two thirds of the employed are registered as having middle formal qualifications, while only one third is classified in the category of low qualifications (Graph 9).

Graph 8: *Educational levels of ISCO groups, BG, 2000*



Graph 9: *Educational levels of ISCO groups, CZ, 2000*

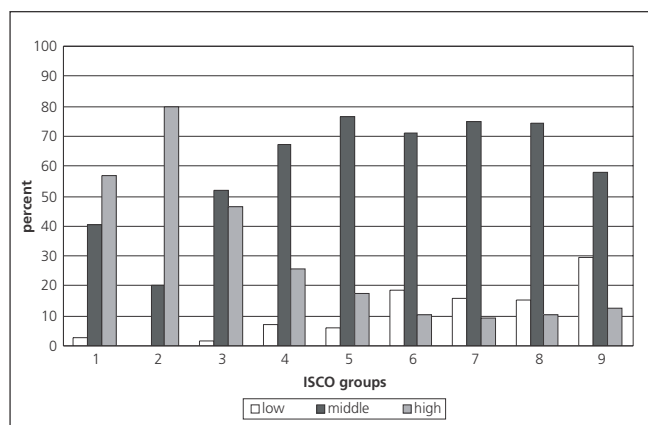




## Educational levels and occupational structure

The employed with middle formal educational qualifications also dominate in Estonia. They account for about one quarter of the service & sales as well as the craft & trades workers and plant & machine operators. Their share still reaches around 70% among the clerks and skilled agricultural & fishery workers. Even for the elementary occupations it is comparatively high with nearly 60%. This is not much higher than for technicians & associate professionals who are characterized in Estonia by an almost equal share of high qualifications. High qualifications are more prevalent only among legislators, senior officials & managers and, of course, among professionals. However, the latter also have a surprisingly high share of employed with just middle qualifications. In contrast, persons with high qualifications account for a considerable part of the clerks with a share of one quarter. To a lesser extent this also applies to service & sales workers who reach a share of almost 20% with high qualifications in Estonia, while it lies around 10% for the remaining occupational groups (Graph 10).

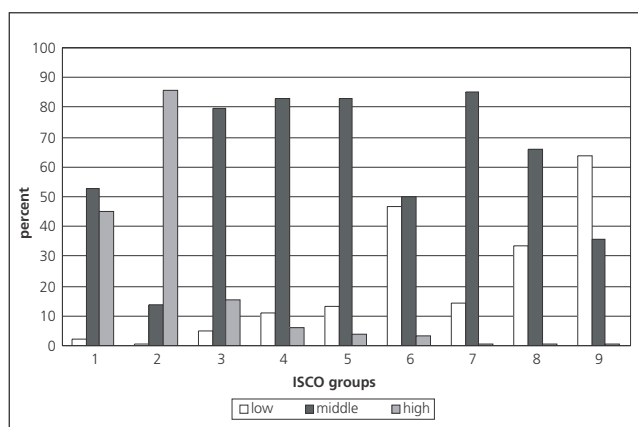
Graph 10: *Educational levels of ISCO groups, EE, 2000*



In Hungary, too, middle formal qualifications dominate in almost all occupational groups. Four fifths or more of the clerks, service & sales workers, craft & related trades workers as well as technicians & associate professionals are registered as having this qualification level. Among the plant & machine operators & assemblers, who belong mainly to the industrial sector, this qualification level still reaches a share of two thirds. Among legislators, senior officials & managers in the public and private sectors and among skilled agricultural workers it still is more than one half or just under that mark. Even four tenths of the elementary occupations have a middle level of education. In contrast, professionals as expected exhibit the highest share of high qualifications with 85%. In addition to legislators, senior officials & managers, technicians & associate professionals are the only other occupational group in Hungary with a notable share of high qualifications with 15% (Graph 11).

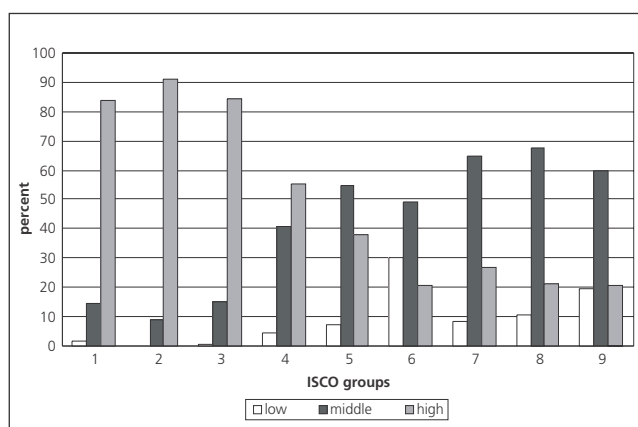
For Lithuania the distribution of the employed by occupational groups generally corresponds with expectations.

Graph 11: *Educational levels of ISCO groups, HU, 2000*



Thus, professionals and legislators, senior officials & managers have a share of 90 respectively 80% of high qualifications. However, the latter also applies to technicians & associate professionals. High qualifications also account for the highest share among clerks, while the middle formal qualification level dominates among service & sales workers, skilled agricultural & fishery workers, craft & trades workers and plant & machine operators & assemblers. In contrast, low qualifications do not dominate in any occupational group. Even among elementary occupations their share is comparatively low with about 20%, while high qualifications also are strongly represented here with one fifth. Low formal qualifications reach their highest share in Lithuania among skilled agricultural & fishery workers (Graph 12).

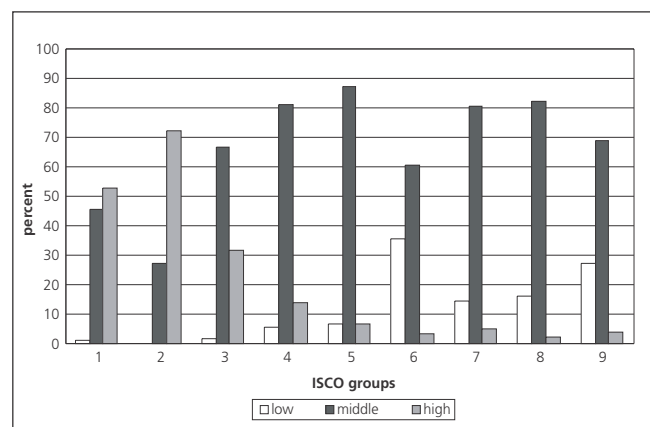
Graph 12: *Educational levels of ISCO groups, LT, 2000*



Latvia, in contrast, is characterized above all by the predominance of the middle qualification level. It accounts for more than four fifths of the clerks, service & sales workers, craft & trades workers and machine operators & assemblers. Among technicians & associate professionals the share of middle qualifications amounts to two thirds and still reaches 60% among skilled agricultural & fishery workers. Even among elementary occupations nearly 70% of the employed are classified on this qualification level. High qualifications naturally are concentrated mainly

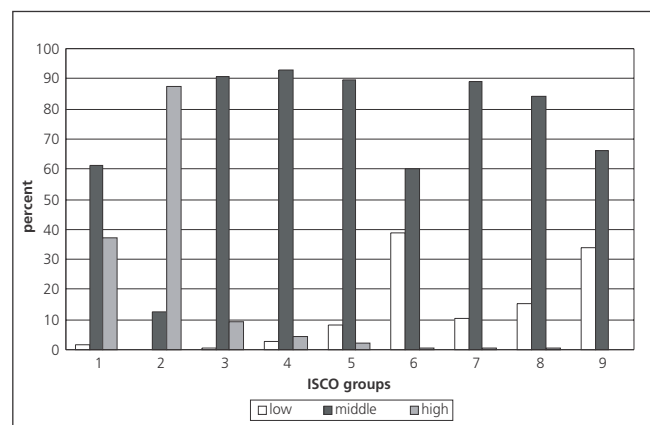
among professionals, but with somewhat over 70% their share is not very high. In addition to legislators, senior officials & managers where they hold a share of 53%, high qualifications are only represented to any greater extent among technicians & associate professionals with not quite one third. In contrast, in Latvia, too, low qualifications are represented with stronger shares of about one third only among skilled agricultural & fishery workers and, of course, among elementary occupations (Graph 13).

Graph 13: **Educational levels of ISCO groups, LV, 2000**



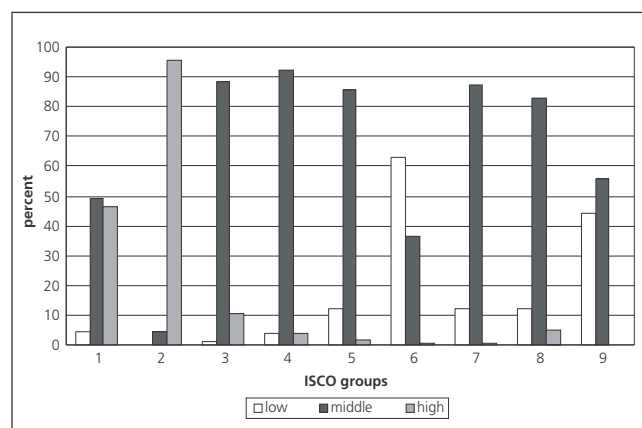
For Poland, too, the LFS results show a predominance of the middle formal qualification level in most occupational groups. Its share amounts to around nine tenths among technicians & associate professionals, clerks, service & sales workers and craft & trades workers, being only slightly lower for machine operators & assemblers. With more than 60% persons possessing a middle formal education also are remarkably well represented among legislators, senior officials & managers, who at the same time have a share of high qualifications amounting to more than one third. With 87% professionals have the highest share of high qualifications. In contrast, persons with low qualifications are found to any greater extent only among skilled agricultural & fishery workers and elementary occupations (Graph 14).

Graph 14: **Educational levels of ISCO groups, PL, 2000**



In Romania the qualification structure of the individual occupational groups is quite differentiated. As expected, professionals almost exclusively fall into the group with high qualifications, but barely half of the legislators, senior officials & managers do so. 10% of the technicians & associate professionals also are classified in the highest educational category, but hardly any are registered in the other occupational groups. In contrast, persons with middle formal education reach shares of over 80 up to even over 90% among technicians & associate professionals, clerks, service & sales workers, craft & trades workers and machine operators & assemblers. Even among elementary occupations qualifications of this level are in the majority over low qualifications. Apart from that group, low qualifications are represented mainly among skilled agricultural & fishery workers with a share of over 60%, i.e. in a sector which is more important for the labour market in Romania than in other countries (Graph 15).

Graph 15: **Educational levels of ISCO groups, RO, 2000**

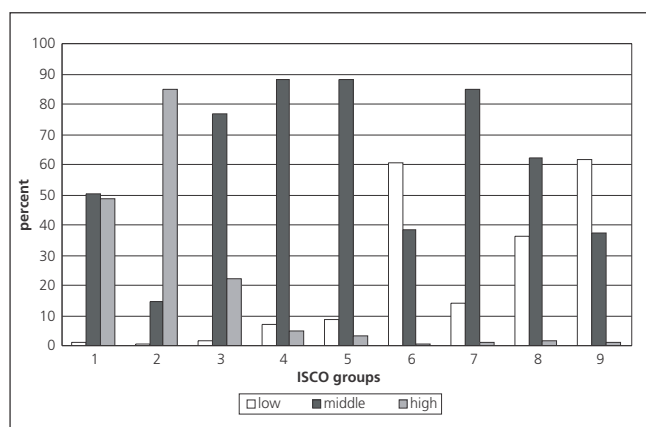


As expected, Slovenia records the highest share of high qualifications for professionals, though they also are shown to have a share of no less than about 15% with merely middle qualifications. Among legislators, senior officials & managers, in contrast, one finds almost equal shares of middle and high qualifications. In Slovenia, too, the share of high qualifications among technicians & associate professionals is quite high with about one fifth. On the whole, however, this group is dominated by middle qualifications with a share of just over three quarters. The predominance of this level is even more pronounced among craft & related trades workers and above all among clerks and service & sales workers with shares of almost 90%. In contrast, it should be noted that about one third of the plant & machine operators & assemblers have not reached this middle level and are reported to have low qualifications. In addition, low qualifications are in a clear majority among skilled agricultural & fishery workers and elementary occupations (Graph 16).

The most noticeable result for Slovakia is the surprisingly low value of only 60% of the employed with high formal qualifications among professionals. Among legislators,

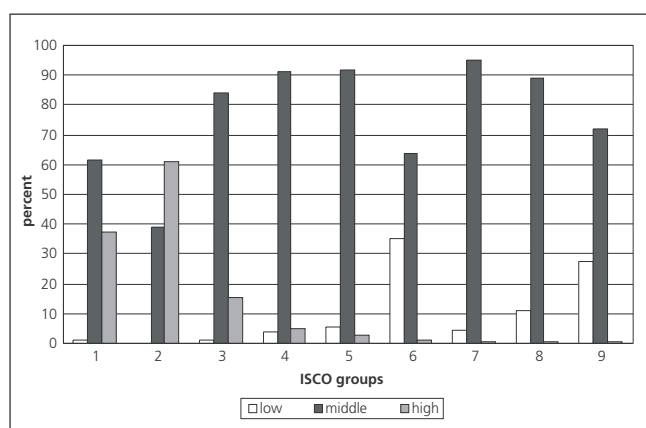
## Educational levels and occupational structure

Graph 16: *Educational levels of ISCO groups, SI, 2000*



senior officials & managers, too, high qualifications clearly are in the minority relative to middle qualifications. Persons with middle formal education dominate even more clearly among technicians & associate professionals, clerks, service & sales workers as well as craft & trades workers and machine operators & assemblers with shares of more than 80 and partly more than 90%. Even among skilled agricultural workers they are in a clear majority over low qualifications. This also applies to elementary occupations which report the remarkable relation of 70% with middle qualifications as against 30% with low qualifications (Graph 17).

Graph 17: *Educational levels of ISCO groups, SK, 2000*



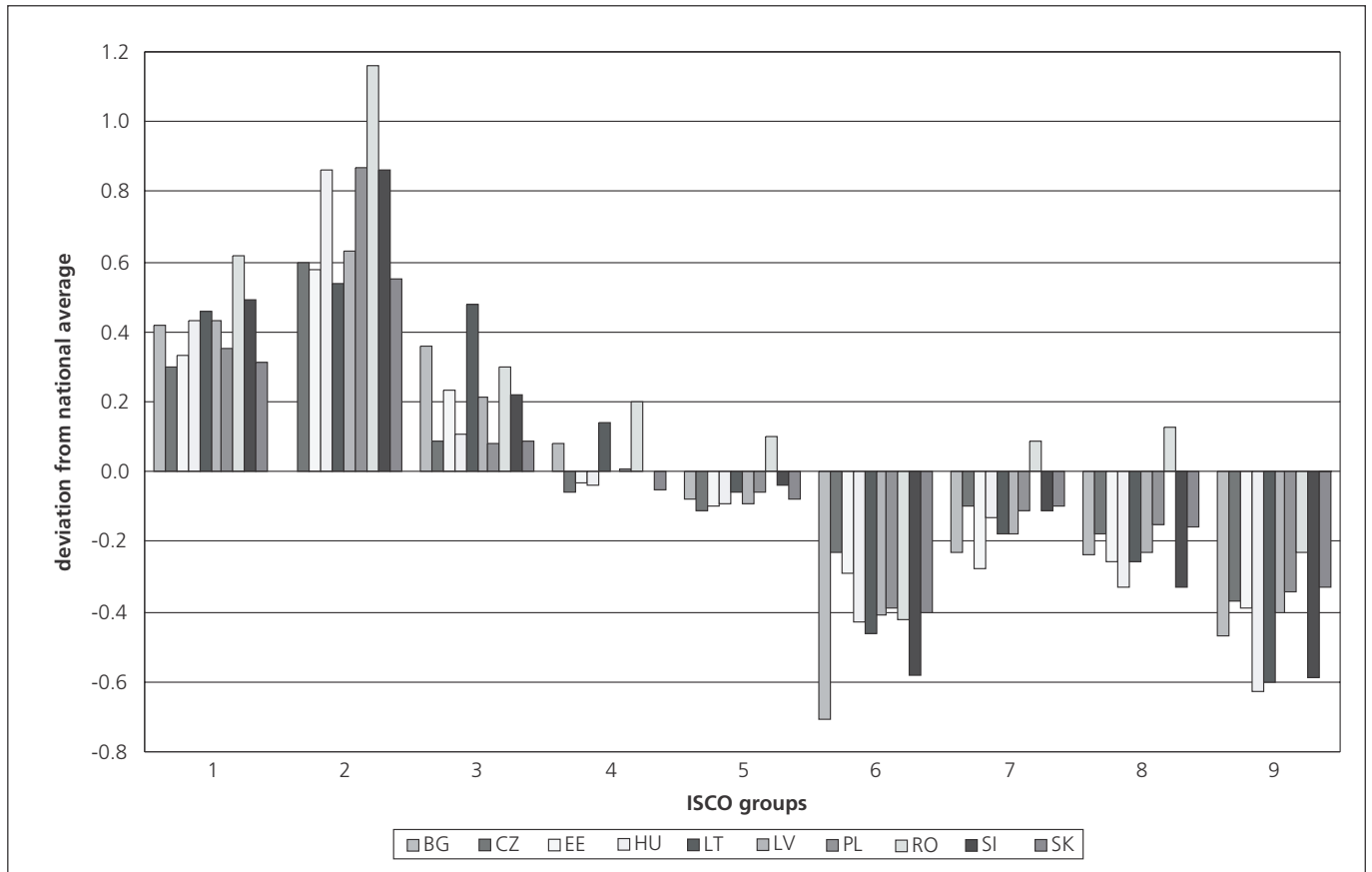
### Comparative qualification structure

In the foregoing this analysis has looked at individual aspects of educational and occupational qualification. At various points in this process it has become apparent that comparisons between countries with different educational systems and possibly divergent coding practices can be problematic.

Nevertheless it may be asked whether there are fundamental similarities or differences between the countries in question. For that purpose a simple weighting scheme was used to determine the average educational level of all employed for each country and the extent to which the qualification structure of the individual occupational groups deviate from it (Graph 18).

The resulting picture is fairly uniform. In all countries the qualification of the employed in the occupational groups of legislators, senior officials & managers, professionals and technicians & associate professionals is above average. Clerks are more or less right on the average with only small deviations in the upward or downward direction. In contrast, all remaining occupational groups generally lie below the country averages. The only exception is Romania, where service & sales workers, craft & trades workers and machine operators & assemblers still rank just above the calculated country average. In sum, the qualification structures of the countries analysed here, despite all differences in details, thus are characterized by a surprisingly high degree of homogeneity.

Graph 18: Average educational level of ISCO groups as deviation from national average, 2000



## Educational levels and occupational structure

Table 1: *Educational qualification of the working age population, 2000 (in %)*

Education	BG	CZ	EE	HU	LT
<b>a) all</b>					
low	36.4	19.6	22.1	33.3	23.0
middle	48.4	70.9	54.6	55.2	41.8
high	15.2	9.5	23.3	11.5	35.1
total (in 1000)	5501.9	7061.6	959.9	6759.8	2461.6
<b>b) employed</b>					
low	21.5	8.7	10.2	17.3	10.1
middle	55.7	78.9	58.3	65.8	43.5
high	22.8	12.3	31.5	16.9	46.5
total (in 1000)	2834.2	4616.8	588.8	3781.5	1485.6
<b>c) unemployed</b>					
low	38.0	26.6	23.7	32.1	17.9
middle	53.6	69.5	65.3	64.4	57.4
high	8.4	3.9	10.9	3.5	24.7
total (in 1000)	554.9	447.2	91.7	266.9	280.5
<b>d) inactive</b>					
low	56.0	43.3	46.5	55.7	52.8
middle	37.3	52.6	43.3	39.4	32.0
high	6.7	4.1	10.2	4.8	15.2
total (in 1000)	2112.8	1997.5	279.3	2711.4	695.4

Table 2: *Gender differences in educational qualification, men-women, 2000 (in percentage points)*

Education	BG	CZ	EE	HU	LT
low	5.8	-5.7	3.2	-2.9	4.3
middle	4.3	3.5	13.3	6.5	8.1
high	-10.1	2.2	-16.5	-3.6	-12.5

Table 3: *Occupational structure of employed men and women, 2000 (in %)*

ISCO code	BG	CZ	EE	HU	LT
<b>a) men</b>					
1	8.4	8.4	14.6	8.5	10.3
2	8.4	8.9	7.3	8.8	7.5
3	9.5	15.3	7.8	8.8	5.2
4	3.0	2.7	3.1	3.1	2.5
5	9.4	7.3	4.4	11.1	7.9
6	8.4	2.2	4.1	4.7	15.8
7	21.0	32.0	27.9	32.2	24.4
8	20.6	17.5	22.4	16.0	15.6
9	11.4	5.7	8.3	6.8	10.9
total (in 1000)	1472.8	2565.3	301.5	2037.3	739.5
<b>b) women</b>					
1	4.0	3.4	9.7	5.2	7.5
2	16.2	12.9	20.3	15.1	20.6
3	16.2	23.2	16.9	19.1	10.6
4	10.2	14.0	7.1	15.7	9.0
5	19.6	18.2	17.9	17.6	16.2
6	8.0	2.0	2.9	2.1	11.0
7	8.9	7.3	5.9	9.0	10.3
8	6.5	7.7	7.1	7.2	2.7
9	10.4	11.2	12.2	9.1	12.1
total (in 1000)	1322.1	2029.5	286.5	1697.2	745.2

## Educational levels and occupational structure

LV	PL	RO	SI	SK	Education
23.7	26.6	35.9	29.4	22.1	low
61.2	64.3	56.7	57.8	69.7	middle
15.0	9.1	7.4	12.8	8.2	high
1635.2	25652.3	15213.4	1389.4	3692.4	total (in 1000)
12.0	13.6	30.2	18.6	6.9	low
67.2	72.6	60.2	63.9	80.8	middle
20.8	13.9	9.6	17.4	12.3	high
944.8	14145.4	9765.0	872.9	2078.3	total (in 1000)
20.8	20.8	20.0	31.7	19.9	low
69.4	75.2	75.7	63.1	77.2	middle
9.8	4.0	4.4	(5.2)	2.8	high
160.3	2814.5	816.1	66.4	489.6	total (in 1000)
45.5	49.7	50.9	50.1	51.2	low
48.1	47.2	46.0	45.1	46.0	middle
6.4	3.1	3.1	4.8	2.8	high
530.1	8692.4	4632.4	450.1	1124.5	total (in 1000)

LV	PL	RO	SI	SK	Education
4.7	0.6	-9.2	-3.7	-4.2	low
1.2	5.0	8.4	10.0	4.5	middle
-6.0	-5.6	0.9	-6.3	-0.3	high

LV	PL	RO	SI	SK	ISCO code
12.4	7.6	3.2	9.8	8.0	1
6.9	7.1	6.5	7.6	7.3	2
9.9	9.7	6.3	13.3	12.7	3
1.6	3.6	2.2	6.5	3.1	4
7.5	7.0	3.8	8.5	8.0	5
7.9	16.3	31.9	6.9	1.3	6
21.6	27.1	23.4	19.5	30.3	7
17.4	14.6	15.0	24.2	20.4	8
14.8	6.8	7.8	3.7	9.1	9
489.7	7688.2	5211.6	469.7	1117.8	total (in 1000)
7.8	4.5	1.4	4.8	4.2	1
15.0	15.3	7.3	14.4	14.2	2
17.9	16.8	11.8	15.1	23.2	3
8.1	12.2	6.3	16.8	12.6	4
20.2	16.1	11.5	16.7	18.7	5
8.2	16.0	39.8	6.4	1.5	6
6.5	6.9	11.4	1.5	8.8	7
3.4	2.5	4.7	17.0	5.7	8
12.8	9.9	6.0	7.3	11.1	9
453.4	6395.4	4553.4	403.1	956.7	total (in 1000)

## Educational levels and occupational structure

Table 4: *Educational qualification of occupations, 2000 (in %)*

ISCO code	Education	BG	CZ	EE	HU	LT
1	low	(4.7)	2.0	(2.5)	2.4	.
	middle	46.9	62.5	40.5	52.6	14.8
	high	48.4	35.4	57.0	45.0	83.7
total (in 1000)		177.0	285.2	72.0	261.3	131.6
2	low	.	0.7	.	.	.
	middle	9.1	35.7	20.0	13.9	8.7
	high	90.5	63.6	79.9	85.7	91.2
total (in 1000)		338.7	491.8	80.3	436.5	209.2
3	low	(2.1)	1.2	.	5.2	.
	middle	58.2	85.4	52.0	79.5	14.9
	high	39.6	13.4	46.2	15.3	84.6
total (in 1000)		353.8	862.1	72.0	503.6	117.6
4	low	(5.0)	6.5	(7.3)	10.8	.
	middle	80.6	89.7	67.2	83.2	40.5
	high	14.4	3.9	25.5	6.0	55.2
total (in 1000)		178.7	354.2	29.5	329.4	85.1
5	low	15.2	9.2	6.1	13.0	7.3
	middle	76.3	89.2	76.4	83.2	55.0
	high	8.6	1.6	17.5	3.8	37.8
total (in 1000)		397.1	558.7	64.5	523.6	179.5
6	low	71.8	21.0	18.7	46.7	30.2
	middle	26.3	77.6	70.9	49.9	49.2
	high	.	1.4	(10.5)	3.4	20.7
total (in 1000)		228.7	96.5	20.8	131.7	198.7
7	low	25.2	7.3	15.9	14.3	8.5
	middle	71.2	92.1	75.0	84.9	64.6
	high	3.7	0.6	9.1	0.7	26.8
total (in 1000)		426.8	968.9	100.9	808.9	257.1
8	low	25.6	15.0	15.2	33.6	10.8
	middle	71.2	84.6	74.4	65.9	67.7
	high	3.2	0.4	10.4	.	21.5
total (in 1000)		389.2	604.0	87.9	446.8	135.0
9	low	48.6	34.1	29.7	63.8	19.7
	middle	49.0	65.6	57.9	35.8	59.5
	high	(2.4)	0.3	12.4	.	20.8
total (in 1000)		304.7	372.9	60.1	292.8	170.5

Table 5: *Average educational level of occupations as deviation from national average, 2000*

ISCO code	BG	CZ	EE	HU	LT	LV	PL	RO	SI	SK
1	0.42	0.30	0.33	0.43	0.46	0.43	0.35	0.62	0.49	0.31
2	0.89	0.60	0.58	0.86	0.54	0.63	0.87	1.16	0.86	0.55
3	0.36	0.09	0.23	0.11	0.48	0.21	0.08	0.30	0.22	0.09
4	0.08	-0.06	-0.03	-0.04	0.14	0.00	0.01	0.20	0.00	-0.05
5	-0.08	-0.11	-0.10	-0.09	-0.06	-0.09	-0.06	0.10	-0.04	-0.08
6	-0.71	-0.23	-0.29	-0.43	-0.46	-0.41	-0.39	-0.42	-0.58	-0.40
7	-0.23	-0.10	-0.28	-0.13	-0.18	-0.18	-0.11	0.09	-0.11	-0.10
8	-0.24	-0.18	-0.26	-0.33	-0.26	-0.23	-0.15	0.13	-0.33	-0.16
9	-0.47	-0.37	-0.39	-0.63	-0.60	-0.40	-0.34	-0.23	-0.59	-0.33

Weighting of educational levels: low = 1, middle = 2, high = 3

## Educational levels and occupational structure

LV	PL	RO	SI	SK	Education	ISCO code
.	(1.6)	4.4	.	.	low	1
45.7	61.0	49.2	50.1	61.7	middle	
53.0	37.4	46.3	48.6	37.3	high	
96.3	873.0	229.3	65.4	129.4		total (in 1000)
.	.	.	.	.	low	2
27.4	12.8	4.2	14.6	38.9	middle	
72.3	87.2	95.8	85.1	60.9	high	
101.7	1524.7	669.1	93.5	216.8		total (in 1000)
.	(0.5)	1.0	(1.5)	0.9	low	3
66.8	90.4	88.6	76.5	83.9	middle	
31.5	9.0	10.4	22.0	15.2	high	
129.5	1820.3	865.2	123.5	363.7		total (in 1000)
.	2.7	3.9	6.8	4.1	low	4
81.1	93.1	92.5	88.2	91.0	middle	
13.6	4.2	3.6	5.0	4.9	high	
44.7	1054.3	402.7	98.5	154.3		total (in 1000)
6.4	7.9	12.4	8.8	5.4	low	5
87.0	89.7	85.8	88.0	91.8	middle	
6.6	2.4	1.8	(3.2)	2.7	high	
128.5	1571.4	720.3	107.3	268.2		total (in 1000)
35.8	39.0	63.2	60.6	35.2	low	6
60.6	60.3	36.4	38.6	63.8	middle	
(3.6)	(0.7)	0.4	.	.	high	
76.1	2278.5	3472.5	58.1	28.6		total (in 1000)
14.5	10.5	11.9	13.8	4.6	low	7
80.5	89.0	87.6	84.9	95.1	middle	
5.0	(0.5)	0.6	(1.3)	.	high	
135.2	2527.9	1736.7	97.4	423.5		total (in 1000)
15.9	15.4	12.2	36.1	10.8	low	8
82.0	84.0	82.8	62.2	88.9	middle	
.	(0.6)	5.0	(1.7)	.	high	
100.8	1280.1	992.4	182.2	282.8		total (in 1000)
27.4	34.0	43.9	61.5	27.7	low	9
68.9	65.9	55.9	37.4	71.9	middle	
3.7	.	.	.	.	high	
130.3	1153.4	676.8	46.9	207.1		total (in 1000)



## National time series

<b>Bulgaria</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+3.5	-5.7	+10.3	+2.4	-3.3	+14.9
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	8230	4014	4216	8133	3933	4200
age group 15–64	1000	5569	2748	2821	5502	2687	2815
<i>age group 15+ by education</i>							
< upper secondary	%	43.8	42.8	44.8	43.9	43.1	44.7
upper secondary	%	42.6	45.1	40.3	42.3	44.6	40.2
tertiary	%	13.6	12.1	15.0	13.7	12.3	15.1
<i>dependency and activity</i>							
youth dependency	rate	24.1	25.0	23.1	23.6	24.8	22.5
old age dependency	rate	23.7	21.0	26.3	24.2	21.6	26.7
activity age group 15–64	rate	61.6	66.3	57.0	61.6	67.4	56.1
effective dependency	rate	131.9	110.2	156.6	137.9	113.2	166.0
<b>Employment</b>							
total (15+)	1000	2971	1582	1389	2872	1532	1341
<i>by age groups</i>							
15–24	rate	21.1	22.7	19.4	20.5	23.0	18.0
25–54	rate	73.0	75.3	70.7	69.7	72.1	67.4
55–64	rate	21.3	34.5	10.0	22.1	34.9	11.2
65+	rate	1.7	2.8	(0.9)	2.9	4.4	1.7
15–64	rate	52.9	57.0	49.0	51.5	56.1	47.2
<i>by education</i>							
< upper secondary	%	22.2	25.1	19.0	23.2	26.2	19.8
upper secondary	%	55.4	56.8	53.8	58.0	60.1	55.5
tertiary	%	22.3	18.1	27.2	23.9	19.1	29.3
<i>by economic activity</i>							
agriculture & fishery	%	10.9	13.1	8.4	13.2	15.4	10.6
mining & quarrying	%	1.6	2.5	(0.7)	1.5	2.2	(0.6)
manufacturing	%	24.9	24.2	25.7	23.5	23.3	23.8
electricity, gas, water	%	1.9	2.6	1.1	2.0	2.7	1.2
construction	%	6.1	10.1	1.6	5.9	9.5	1.8
trade & repair	%	14.5	13.4	15.7	14.1	13.2	15.2
hotels & restaurants	%	4.7	3.8	5.8	5.0	3.9	6.2
transport & communication	%	7.1	9.9	4.0	7.5	10.2	4.4
financial intermediation	%	1.1	0.7	1.5	1.1	0.7	1.6
real estate & business	%	3.1	3.0	3.1	3.2	3.0	3.5
public administration	%	7.1	8.3	5.7	6.8	8.1	5.4
education	%	7.6	3.1	12.8	7.4	2.7	12.7
health & social work	%	6.1	2.5	10.1	5.8	2.5	9.6
other services	%	3.3	2.8	3.8	3.1	2.7	3.6
self-employed	% of total	11.9	15.1	8.3	14.6	18.2	10.5
part-time	% of total						
temporary	% of employees						
<i>usual weekly hours</i>							
full-time employees	average	40.2	41.1	40.2	40.4	40.8	40.0
part-time employees	average						
self-employed	average	45.4	46.0	44.3	42.5	43.4	40.7
<b>Unemployment</b>							
total (15–64)	1000	484	258	226	556	304	252
<i>by age groups</i>							
15–24	rate	31.3	31.3	31.3	33.3	36.1	29.6
25–54	rate	12.2	12.3	12.1	14.6	14.6	14.7
55–64	rate	9.5	9.1	(10.4)	12.2	12.6	(10.8)
15–64	rate	14.1	14.1	14.0	16.4	16.8	15.9
<i>by education</i>							
< upper secondary	rate	23.1	21.9	24.9	25.0	23.6	27.0
upper secondary	rate	13.1	12.7	13.5	15.8	16.0	15.6
tertiary	rate	5.4	5.3	5.5	6.7	7.0	6.5
long-term	% of total	58.3	57.6	59.1	58.7	58.8	58.7

<b>Czech Republic</b>		<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>			GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%		-2.2	-2.3	+42.3	-0.8	-0.9	+3.1
	<b>unit</b>		<b>1999</b>			<b>2000</b>		
			<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>								
total	1000		10237	4956	5281	10222	4948	5274
age group 15–64	1000		7087	3523	3564	7111	3535	3576
<i>age group 15+ by education</i>								
< upper secondary	%		23.0	16.2	29.3	23.8	16.9	30.2
upper secondary	%		68.3	73.2	63.8	67.0	72.0	62.5
tertiary	%		8.7	10.6	6.9	9.1	11.1	7.3
<i>dependency and activity</i>								
youth dependency	rate		24.5	25.2	23.7	23.8	24.5	23.0
old age dependency	rate		20.0	15.4	24.5	20.0	15.4	24.4
activity age group 15–64	rate		71.8	79.7	63.9	71.2	79.0	63.5
effective dependency	rate		80.3	53.8	114.2	82.5	55.6	116.8
<b>Employment</b>								
total (15+)	1000		4716	2644	2071	4675	2623	2052
<i>by age groups</i>								
15–24	rate		38.3	42.7	33.9	36.4	39.3	33.6
25–54	rate		82.0	89.5	74.3	81.5	89.2	73.7
55–64	rate		37.6	53.2	23.6	36.1	51.6	22.1
65+	rate		4.5	6.9	2.9	4.1	6.8	2.3
15–64	rate		65.6	74.0	57.4	64.9	73.1	56.8
<i>by education</i>								
< upper secondary	%		8.7	6.5	11.6	8.8	6.2	12.0
upper secondary	%		79.2	80.5	77.6	78.7	80.2	76.7
tertiary	%		11.9	12.9	10.7	12.6	13.6	11.2
<i>by economic activity</i>								
agriculture & fishery	%		5.3	6.4	3.9	5.2	6.3	3.8
mining & quarrying	%		1.7	2.7	0.4	1.6	2.4	0.5
manufacturing	%		27.7	29.8	25.0	27.4	29.9	24.2
electricity, gas, water	%		1.7	2.4	0.9	1.6	2.3	0.8
construction	%		9.4	15.5	1.8	9.4	15.3	1.7
trade & repair	%		13.7	11.4	16.6	12.9	10.7	15.8
hotels & restaurants	%		3.4	2.6	4.4	3.4	2.6	4.5
transport & communication	%		7.8	9.6	5.6	7.9	9.6	5.8
financial intermediation	%		2.1	1.3	3.1	2.0	1.2	3.1
real estate & business	%		5.4	5.3	5.5	5.7	5.6	5.8
public administration	%		6.3	5.8	6.9	6.6	6.3	7.0
education	%		6.0	2.5	10.5	6.4	2.6	11.2
health & social work	%		5.6	1.7	10.7	6.1	2.0	11.3
other services	%		3.8	3.0	4.8	3.7	3.2	4.4
self-employed	% of total		13.9	18.0	8.7	14.5	18.7	9.0
part-time	% of total		5.7	2.5	9.7	5.3	2.2	9.2
temporary	% of employees		7.4	6.1	8.9	8.1	7.0	9.4
<i>usual weekly hours</i>								
full-time employees	average		43.3	44.1	42.4	43.3	44.0	42.4
part-time employees	average		26.2	24.5	26.7	25.8	24.4	26.2
self-employed	average		51.4	53.7	45.2	51.0	53.1	45.6
<b>Unemployment</b>								
total (15–64)	1000		434	203	231	448	207	240
<i>by age groups</i>								
15–24	rate		16.6	16.3	16.9	17.0	17.4	16.4
25–54	rate		7.4	5.8	9.3	7.8	6.0	10.0
55–64	rate		4.9	4.8	4.9	5.3	5.3	5.2
15–64	rate		8.5	7.2	10.2	8.8	7.4	10.6
<i>by education</i>								
< upper secondary	rate		20.7	22.6	19.4	22.6	26.1	20.1
upper secondary	rate		7.7	6.4	9.4	7.8	6.3	9.7
tertiary	rate		3.0	2.6	3.7	3.0	2.3	4.0
long-term	% of total		36.6	32.1	40.5	50.0	49.1	50.7

## National time series

<b>Estonia</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+4.7	-4.4	+18.1	-1.1	-1.7	+14.2
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	1436	667	770	1430	663	767
age group 15–64	1000	966	464	502	972	470	502
<i>age group 15+ by education</i>							
< upper secondary	%	26.1	27.0	25.4	26.2	26.4	26.1
upper secondary	%	50.5	54.7	47.0	51.3	56.0	47.2
tertiary	%	23.3	18.4	27.6	22.5	17.6	26.7
<i>dependency and activity</i>							
youth dependency	rate	27.0	28.8	25.3	25.3	26.5	24.3
old age dependency	rate	21.7	14.8	28.0	21.8	14.8	28.4
activity age group 15–64	rate	70.3	76.2	64.8	70.0	75.6	64.8
effective dependency	rate	91.2	69.1	114.5	95.9	74.3	118.6
<b>Employment</b>							
total (15+)	1000	615	315	300	604	309	295
<i>by age groups</i>							
15–24	rate	29.2	34.1	24.4	27.4	31.4	23.2
25–54	rate	77.3	79.4	75.2	76.8	79.5	74.2
55–64	rate	47.9	59.2	39.3	43.0	50.2	37.5
65+	rate	7.6	11.0	5.9	7.3	10.8	5.7
15–64	rate	62.0	66.3	58.0	60.6	64.3	57.1
<i>by education</i>							
< upper secondary	%	11.6	13.9	9.2	10.7	12.2	9.2
upper secondary	%	56.9	61.0	52.5	57.4	63.7	50.8
tertiary	%	31.5	25.0	38.3	31.8	24.1	39.9
<i>by economic activity</i>							
agriculture & fishery	%	8.8	10.9	6.7	7.0	8.7	5.2
mining & quarrying	%	1.4	2.4	.	1.7	2.4	(0.9)
manufacturing	%	20.9	22.3	19.4	23.0	26.6	19.3
electricity, gas, water	%	3.0	4.1	1.8	2.1	2.9	1.3
construction	%	6.5	11.4	1.3	7.8	14.5	(0.8)
trade & repair	%	14.5	11.9	17.1	12.8	9.5	16.2
hotels & restaurants	%	2.1	(0.6)	3.7	3.0	(0.9)	5.1
transport & communication	%	8.9	13.0	4.7	10.4	14.7	5.9
financial intermediation	%	1.4	(1.1)	1.8	1.5	(1.1)	1.8
real estate & business	%	6.6	7.2	6.1	6.8	6.7	6.8
public administration	%	6.4	6.6	6.3	5.6	5.1	6.2
education	%	8.9	3.7	14.4	7.8	2.4	13.5
health & social work	%	5.7	1.6	10.0	4.8	1.2	8.6
other services	%	4.8	3.4	6.3	5.7	3.2	8.4
self-employed	% of total	8.2	10.6	5.6	8.1	9.7	6.4
part-time	% of total	7.1	5.2	9.0	6.7	4.2	9.3
temporary	% of employees	2.0	2.3	1.7	2.3	3.1	1.4
<i>usual weekly hours</i>							
full-time employees	average	41.3	42.2	40.4	41.2	41.9	40.5
part-time employees	average	22.1	23.6	21.2	21.0	19.8	21.5
self-employed	average	46.5	48.2	43.1	46.2	48.2	43.0
<b>Unemployment</b>							
total (15–64)	1000	80	46	34	92	53	38
<i>by age groups</i>							
15–24	rate	22.1	22.2	21.9	23.7	24.7	22.4
25–54	rate	11.2	12.4	10.0	12.8	13.9	11.5
55–64	rate	6.1	8.0	.	8.2	11.4	.
15–64	rate	11.8	13.1	10.5	13.5	15.0	11.8
<i>by education</i>							
< upper secondary	rate	20.4	21.6	18.3	25.3	26.9	23.1
upper secondary	rate	12.6	13.7	11.3	14.7	14.8	14.6
tertiary	rate	6.0	5.2	6.5	5.0	6.3	4.1
long-term	% of total	42.2	43.2	41.0	47.3	48.2	46.0

<b>Hungary</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+4.9	+3.3	-11.7	+4.5	+0.6	-5.3
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	9976	4753	5223	9927	4727	5200
age group 15–64	1000	6788	3314	3473	6760	3312	3448
<i>age group 15+ by education</i>							
< upper secondary	%	34.2	27.7	40.1	38.5	34.0	42.7
upper secondary	%	54.4	61.0	48.4	50.3	54.7	46.2
tertiary	%	11.4	11.3	11.5	11.2	11.3	11.1
<i>dependency and activity</i>							
youth dependency	rate	25.5	26.7	24.3	25.2	26.4	24.1
old age dependency	rate	21.5	16.7	26.1	21.6	16.3	26.7
activity age group 15–64	rate	59.6	67.5	52.0	59.9	67.6	52.5
effective dependency	rate	117.9	85.8	157.2	116.0	84.2	154.7
<b>Employment</b>							
total (15+)	1000	3785	2081	1703	3807	2092	1715
<i>by age groups</i>							
15–24	rate	34.9	38.6	31.2	33.1	37.0	29.2
25–54	rate	72.2	78.8	65.8	72.8	79.0	66.7
55–64	rate	19.1	29.3	11.1	21.9	33.0	13.0
65+	rate	1.5	2.5	0.9	1.7	2.7	1.1
15–64	rate	55.4	62.4	48.8	55.9	62.7	49.4
<i>by education</i>							
< upper secondary	%	14.9	12.8	17.6	17.4	16.1	19.1
upper secondary	%	67.3	71.3	62.4	65.5	68.4	61.9
tertiary	%	17.5	15.6	19.8	17.1	15.5	19.0
<i>by economic activity</i>							
agriculture & fishery	%	7.0	9.7	3.7	6.5	9.0	3.3
mining & quarrying	%	0.7	1.0	0.3	0.6	0.9	(0.2)
manufacturing	%	24.6	26.7	22.2	24.2	25.8	22.3
electricity, gas, water	%	2.3	3.0	1.4	2.0	2.7	1.0
construction	%	6.7	11.3	1.1	7.0	11.7	1.2
trade & repair	%	13.9	11.9	16.4	14.5	12.9	16.4
hotels & restaurants	%	3.7	3.1	4.3	3.5	2.9	4.3
transport & communication	%	8.1	10.7	4.9	8.1	10.7	4.9
financial intermediation	%	2.1	1.3	3.2	2.2	1.4	3.2
real estate & business	%	4.7	4.9	4.6	5.4	5.3	5.4
public administration	%	6.8	6.4	7.3	7.0	6.6	7.4
education	%	8.3	3.5	14.1	8.2	3.3	14.2
health & social work	%	6.4	2.6	11.1	6.5	2.9	10.9
other services	%	4.6	4.0	5.4	4.4	3.9	5.1
self-employed	% of total	14.9	18.8	10.2	14.6	18.7	9.6
part-time	% of total	3.5	2.1	5.3	3.2	1.8	5.0
temporary	% of employees	6.2	6.5	5.8	6.9	7.3	6.4
<i>usual weekly hours</i>							
full-time employees	average	41.3	42.1	40.5	41.3	42.2	40.4
part-time employees	average	23.4	23.3	23.4	23.5	23.2	23.7
self-employed	average	45.5	46.6	43.2	45.6	46.8	43.1
<b>Unemployment</b>							
total (15–64)	1000	282	169	113	267	162	105
<i>by age groups</i>							
15–24	rate	12.3	13.5	10.6	12.3	13.7	10.4
25–54	rate	6.2	6.7	5.7	5.9	6.3	5.3
55–64	rate	2.7	3.3	.	3.1	3.8	.
15–64	rate	7.0	7.5	6.2	6.6	7.2	5.8
<i>by education</i>							
< upper secondary	rate	13.7	16.2	11.4	11.5	13.3	9.6
upper secondary	rate	6.7	7.0	6.3	6.4	6.9	5.9
tertiary	rate	1.2	1.5	(1.0)	1.4	1.6	(1.3)
long-term	% of total	47.9	48.7	46.8	47.9	50.6	43.6

## National time series

<b>Lithuania</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+5.1	+1.9	-28.5	-4.2	-5.5	+52.9
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	3669	1373	1585	3698	1744	1954
age group 15–64	1000	2435	1183	1251	2472	1198	1274
<i>age group 15+ by education</i>							
< upper secondary	%	36.3	36.1	36.4	31.3	28.7	33.5
upper secondary	%	32.0	34.6	29.8	36.8	42.0	32.3
tertiary	%	31.7	29.3	33.8	31.9	29.3	34.2
<i>dependency and activity</i>							
youth dependency	rate	30.9	0.0	0.0	29.6	31.2	28.0
old age dependency	rate	19.8	14.1	25.2	20.0	14.3	25.4
activity age group 15–64	rate	72.6	77.7	67.7	71.5	75.5	67.6
effective dependency	rate	80.8	65.2	102.6	94.6	80.8	108.2
<b>Employment</b>							
total (15+)	1000	1613	831	782	1525	757	767
<i>by age groups</i>							
15–24	rate	33.8	38.3	29.2	26.7	30.2	23.2
25–54	rate	81.5	82.4	80.7	76.0	75.1	76.8
55–64	rate	42.6	56.7	31.8	42.2	52.2	34.5
65+	rate	6.2	9.7	4.3	7.8	9.7	6.8
15–64	rate	65.0	68.9	61.4	60.1	61.8	58.5
<i>by education</i>							
< upper secondary	%	17.8	21.7	13.7	11.4	13.3	9.6
upper secondary	%	37.4	39.7	34.9	42.6	46.8	38.5
tertiary	%	44.8	38.6	51.4	45.9	39.9	51.8
<i>by economic activity</i>							
agriculture & fishery	%	21.4	25.3	17.3	18.4	22.3	14.6
mining & quarrying	%	.	.	.	0.3	.	.
manufacturing	%	17.5	16.6	18.4	18.6	19.3	17.9
electricity, gas, water	%	2.3	3.2	1.3	2.6	3.3	1.9
construction	%	6.5	11.5	1.3	5.9	10.8	1.0
trade & repair	%	13.8	14.1	13.5	13.7	12.6	14.9
hotels & restaurants	%	1.7	0.7	2.8	1.8	1.1	2.5
transport & communication	%	6.5	8.5	4.3	6.8	9.2	4.5
financial intermediation	%	1.0	0.8	1.2	1.0	0.9	1.2
real estate & business	%	3.1	3.2	2.9	2.8	3.1	2.5
public administration	%	5.2	6.1	4.2	5.4	6.4	4.4
education	%	10.2	4.7	16.0	12.1	5.4	18.6
health & social work	%	6.5	2.0	11.2	6.6	1.7	11.5
other services	%	4.2	3.1	5.3	3.9	3.7	4.0
self-employed	% of total	17.0	20.3	13.4	15.9	19.2	12.7
part-time	% of total	0.0	0.0	0.0	8.6	7.6	9.6
temporary	% of employees	5.3	7.3	3.4	3.8	5.1	2.7
<i>usual weekly hours</i>							
full-time employees	average	39.2	40.2	38.2	39.7	40.4	39.2
part-time employees	average				23.4	23.5	23.3
self-employed	average	40.0	41.0	38.3	39.9	40.6	38.9
<b>Unemployment</b>							
total (15–64)	1000	183	104	79	280	164	116
<i>by age groups</i>							
15–24	rate	21.3	22.7	19.3	27.5	27.6	27.4
25–54	rate	9.4	10.0	8.9	15.1	17.5	12.8
55–64	rate	4.0	6.4	.	9.2	12.4	.
15–64	rate	10.4	11.4	9.3	15.9	18.2	13.5
<i>by education</i>							
< upper secondary	rate	15.3	16.9	12.5	22.5	25.5	18.0
upper secondary	rate	11.8	12.6	10.9	19.9	21.2	18.1
tertiary	rate	6.6	6.0	7.0	9.0	10.4	8.0
long-term	% of total	38.8	40.9	35.9	52.4	55.9	47.3

<b>Latvia</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+3.9	-0.6	-9.0	+1.1	-2.2	+2.4
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	2440	1128	1312	2424	1123	1301
age group 15–64	1000	1627	783	843	1636	788	848
<i>age group 15+ by education</i>							
< upper secondary	%	29.7	28.8	30.4	30.6	29.7	31.4
upper secondary	%	56.2	58.1	54.6	55.3	56.6	54.1
tertiary	%	14.2	13.1	15.1	14.1	13.6	14.5
<i>dependency and activity</i>							
youth dependency	rate	27.7	29.1	26.4	26.4	28.1	24.8
old age dependency	rate	22.3	14.9	29.2	21.7	14.4	28.5
activity age group 15–64	rate	69.1	76.2	62.6	68.0	73.6	62.8
effective dependency	rate	99.3	71.0	130.9	104.1	79.3	130.5
<b>Employment</b>							
total (15+)	1000	998	526	472	976	503	473
<i>by age groups</i>							
15–24	rate	33.2	37.6	28.7	30.4	35.2	25.6
25–54	rate	74.8	78.7	71.2	74.2	75.4	73.0
55–64	rate	36.6	50.3	26.4	35.4	48.3	25.9
65+	rate	8.3	12.2	6.4	6.6	10.2	5.0
15–64	rate	59.5	65.4	54.1	58.2	62.3	54.3
<i>by education</i>							
< upper secondary	%	13.4	16.0	10.6	12.7	14.9	10.3
upper secondary	%	66.2	67.3	65.0	66.3	66.9	65.7
tertiary	%	20.3	16.7	24.3	21.0	18.2	24.0
<i>by economic activity</i>							
agriculture & fishery	%	17.2	19.1	15.1	14.4	16.0	12.8
mining & quarrying	%	.	.	.	.	.	.
manufacturing	%	17.4	19.8	14.7	18.5	20.5	16.4
electricity, gas, water	%	2.2	3.0	1.3	2.1	2.8	1.3
construction	%	6.1	10.1	1.6	6.0	10.8	(0.9)
trade & repair	%	14.4	12.4	16.5	15.3	12.7	18.1
hotels & restaurants	%	2.1	0.9	3.4	2.3	1.2	3.5
transport & communication	%	8.5	11.4	5.4	8.5	11.5	5.3
financial intermediation	%	1.3	(0.8)	1.9	1.2	1.0	1.5
real estate & business	%	4.0	4.0	3.9	4.9	5.0	4.7
public administration	%	7.5	8.0	6.9	7.8	8.7	6.7
education	%	8.8	3.6	14.5	9.0	4.0	14.4
health & social work	%	5.5	2.4	9.0	5.0	1.2	9.1
other services	%	5.0	4.3	5.9	4.7	4.3	5.1
self-employed	% of total	11.1	12.9	9.2	10.5	12.5	8.4
part-time	% of total	11.9	10.9	12.9	10.7	9.5	12.1
temporary	% of employees	7.5	10.1	4.6	6.7	8.8	4.6
<i>usual weekly hours</i>							
full-time employees	average	43.0	44.1	41.8	43.0	43.8	42.3
part-time employees	average	23.5	25.8	22.0	22.7	25.0	21.2
self-employed	average	46.5	48.4	43.9	45.6	47.4	42.8
<b>Unemployment</b>							
total (15–64)	1000	157	85	72	160	89	72
<i>by age groups</i>							
15–24	rate	23.4	26.1	19.5	21.2	21.1	21.3
25–54	rate	13.1	13.0	13.3	14.0	15.0	13.0
55–64	rate	8.2	7.1	9.8	9.4	10.5	7.9
15–64	rate	13.9	14.2	13.6	14.4	15.3	13.5
<i>by education</i>							
< upper secondary	rate	17.5	18.9	15.1	21.2	23.7	17.1
upper secondary	rate	15.0	14.3	15.7	14.7	14.8	14.6
tertiary	rate	6.3	7.6	5.3	7.1	7.0	7.2
long-term	% of total	53.0	52.0	54.1	55.9	56.2	55.5

## National time series

<b>Poland</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+4.8	-2.8	+18.9	+4.0	-2.8	+35.0
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	37997	18372	19625	38093	18426	19667
age group 15–64	1000	25252	12457	12795	25652	12670	12982
<i>age group 15+ by education</i>							
< upper secondary	%	35.2	32.0	38.1	33.1	29.7	36.2
upper secondary	%	56.4	59.5	53.5	58.3	62.1	54.9
tertiary	%	8.4	8.5	8.4	8.6	8.2	8.9
<i>dependency and activity</i>							
youth dependency	rate	31.1	32.3	29.9	29.5	30.6	28.4
old age dependency	rate	19.3	15.1	23.4	19.0	14.8	23.1
activity age group 15–64	rate	65.8	72.1	59.6	66.1	71.8	60.5
effective dependency	rate	101.7	75.7	133.1	110.3	82.5	144.3
<b>Employment</b>							
total (15+)	1000	14940	8164	6776	14518	7975	6543
<i>by age groups</i>							
15–24	rate	24.3	27.2	21.5	24.1	26.4	21.9
25–54	rate	73.7	79.8	67.6	71.0	77.5	64.5
55–64	rate	32.5	41.8	24.5	29.0	37.4	21.8
65+	rate	8.5	12.7	6.0	7.6	12.0	4.9
15–64	rate	57.5	63.6	51.6	55.1	61.2	49.3
<i>by education</i>							
< upper secondary	%	16.5	16.7	16.2	14.8	14.9	14.8
upper secondary	%	70.1	71.4	68.7	71.3	73.5	68.6
tertiary	%	13.4	11.9	15.1	13.9	11.6	16.6
<i>by economic activity</i>							
agriculture & fishery	%				18.7	18.9	18.4
mining & quarrying	%				2.1	3.2	0.7
manufacturing	%				19.8	22.9	15.9
electricity, gas, water	%				1.8	2.7	0.7
construction	%				7.4	12.3	1.5
trade & repair	%				14.0	12.0	16.5
hotels & restaurants	%				1.7	0.9	2.6
transport & communication	%				6.2	8.4	3.5
financial intermediation	%				2.5	1.4	3.9
real estate & business	%				3.5	3.6	3.4
public administration	%				5.3	5.3	5.4
education	%				6.9	3.0	11.6
health & social work	%				6.5	2.1	11.8
other services	%				3.6	3.2	4.1
self-employed	% of total	22.8	26.1	19.0	22.5	25.9	18.4
part-time	% of total	9.6	7.4	12.2	10.6	8.4	13.2
temporary	% of employees	4.8	5.1	4.5	5.8	6.6	4.8
<i>usual weekly hours</i>							
full-time employees	average						
part-time employees	average						
self-employed	average						
<b>Unemployment</b>							
total (15–64)	1000	2085	1060	1025	2815	1351	1463
<i>by age groups</i>							
15–24	rate	29.6	27.9	31.6	35.7	34.3	37.2
25–54	rate	10.6	9.9	11.6	14.2	12.3	16.3
55–64	rate	7.3	8.5	5.6	9.7	9.1	10.6
15–64	rate	12.6	11.8	13.4	16.6	14.8	18.6
<i>by education</i>							
< upper secondary	rate	17.0	17.6	16.4	21.5	20.9	22.1
upper secondary	rate	12.7	11.4	14.3	17.0	14.6	20.0
tertiary	rate	3.2	2.9	3.5	5.5	5.0	5.9
long-term	% of total	41.6	36.5	46.8	44.6	40.2	48.6

<b>Romania</b>		<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>			GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change		%	-5.4	-1.8	+10.4	-3.2	-1.1	+11.3
		<b>unit</b>	<b>1999</b>			<b>2000</b>		
			<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>								
total		1000	22358	10870	11487	22338	10863	11475
age group 15–64		1000	15190	7477	7713	15213	7499	7714
<i>age group 15+ by education</i>								
< upper secondary		%	43.6	37.8	49.0	43.2	37.2	48.8
upper secondary		%	49.8	54.4	45.5	49.9	54.8	45.4
tertiary		%	6.6	7.8	5.5	6.9	8.0	5.8
<i>dependency and activity</i>								
youth dependency		rate	28.1	29.1	27.0	27.3	28.4	26.3
old age dependency		rate	19.1	16.2	21.9	19.5	16.5	22.4
activity age group 15–64		rate	69.8	76.1	63.7	69.6	75.7	63.6
effective dependency		rate	64.2	49.7	80.4	66.8	51.9	83.5
<b>Employment</b>								
total (15+)		1000	11022	5808	5214	10898	5750	5148
<i>by age groups</i>								
15–24		rate	35.3	38.8	31.9	34.0	36.9	31.1
25–54		rate	79.6	85.2	74.1	78.6	84.6	72.7
55–64		rate	52.9	59.4	47.3	52.0	57.4	47.3
65+		rate	39.7	45.0	35.8	38.2	43.5	34.4
15–64		rate	65.0	70.4	59.7	64.2	69.5	59.0
<i>by education</i>								
< upper secondary		%	37.1	32.2	42.6	36.8	32.0	42.3
upper secondary		%	54.5	58.8	49.7	54.4	58.8	49.6
tertiary		%	8.4	9.0	7.7	8.7	9.2	8.1
<i>by economic activity</i>								
agriculture & fishery		%	44.0	40.8	47.6	45.2	42.8	47.9
mining & quarrying		%	1.7	2.8	0.5	1.6	2.6	0.5
manufacturing		%	19.6	20.6	18.5	18.6	19.2	18.0
electricity, gas, water		%	2.1	3.2	0.8	1.8	2.7	0.9
construction		%	3.6	6.1	0.9	3.7	6.1	1.0
trade & repair		%	8.3	6.9	9.8	8.3	6.9	9.9
hotels & restaurants		%	1.1	0.7	1.5	1.1	0.8	1.4
transport & communication		%	4.4	6.2	2.4	4.5	6.5	2.2
financial intermediation		%	0.8	0.4	1.2	0.9	0.5	1.3
real estate & business		%	1.4	1.3	1.5	1.2	1.3	1.1
public administration		%	3.7	5.0	2.4	3.9	5.1	2.7
education		%	4.0	2.3	5.9	4.0	2.1	6.1
health & social work		%	3.1	1.3	5.0	2.9	1.1	5.0
other services		%	2.2	2.3	2.1	2.2	2.3	2.1
self-employed		% of total	23.8	30.1	16.8	25.4	32.6	17.4
part-time		% of total	16.5	14.0	19.2	16.4	14.3	18.6
temporary		% of employees	3.1	3.0	3.2	2.9	3.0	2.9
<i>usual weekly hours</i>								
full-time employees		average	41.1	41.3	40.9	41.4	41.6	41.1
part-time employees		average	34.0	37.9	29.6	32.4	33.5	31.7
self-employed		average	41.3	43.1	37.2	40.4	41.8	37.3
<b>Unemployment</b>								
total (15–64)		1000	733	428	305	816	466	351
<i>by age groups</i>								
15–24		rate	17.3	18.8	15.5	17.8	19.3	15.9
25–54		rate	5.8	6.2	5.5	6.9	7.1	6.7
55–64		rate	0.9	1.5	0.3	1.1	1.7	0.4
15–64		rate	6.9	7.5	6.2	7.7	8.2	7.1
<i>by education</i>								
< upper secondary		rate	3.6	4.8	2.5	3.9	4.9	3.1
upper secondary		rate	8.5	8.6	8.3	9.4	9.4	9.5
tertiary		rate	2.7	2.5	3.0	3.6	4.0	3.1
long-term		% of total	45.2	41.8	50.0	49.2	50.2	48.0



## National time series

<b>Slovenia</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+3.8	-2.0	-6.4	+5.0	+0.6	-5.4
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	1980	964	1015	1988	971	1018
age group 15–64	1000	1379	698	681	1393	704	689
<i>age group 15+ by education</i>							
< upper secondary	%	35.4	28.8	41.5	33.9	27.8	39.7
upper secondary	%	53.1	59.9	46.6	53.9	60.2	48.1
tertiary	%	11.6	11.3	11.9	12.1	12.0	12.2
<i>dependency and activity</i>							
youth dependency	rate	23.4	23.8	23.1	22.7	23.0	22.4
old age dependency	rate	20.1	14.3	26.0	20.0	14.9	25.3
activity age group 15–64	rate	67.6	72.2	63.0	67.4	71.7	63.1
effective dependency	rate	86.4	66.3	110.1	87.1	68.1	109.3
<b>Employment</b>							
total (15+)	1000	889	480	409	894	481	413
<i>by age groups</i>							
15–24	rate	32.9	34.7	31.2	31.2	34.7	27.4
25–54	rate	82.2	85.6	78.6	82.6	85.5	79.6
55–64	rate	23.4	32.2	14.9	22.3	31.0	14.3
65+	rate	9.4	13.3	7.3	7.4	10.8	5.4
15–64	rate	62.5	66.8	58.1	62.7	66.7	58.5
<i>by education</i>							
< upper secondary	%	21.0	18.8	23.5	19.9	18.0	22.2
upper secondary	%	62.5	67.0	57.1	62.8	67.4	57.4
tertiary	%	16.6	14.2	19.3	17.3	14.6	20.4
<i>by economic activity</i>							
agriculture & fishery	%	10.8	10.7	11.0	9.6	9.5	9.7
mining & quarrying	%	0.7	1.3	.	0.8	1.4	(0.3)
manufacturing	%	31.1	35.2	26.4	30.3	33.5	26.5
electricity, gas, water	%	0.9	1.3	(0.4)	1.1	1.7	(0.5)
construction	%	5.1	8.6	1.0	5.4	9.0	1.2
trade & repair	%	12.3	11.2	13.6	13.4	11.9	15.1
hotels & restaurants	%	3.8	3.0	4.7	3.8	3.0	4.8
transport & communication	%	6.0	8.8	2.8	6.7	9.7	3.3
financial intermediation	%	2.3	1.1	3.7	2.4	1.5	3.6
real estate & business	%	5.5	5.2	5.9	4.8	5.1	4.5
public administration	%	5.5	5.3	5.8	6.0	5.5	6.4
education	%	6.7	2.9	11.2	6.4	2.6	10.9
health & social work	%	5.1	1.9	8.8	5.2	2.0	9.0
other services	%	4.1	3.5	4.8	3.9	3.6	4.3
self-employed	% of total	12.6	16.6	8.0	11.2	15.3	6.5
part-time	% of total	6.6	5.6	7.8	6.1	4.7	7.7
temporary	% of employees	10.8	10.0	11.7	12.9	12.4	13.5
<i>usual weekly hours</i>							
full-time employees	average	41.5	42.0	40.9	41.4	41.8	41.0
part-time employees	average	17.8	17.0	18.4	19.3	18.4	19.9
self-employed	average	50.4	51.1	48.6	49.8	50.5	48.0
<b>Unemployment</b>							
total (15–64)	1000	70	37	33	66	35	31
<i>by age groups</i>							
15–24	rate	18.5	17.2	19.8	16.4	14.8	18.5
25–54	rate	6.1	6.1	6.0	5.8	5.7	6.0
55–64	rate	(3.7)	(4.8)	.	(6.1)	(7.6)	.
15–64	rate	7.5	7.4	7.7	7.1	6.9	7.2
<i>by education</i>							
< upper secondary	rate	9.9	10.5	9.3	10.6	11.4	9.8
upper secondary	rate	7.5	7.1	8.2	6.9	6.6	7.4
tertiary	rate	3.0	(3.2)	(2.9)	(2.2)	.	(2.9)
long-term	% of total	41.8	45.2	38.0	62.7	64.9	60.3

<b>Slovakia</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+4.1	-3.3	+31.8	+1.9	-2.1	+21.4
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	5369	2599	2770	5377	2604	2773
age group 15–64	1000	3657	1802	1855	3692	1821	1871
<i>age group 15+ by education</i>							
< upper secondary	%	30.1	23.6	36.1	28.8	22.6	34.5
upper secondary	%	62.5	67.9	57.6	63.5	68.8	58.7
tertiary	%	7.3	8.5	6.3	7.6	8.5	6.8
<i>dependency and activity</i>							
youth dependency	rate	30.1	31.3	29.0	29.0	30.0	27.9
old age dependency	rate	16.7	13.0	20.3	16.7	12.9	20.3
activity age group 15–64	rate	69.0	76.3	62.0	69.5	76.5	62.8
effective dependency	rate	100.5	75.6	130.2	106.8	82.8	135.0
<b>Employment</b>							
total (15+)	1000	2128	1159	969	2083	1125	958
<i>by age groups</i>							
15–24	rate	31.1	33.1	29.1	28.3	28.7	27.9
25–54	rate	75.9	81.3	70.5	74.2	79.1	69.3
55–64	rate	22.2	36.4	10.6	21.5	35.2	10.2
65+	rate	1.2	2.2	.	0.8	1.6	.
15–64	rate	58.0	64.0	52.1	56.3	61.6	51.1
<i>by education</i>							
< upper secondary	%	8.2	6.3	10.4	6.9	5.0	9.2
upper secondary	%	80.0	81.8	77.9	80.7	82.8	78.3
tertiary	%	11.8	11.9	11.6	12.4	12.3	12.5
<i>by economic activity</i>							
agriculture & fishery	%	7.2	9.3	4.8	6.9	9.2	4.3
mining & quarrying	%	1.4	2.3	0.4	1.2	2.0	0.3
manufacturing	%	25.7	28.0	22.9	25.8	28.3	22.9
electricity, gas, water	%	2.4	3.6	0.9	2.2	3.5	0.8
construction	%	9.0	14.9	1.9	8.0	13.5	1.5
trade & repair	%	12.4	8.8	16.6	12.5	9.5	15.9
hotels & restaurants	%	3.1	2.1	4.3	3.0	2.1	4.1
transport & communication	%	7.8	10.1	4.9	8.2	10.5	5.6
financial intermediation	%	1.7	0.9	2.8	1.8	1.1	2.5
real estate & business	%	3.7	4.1	3.1	4.1	4.6	3.6
public administration	%	7.1	7.1	7.0	7.7	7.0	8.5
education	%	7.8	3.1	13.5	7.8	3.2	13.2
health & social work	%	7.3	2.5	13.0	7.0	2.4	12.5
other services	%	3.5	3.2	3.9	3.7	3.2	4.3
self-employed	% of total	7.4	10.1	4.2	7.8	10.9	4.1
part-time	% of total	1.9	1.0	3.0	1.7	0.9	2.8
temporary	% of employees	3.7	3.8	3.7	4.0	3.8	4.3
<i>usual weekly hours</i>							
full-time employees	average	42.2	42.7	41.7	42.2	42.7	41.7
part-time employees	average	24.8	25.8	24.4	24.1	24.2	24.0
self-employed	average	50.9	52.0	48.0	50.7	51.3	48.8
<b>Unemployment</b>							
total (15–64)	1000	403	220	183	490	271	219
<i>by age groups</i>							
15–24	rate	32.0	33.1	30.8	36.9	40.0	33.3
25–54	rate	13.0	12.8	13.1	15.9	15.8	16.0
55–64	rate	10.3	11.7	.	12.7	14.2	.
15–64	rate	16.0	16.0	15.9	19.1	19.5	18.6
<i>by education</i>							
< upper secondary	rate	34.1	39.4	29.7	40.4	48.7	33.6
upper secondary	rate	15.1	15.0	15.2	18.4	18.4	18.4
tertiary	rate	4.1	4.0	4.3	5.3	6.1	4.3
long-term	% of total	47.6	44.3	51.5	54.7	54.5	54.8

## National time series

<b>Albania</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+8.0	-1.8	+2.1	+8.0	+0.3	-10.4
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	3373	1662	1711	3401	1677	1724
age group 15–64	1000	2083	1013	1070	2116	1029	1087
<i>age group 15+ by education</i>							
< upper secondary	%						
upper secondary	%						
tertiary	%						
<i>dependency and activity</i>							
youth dependency	rate	52.5	55.7	49.4	51.7	54.9	48.7
old age dependency	rate	9.5	8.4	10.5	9.0	8.0	9.9
activity age group 15–64	rate						
effective dependency	rate						
<b>Employment</b>							
total (15+)	1000	1065	661	404	1068	641	427
<i>by age groups</i>							
15–24	rate						
25–54	rate						
55–64	rate						
65+	rate						
15–64	rate						
<i>by education (public sector)</i>							
< upper secondary	%	20.8			20.8		
upper secondary	%	51.0			51.0		
tertiary	%	28.2			28.2		
<i>by economic activity</i>							
agriculture & fishery	%	72.2			71.9		
mining & quarrying	%	1.5			0.9		
manufacturing	%	5.0			3.2		
electricity, gas, water	%	1.2			1.4		
construction	%	1.1			1.2		
trade & repair	%	2.7			4.5		
hotels & restaurants	%	1.3			1.8		
transport & communication	%	3.0			2.4		
financial intermediation	%						
real estate & business	%						
public administration	%						
education	%	4.5			4.4		
health & social work	%	2.4			2.1		
other services	%	5.2			6.2		
self-employed	% of total						
part-time	% of total						
temporary	% of employees						
<i>usual weekly hours</i>							
full-time employees	average						
part-time employees	average						
self-employed	average						
<b>Unemployment</b>							
total (15–64)	1000	240	130	110	215	113	102
<i>by age groups</i>							
under 35	% of total	58.5	54.6	63.1	57.8	57.9	57.8
35 and more	% of total	41.5	45.4	36.9	42.1	42.1	42.1
<i>by education</i>							
< upper secondary	% of total	47.9			48.7		
upper secondary	% of total	49.2			48.7		
tertiary	% of total	2.9			2.7		
long-term	% of total	90.2	89.4	91.3	89.7	88.8	90.8

<b>FYROM</b>	<b>unit</b>	<b>1999</b>			<b>2000</b>		
<b>Macroeconomic indicators</b>		GDP (1998)	Employed	Unemployed	GDP (1999)	Employed	Unemployed
annual change	%	+2.9			+2.7	+0.8	+0.1
	<b>unit</b>	<b>1999</b>			<b>2000</b>		
		<b>all</b>	<b>male</b>	<b>female</b>	<b>all</b>	<b>male</b>	<b>female</b>
<b>Population</b>							
total	1000	2022	1011	1010	2026	1014	1012
age group 15–64	1000	1337	674	663	1347	674	673
<i>age group 15+ by education</i>							
< upper secondary	%	52.1	46.2	57.9	52.4	45.6	59.1
upper secondary	%	37.3	42.7	32.0	38.0	43.7	32.4
tertiary	%	9.6	10.9	8.2	9.6	10.7	8.5
<i>dependency and activity</i>							
youth dependency	rate	33.3	34.2	32.4			
old age dependency	rate	14.6	13.0	16.2			
activity age group 15+	rate	59.7	72.8	46.5	59.7	71.7	47.7
effective dependency	rate	178.5	124.2	267.0	179.0	123.5	268.7
<b>Employment</b>							
total (15+)	1000	545	338	207	550	340	210
<i>by age groups</i>							
15–24	rate	14.4	16.8	11.9	15.1	18.3	11.8
25–54	rate	53.6	64.3	42.6	53.2	64.2	42.1
55–64	rate	26.3	40.3	12.6	26.2	39.4	14.0
65+	rate	4.1	6.5	2.1	3.7	5.4	2.3
15–64	rate	40.2	49.4	30.9	40.3	49.7	30.9
<i>by education</i>							
< upper secondary	%	33.1	34.8	30.2	33.0	33.8	31.8
upper secondary	%	48.4	48.7	48.0	49.7	50.8	47.9
tertiary	%	17.7	16.0	20.3	17.2	15.4	20.2
<i>by economic activity</i>							
agriculture & fishery	%	21.0	22.2	19.0	21.8	21.9	21.7
mining & quarrying	%	incl. in manufacturing			incl. in manufacturing		
manufacturing	%	27.5	26.1	29.6	27.0	25.7	29.1
electricity, gas, water	%	0.5	0.8	0.1	0.5	0.8	0.1
construction	%	5.7	8.3	1.5	6.5	9.4	1.7
trade & repair	%	12.9	12.8	13.1	12.2	12.2	12.2
hotels & restaurants	%	2.6	2.7	2.5	2.9	2.9	2.8
transport & communication	%	5.0	6.6	2.5	5.0	6.6	2.4
financial intermediation	%	3.1	2.6	3.9	2.9	2.6	3.3
real estate & business	%	1.7	2.5	0.5	1.9	2.4	1.1
public administration	%	5.9	5.9	5.7	5.9	6.6	4.8
education	%	7.4	6.2	9.2	7.3	5.6	10.1
health & social work	%	5.7	2.6	10.6	5.8	2.8	10.6
other services	%	0.2	0.2	0.2	0.3	0.4	0.2
self-employed	% of total	15.2	20.9	6.1	14.8	19.1	7.8
part-time	% of total	4.4	3.6	5.7	7.2	6.5	8.3
temporary	% of total	9.1	9.2	9.0	10.3	11.1	9.0
<i>usual weekly hours</i>							
full-time employees	average						
part-time employees	average						
self-employed	average						
<b>Unemployment</b>							
total (15–64)	1000	261	158	103	262	149	113
<i>by age groups</i>							
15–24	rate	62.9	63.6	61.8	59.9	58.1	62.4
25–54	rate	28.3	27.9	29.0	28.6	26.9	31.2
55–64	rate	13.5	14.3	11.0	16.3	17.9	11.9
15–64	rate	32.7	32.2	33.5	32.5	30.7	35.1
<i>by education</i>							
< upper secondary	rate	37.5	38.2	36.3	37.6	37.7	37.3
upper secondary	rate	33.3	31.5	36.1	32.6	28.8	38.1
tertiary	rate	16.4	14.1	19.1	17.8	15.7	20.2
long-term	% of total	83.8	82.9	85.2	83.3	83.2	83.6

## Regional data

Country Region	Year	Population		Employment						
		total (1000)	15-64 (1000)	total (1000)	all 15-64 (rate)	males 15-64 (rate)	females 15-64 (rate)	in agriculture (%)	in industry (%)	in services (%)
<b>Bulgaria</b>	<b>2000</b>	<b>8136</b>	<b>5502</b>	<b>2872</b>	<b>51.5</b>	<b>56.1</b>	<b>47.2</b>	<b>13.2</b>	<b>32.8</b>	<b>54.0</b>
North-East	2000	1336	916	449	48.1	53.7	42.8	19.3	27.7	53.1
North Central	2000	1219	813	417	50.0	54.8	45.4	15.0	37.6	47.4
North-West	2000	581	367	154	41.6	43.2	40.1	8.7	33.9	57.4
South-East	2000	820	554	257	45.6	50.7	40.6	12.6	29.3	58.0
South Central	2000	2051	1385	736	52.7	57.6	48.0	19.0	36.4	44.6
South-West	2000	2129	1468	859	58.1	62.2	54.3	5.2	31.0	63.7
<b>Czech Republic</b>	<b>2000</b>	<b>10222</b>	<b>7111</b>	<b>4675</b>	<b>64.9</b>	<b>73.1</b>	<b>56.8</b>	<b>5.2</b>	<b>39.9</b>	<b>54.8</b>
Praha	2000	1180	823	607	71.4	77.3	65.9	0.7	21.7	77.7
Stredni Cechy	2000	1107	767	515	66.5	76.0	57.0	5.6	41.2	53.2
Jihozapad	2000	1172	815	560	68.1	77.0	59.1	7.5	42.3	50.2
Severozapad	2000	1124	793	484	60.4	68.9	52.0	3.6	41.2	55.2
Severovychod	2000	1481	1022	689	66.4	74.4	58.5	6.2	43.5	50.3
Jihovychod	2000	1652	1141	757	65.7	74.1	57.4	7.8	41.0	51.2
Stredni Morava	2000	1233	856	538	62.5	72.1	53.1	5.8	45.6	48.6
Ostravsko	2000	1275	894	525	58.4	65.5	51.3	3.5	44.2	52.3
<b>Estonia</b>	<b>2000</b>	<b>1430</b>	<b>972</b>	<b>604</b>	<b>60.6</b>	<b>64.3</b>	<b>57.1</b>	<b>7.0</b>	<b>34.7</b>	<b>58.3</b>
<b>Hungary</b>	<b>2000</b>	<b>9927</b>	<b>6760</b>	<b>3807</b>	<b>55.9</b>	<b>62.7</b>	<b>49.4</b>	<b>6.5</b>	<b>33.8</b>	<b>59.8</b>
Közep-Magyarország	2000	2807	1941	1180	60.2	66.8	54.2	1.5	27.0	71.4
Közep-Dunantul	2000	1097	761	449	58.8	65.8	51.9	6.4	42.7	50.9
Nyugat-Dunantul	2000	972	667	423	63.1	70.4	56.0	6.1	41.5	52.4
Del-Dunantul	2000	964	655	349	53.1	59.6	46.9	10.0	32.4	57.6
Eszak-Magyarország	2000	1256	841	417	49.2	55.3	43.3	5.3	38.3	56.4
Eszak-Alföld	2000	1506	1009	491	48.4	55.1	41.8	8.6	34.9	56.5
Del-Alföld	2000	1326	886	497	55.7	63.6	48.1	14.9	31.2	53.9
<b>Lithuania</b>	<b>2000</b>	<b>3698</b>	<b>2472</b>	<b>1525</b>	<b>60.1</b>	<b>61.8</b>	<b>58.5</b>	<b>18.4</b>	<b>27.4</b>	<b>54.2</b>
<b>Latvia</b>	<b>2000</b>	<b>2424</b>	<b>1636</b>	<b>976</b>	<b>58.2</b>	<b>62.3</b>	<b>54.3</b>	<b>14.4</b>	<b>26.8</b>	<b>58.7</b>
<b>Poland</b>	<b>2000</b>	<b>37955</b>	<b>25652</b>	<b>14518</b>	<b>55.1</b>	<b>61.2</b>	<b>49.3</b>	<b>18.7</b>	<b>31.1</b>	<b>50.3</b>
Dolnoslaskie	2000	2792	1903	972	50.7	56.0	45.4	10.1	33.0	56.9
Kujawsko-Pomorskie	2000	2140	1481	785	52.5	59.2	46.1	17.6	31.8	50.6
Lubelskie	2000	2387	1570	997	60.2	64.0	56.5	40.2	20.0	39.8
Lubuskie	2000	1035	716	359	49.6	55.4	43.8	9.9	35.8	54.3
Lodzkie	2000	2957	2092	1202	56.0	61.1	51.4	14.7	30.6	54.6
Malopolskie	2000	3320	2221	1350	59.0	64.4	53.7	21.2	30.4	48.4
Mazowieckie	2000	5011	3315	2109	61.2	67.0	55.5	19.4	25.2	55.5
Opolskie	2000	1069	729	418	55.9	65.1	46.9	21.8	35.2	43.0
Podkarpackie	2000	2082	1356	808	56.3	59.9	52.7	29.1	28.2	42.7
Podlaskie	2000	1155	743	452	58.4	65.4	51.3	33.4	23.2	43.4
Pomorskie	2000	1918	1262	672	53.0	61.6	44.9	10.3	30.7	59.0
Slaskie	2000	3999	2682	1324	48.7	55.6	41.8	4.3	47.7	48.0
Swietokrzyskie	2000	1381	941	527	53.4	58.8	47.9	30.3	26.8	42.9
Warminsko-Mazurskie	2000	1517	1041	529	50.5	56.3	44.8	12.5	30.7	56.8
Wielkopolskie	2000	3561	2493	1434	56.7	63.8	49.8	20.6	34.6	44.8
Zachodniopomorskie	2000	1632	1107	578	51.7	58.6	45.0	7.0	31.8	61.2
<b>Romania</b>	<b>2000</b>	<b>22338</b>	<b>15213</b>	<b>10898</b>	<b>64.2</b>	<b>69.5</b>	<b>59.0</b>	<b>45.2</b>	<b>25.8</b>	<b>29.0</b>
Nord-Est	2000	3817	2524	1975	67.2	70.5	63.8	58.5	19.2	22.2
Sud-Est	2000	2929	2005	1377	61.9	68.0	56.0	48.2	21.3	30.5
Sud	2000	3462	2319	1781	66.9	73.8	60.1	51.0	25.1	23.9
Sud-Vest	2000	2403	1610	1324	70.0	73.2	66.9	61.3	20.0	18.7
Vest	2000	2022	1398	936	61.6	67.1	56.4	40.1	26.8	33.1
Nord-Vest	2000	2834	1939	1343	63.2	68.2	58.3	42.1	27.4	30.5
Centru	2000	2633	1821	1188	61.1	66.3	55.9	32.5	37.4	30.1
Bucuresti	2000	2238	1599	973	59.5	67.1	52.8	6.1	37.3	56.5
<b>Slovenia</b>	<b>2000</b>	<b>1988</b>	<b>1393</b>	<b>894</b>	<b>62.7</b>	<b>66.7</b>	<b>58.5</b>	<b>9.6</b>	<b>37.7</b>	<b>52.7</b>
<b>Slovak Republic</b>	<b>2000</b>	<b>5377</b>	<b>3692</b>	<b>2083</b>	<b>56.3</b>	<b>61.6</b>	<b>51.1</b>	<b>6.9</b>	<b>37.3</b>	<b>55.8</b>
Bratislavsky kraj	2000	615	439	311	70.2	75.3	65.5	2.5	22.4	75.1
Zapadne Slovensko	2000	1869	1297	731	56.3	62.1	50.7	8.9	40.4	50.6
Stredne Slovensko	2000	1350	921	505	54.7	61.8	47.8	6.5	41.1	52.4
Vychodne Slovensko	2000	1544	1035	536	51.7	55.1	48.4	7.2	37.8	55.0

Employment			Unemployment					Year	Country Region	
self- employed (% of total)	temporary (% of em- ployees)	part-time (% of total)	total (1000)	all 15-64 (rate)	males 15-64 (rate)	females 15-64 (rate)	youth unempl. (rate)			long-term unempl. (% of total)
<b>14.6</b>			<b>556.0</b>	<b>16.4</b>	<b>16.8</b>	<b>15.9</b>	<b>33.3</b>	<b>58.7</b>	<b>2000</b>	<b>Bulgaria</b>
18.6			125.7	22.2	22.1	22.3	42.2	56.0	2000	North-East
16.6			83.6	17.1	17.5	16.5	32.3	62.0	2000	North Central
9.6			59.4	28.0	29.9	25.8	51.7	77.4	2000	North-West
13.6			70.1	21.7	21.2	22.3	43.3	60.3	2000	South-East
16.7			109.7	13.1	13.3	12.8	28.2	54.9	2000	South Central
10.9			107.5	11.1	11.7	10.5	23.3	51.8	2000	South-West
<b>14.5</b>	<b>8.1</b>	<b>5.3</b>	<b>447.5</b>	<b>8.8</b>	<b>7.4</b>	<b>10.6</b>	<b>17.0</b>	<b>49.1</b>	<b>2000</b>	<b>Czech Republic</b>
20.0	6.5	6.1	25.0	4.1	3.7	4.5	11.3	29.4	2000	Praha
15.5	6.0	5.1	42.0	7.6	5.5	10.3	11.6	51.3	2000	Stredni Cechy
14.3	7.5	5.6	35.8	6.1	4.8	7.7	10.8	41.4	2000	Jihozapad
12.5	9.1	3.8	84.9	15.1	13.8	16.6	25.6	56.8	2000	Severozapad
14.7	10.3	6.1	50.3	6.9	5.5	8.6	14.3	41.6	2000	Severovýchod
13.8	7.9	5.2	58.0	7.2	5.8	8.9	12.7	46.9	2000	Jihovýchod
13.2	8.7	5.6	65.2	10.9	8.7	13.6	20.0	47.6	2000	Stredni Morava
10.8	8.8	4.4	86.4	14.2	12.4	16.4	30.5	56.5	2000	Ostravsko
<b>8.1</b>	<b>2.3</b>	<b>6.7</b>	<b>91.7</b>	<b>13.5</b>	<b>15.0</b>	<b>11.8</b>	<b>23.7</b>	<b>47.4</b>	<b>2000</b>	<b>Estonia</b>
<b>14.6</b>	<b>6.9</b>	<b>3.2</b>	<b>266.9</b>	<b>6.6</b>	<b>7.2</b>	<b>5.8</b>	<b>12.3</b>	<b>47.8</b>	<b>2000</b>	<b>Hungary</b>
15.1	4.9	3.4	67.9	5.5	5.9	5.1	11.6	49.4	2000	Közep-Magyarország
13.3	5.7	2.9	24.5	5.2	5.3	5.1	8.0	42.0	2000	Közep-Dunantul
12.9	5.7	2.5	19.3	4.4	4.1	4.8	8.4	44.8	2000	Nyugat-Dunantul
16.4	9.5	3.9	29.8	7.9	9.2	6.2	12.4	46.1	2000	Del-Dunantul
12.6	10.1	3.6	46.1	10.0	11.8	7.8	20.2	53.3	2000	Eszak-Magyarország
12.3	8.1	3.4	52.9	9.8	10.6	8.6	16.7	48.7	2000	Eszak-Alföld
18.8	8.2	3.0	26.4	5.1	5.6	4.4	8.0	41.9	2000	Del-Alföld
<b>15.9</b>	<b>3.7</b>	<b>8.6</b>	<b>280.5</b>	<b>15.9</b>	<b>18.2</b>	<b>13.5</b>	<b>27.5</b>	<b>52.4</b>	<b>2000</b>	<b>Lithuania</b>
<b>10.5</b>	<b>6.7</b>	<b>10.7</b>	<b>160.2</b>	<b>14.4</b>	<b>15.3</b>	<b>13.5</b>	<b>21.2</b>	<b>55.8</b>	<b>2000</b>	<b>Latvia</b>
<b>22.5</b>	<b>5.8</b>	<b>10.6</b>	<b>2814.5</b>	<b>16.6</b>	<b>14.8</b>	<b>18.6</b>	<b>35.7</b>	<b>44.7</b>	<b>2000</b>	<b>Poland</b>
19.7	5.8	9.6	284.6	22.8	21.1	24.7	42.1	45.7	2000	Dolnoslaskie
21.5	4.8	7.9	173.5	18.2	16.3	20.5	38.1	54.4	2000	Kujawsko-Pomorskie
32.8	7.4	18.2	155.4	14.1	13.5	14.8	34.9	41.5	2000	Lubelskie
15.8	6.0	9.4	96.7	21.4	18.7	24.5	35.4	30.6	2000	Lubuskie
23.1	4.4	10.9	231.0	16.5	15.9	17.1	41.2	50.1	2000	Lodzkie
25.6	5.3	13.7	177.8	12.0	11.0	13.1	27.6	42.1	2000	Malopolskie
23.6	4.6	9.3	318.3	13.6	13.1	14.1	32.0	41.9	2000	Mazowieckie
17.9	8.9	10.0	71.3	14.9	10.0	20.7	31.4	25.3	2000	Opolskie
24.9	5.6	13.6	137.2	15.2	15.7	14.7	41.6	51.9	2000	Podkarpackie
33.6	7.5	12.6	84.3	16.3	14.1	18.9	30.9	53.5	2000	Podlaskie
16.1	4.5	7.9	139.1	17.2	14.0	21.0	33.6	43.7	2000	Pomorskie
12.7	5.7	9.1	305.9	19.0	15.5	23.1	34.1	38.1	2000	Slaskie
35.1	6.6	10.3	106.6	17.5	16.3	19.0	40.3	46.9	2000	Swietokrzyskie
16.0	9.8	6.8	152.8	22.5	20.7	24.6	41.2	49.1	2000	Warminsko-Mazurskie
23.9	6.0	10.0	234.9	14.3	10.8	18.1	32.9	43.7	2000	Wielkopolskie
15.4	6.0	6.5	145.0	20.2	17.5	23.4	46.2	52.8	2000	Zachodniopomorskie
<b>25.4</b>	<b>2.9</b>	<b>16.4</b>	<b>816.1</b>	<b>7.7</b>	<b>8.2</b>	<b>7.1</b>	<b>17.8</b>	<b>49.2</b>	<b>2000</b>	<b>Romania</b>
32.9	3.4	25.4	145.2	7.9	8.1	7.7	15.3	53.0	2000	Nord-Est
26.1	3.8	18.2	134.7	9.8	10.1	9.4	20.1	40.0	2000	Sud-Est
29.2	2.7	17.4	125.1	7.5	8.0	6.8	21.4	45.5	2000	Sud
30.5	2.1	6.2	69.5	5.8	6.0	5.6	14.0	49.0	2000	Sud-Vest
21.0	2.8	16.3	76.9	8.2	9.2	7.0	20.9	45.0	2000	Vest
24.5	2.6	12.6	100.8	7.6	8.0	7.1	15.4	48.0	2000	Nord-Vest
20.2	3.1	20.4	94.8	7.9	8.6	7.0	16.6	63.3	2000	Centru
7.0	2.7	7.4	69.0	6.8	7.5	6.0	22.4	53.5	2000	Bucuresti
<b>11.2</b>	<b>12.9</b>	<b>6.1</b>	<b>66.4</b>	<b>7.1</b>	<b>6.9</b>	<b>7.2</b>	<b>16.4</b>	<b>62.7</b>	<b>2000</b>	<b>Slovenia</b>
<b>7.8</b>	<b>4.0</b>	<b>1.7</b>	<b>489.6</b>	<b>19.1</b>	<b>19.5</b>	<b>18.6</b>	<b>36.9</b>	<b>53.8</b>	<b>2000</b>	<b>Slovak Republic</b>
10.2	3.4	2.0	24.6	7.4	7.2	7.6	18.9	29.7	2000	Bratislavsky kraj
8.2	2.7	1.6	155.7	17.6	17.7	17.5	32.8	53.3	2000	Zapadne Slovensko
7.1	3.6	2.2	134.3	21.0	19.9	22.4	37.5	54.4	2000	Stredne Slovensko
6.4	6.7	1.4	175.1	24.6	26.8	22.1	47.4	57.3	2000	Vychodne Slovensko

### Abbreviations and methodological notes

#### Abbreviations

##### Countries

CC Candidate Country: BG, CZ, EE, HU, LT, LV, PL, RO, SI, SK  
CEC Central European Country: CCs plus AL, BA, FYROM

BG Bulgaria  
CZ Czech Republic  
EE Estonia  
HU Hungary  
LT Lithuania  
LV Latvia  
PL Poland  
RO Romania  
SI Slovenia  
SK Slovakia

AL Albania  
BA Bosnia and Herzegovina  
FYROM Former Yugoslav Republic of Macedonia (in text)  
MK Former Yugoslav Republic of Macedonia (in tables and graphs)

##### Institutions and Programmes

EC European Community  
EU European Union  
Eurostat Statistical Office of the European Communities  
IAB Institut für Arbeitsmarkt- und Berufsforschung, Nuremberg  
ILO International Labour Office  
ICLS International Conference of Labour Statisticians  
ICON Icon-Institute, Cologne  
NSI National Statistical Institute  
PHARE Poland and Hungary: Action for the Restructuring of the Economy  
RWI Rhineland-Westphalian Institute for Economic Research, Essen  
TACIS Technical Assistance to the Commonwealth of Independent States  
UN United Nations  
UNESCO United Nations Educational, Scientific and Cultural Organisation

##### Concepts and Classifications

GDP Gross Domestic Product  
ICSE International Classification of Status in Employment  
ISIC International Standard Industrial Classification  
ISCED International Standard Classification of Education  
ISCO International Standard Classification of Occupations  
LFS Labour Force Survey  
NACE Nomenclature general des Activités Économiques dans les Communeautés Européennes

NUTS Nomenclature des Unités Territoriales pour Statistiques

#### Methodological notes

Major concepts and measures are described in "Data sources and methods" or in the text of the respective sections. The following notes are devoted to specific conditions and circumstances that should be taken into account in interpreting the information presented here or comparing it with other sources.

##### Reference period

The LFS data included here generally refer to the second quarter of 1999 or 2000. They may therefore not be directly comparable to data representing annual averages or referring to other points in time, e.g. mid-year or the end of the year.

Based on provisional results from its 2000 Population Census Latvia has revised its population figures, also affecting the youth and old age dependency ratios. For the sake of consistency the figures shown in this publication, however, still refer to the original LFS data from the second quarter 2000.

The LFS data from Poland for the year 1999 refer to the first quarter.

The LFS data from Bulgaria for the year 2000, which in issue 1/2001 referred to the first quarter, now have been replaced by data from the second quarter.

The administrative data from Albania for 1999 and 2000 refer to the end of the year.

The changes in the number of employed and unemployed between 1998 and 1999 are computed on the basis of the 1998 figures for the second quarter from issue 2/2000 of the "Review".

##### Respondents

Generally, the LFS includes the resident population living in private households. Persons living in collective households and conscripts in compulsory military or community service are either not covered in the survey or, if covered through their private household of origin, excluded in subsequent data processing. However, in a few countries some of these persons may remain in the survey due to the lack of information for their retroactive identification.

In Bulgaria, Lithuania and Poland the LFS does not cover the population under 15 years of age. The required figures for this age group were provided by the respective NSIs from other sources.

In Estonia, the 15-year age limit is defined as of January 1 rather than the last day of the reference week.

### Data availability, inconsistencies and reliability

The national LFSs in the CECs do not yet fully implement the EU LFS standards. As a consequence, some items may be missing completely, in others individual response categories may have been combined or omitted. In the case of missing information the tables or graphs will show blanks or leave out the country altogether.

For example, the Latvian LFS includes persons who are inactive for family reasons in the residual category, the Bulgarian LFS does not provide data on part-time and temporary employment, unemployment registration and benefits.

Apart from different reference periods and survey coverage noted above, inconsistencies in data on the same subject may result from rounding errors or, particularly in the case of shares, whether persons with no answer are taken into account. In other cases, apparent inconsistencies are due to the application of different age limits for the persons included (usually 15–64).

Figures which are unreliable owing to the small size of the sample are set in brackets (). In the case of extremely unreliable data, figures are replaced by a “.”.

### Other

The CEC-10 figures refer to the CCs (BG, CZ, EE, HU, LT, LV, PL, RO, SI, SK) and are computed as a weighted average. It should be noted that this average will be dominated by the results from the largest countries (PL and RO). As such, the CEC-10 only is a statistical computation and does not represent any type of political unit.

The order of countries in the tables and graphs follows the alphabetical order of the English country codes first for the CCs, then for the three additional PHARE programme participants.

The order of regions within countries follows their numbering according to Eurostat.

### Errata in issue 1/2001

- P. 14, 20, 51: By an error in the placement of the decimal point, the employment growth for the year 2000 in Hungary was given as 5.8 instead of 0.58%, so the correct figure should be 0.6.
- P. 17: In the first paragraph, last line, the first word should be “unemployment” instead of “employment”.
- P. 53: The unemployment rates by age for Latvia accidentally copied the figures from Lithuania.
- P. 59: Although the national LFS in the FYROM collects basic data on all persons in a household, the published results only refer to the age group 15–80. Thus, the total population as well as the activity rates for males and females given for the year 2000 only referred to that age group and the youth and old age dependency rates were calculated on an incorrect basis.

### Errata in issue 1&2/2001

- P. 48–59 The distribution by education given for the population applies to the age group 15+ rather than 15–64.
- P. 53 The unemployment total for Latvia accidentally copied the figures from Lithuania.

### Errata in issue 2/2001

- P. 9 In the second paragraph, seventh line, the first word should be “phenomena” instead of “phenomenon”.