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ABSTRACT

The transition economies of Central and Eastern Europe have undergone substantial changes due, in part, to vocational education and training (VET). One of the most important objectives of the European Union (EU) enlargement process is to monitor key indicators of the educational systems and labor markets so that the different skills in demand and the many economic sectors function within a common EU framework. (Country profiles of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Former Yugoslav Republic of Macedonia, Montenegro, Poland, Romania, Slovak Republic, and Slovenia give background information and key statistics for interpreting comparisons subsequently presented.) Participation rates in secondary education in almost all the Central and European countries remain high for 16 year olds, and although an increasing number of young people are studying until the age of 20 to acquire either a general or vocational qualification at upper secondary level, participation starts to fall off after the end of compulsory education. Analysis of Labor Force Surveys (LFS) has shown that labor force activity rates rise with increasing levels of education. Further comparative analysis with reliable and relevant information of good quality would be helpful, and the provision of data remains one of the most important objectives for the key indicators project. (Annexes include general notes, definitions, cross-references, and data. Contains 24 figures, 18 tables, and 8 references.) (MO)

Central and Eastern Europe

REPORT

Key indicators on vocational education and training

October 2002

European Training Foundation

European Training Foundation

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This report is published in the framework of the ETF Key Indicators project conducted in 2001. It presents a selection of the indicators collected through the network of the National Observatories in Central and Eastern Europe.

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This publication is also available on the Internet:
http://www.etf.eu.int/publications/central and eastern europe

The ETF is the European Union centre of expertise supporting vocational education and training reform in the future member states, the western Balkans, the Mediterranean partner, the New Independent States and Mongolia.

It maintains a network of National Observatories in its partner countries to provide up-to-date and in-depth information and analysis of the local situation in vocational education and training.

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A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (http://europa.eu.int).

Cataloguing data can be found at the end of this publication.

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Foreword

The transition economies of Central and Eastern Europe have already undergone substantial changes and vocational education and training is part of this process. The proposed enlargement process of the European Union will have a major impact on Central and Eastern Europe countries as different skills are now in demand and many economic sectors are in the process of change. One of the most important objectives within the enlargement process is to seek to monitor the educational systems and labour market on a regular basis and within a common EU framework.

This publication is the outcome of the Key Indicators project conducted and financed by the European Training Foundation in 2001. The statistics and indicators have been collected, checked and validated through the network of the National Observatories. The data collected through the National Observatory network was supplemented by those collected by Eurostat and OECD. The country profiles were prepared in co-operation between ETF, National Observatories and the Country Managers.

Central and Eastern European participants in the 2001 ETF Key Indicators project

Albania (AL), Bosnia and Herzegovina (BA), Bulgaria (BG), Croatia (HR), Czech Republic (CZ), Estonia (EE), Hungary (HU), Latvia (LV), Lithuania (LT), Former Yugoslav Republic of Macedonia (MK), Montenegro (MG), Poland (PL), Romania (RO), Slovak Republic (SK), Slovenia (SI)

Introduction

In the last decade, changing labour market and economic and social conditions in the Central and Eastern European countries have resulted in a clear demand for more and better education and training. Vocational education and training is becoming more and more important for an increasing proportion of jobs as greater weight is placed on individual knowledge and skills.

This publication provides a basic analysis of data collected through the European Training Foundation's Key Indicators project. The indicators presented in this report are collected by the European Training Foundtion on a regular basis through the National Observatory network. In this publication the data were supplemented by those collected by Eurostat and OECD.

Participation in vocational education and training and the main aspects of national labour markets are presented in this publication.

Part 1 of this publication provides a profile for each participant with background information and key statistics for interpreting the comparisons presented subsequently in the text. It also identifies the main aspects and trends in vocational education and training trends in vocational education and training. The country profiles were prepared in co-operation between ETF, National Observatories and the Country Managers. Access to and participation in vocational education and training as well as spending patterns on such programmes are reviewed in Part 2. As the process of enlargement will substantially modify the characteristics of the EU labour market, Part 3 looks at the main aspects of national labour markets. The annex provides the full set of data used in this publication as well as important information on the definitions and methods underlying these data.

Some measurement issues are also covered in this publication.

As a step towards improving the quality of the data collection process, some issues related to measurement are also covered in this publication.

There is an increasing need for refined indicators that reflect trends in VET.

All the partner countries are taking steps to improve the process of data collection and analysis. There is an increasing need for refined indicators, which reflect and monitor recent trends in vocational education and training. The Foundation will continue to support the partner countries in the field of data collection, to assist them in identifying and filling data gaps and to make better use of the international comparative analysis for informing the debate on vocational education and training.

1. Country profiles

Albania

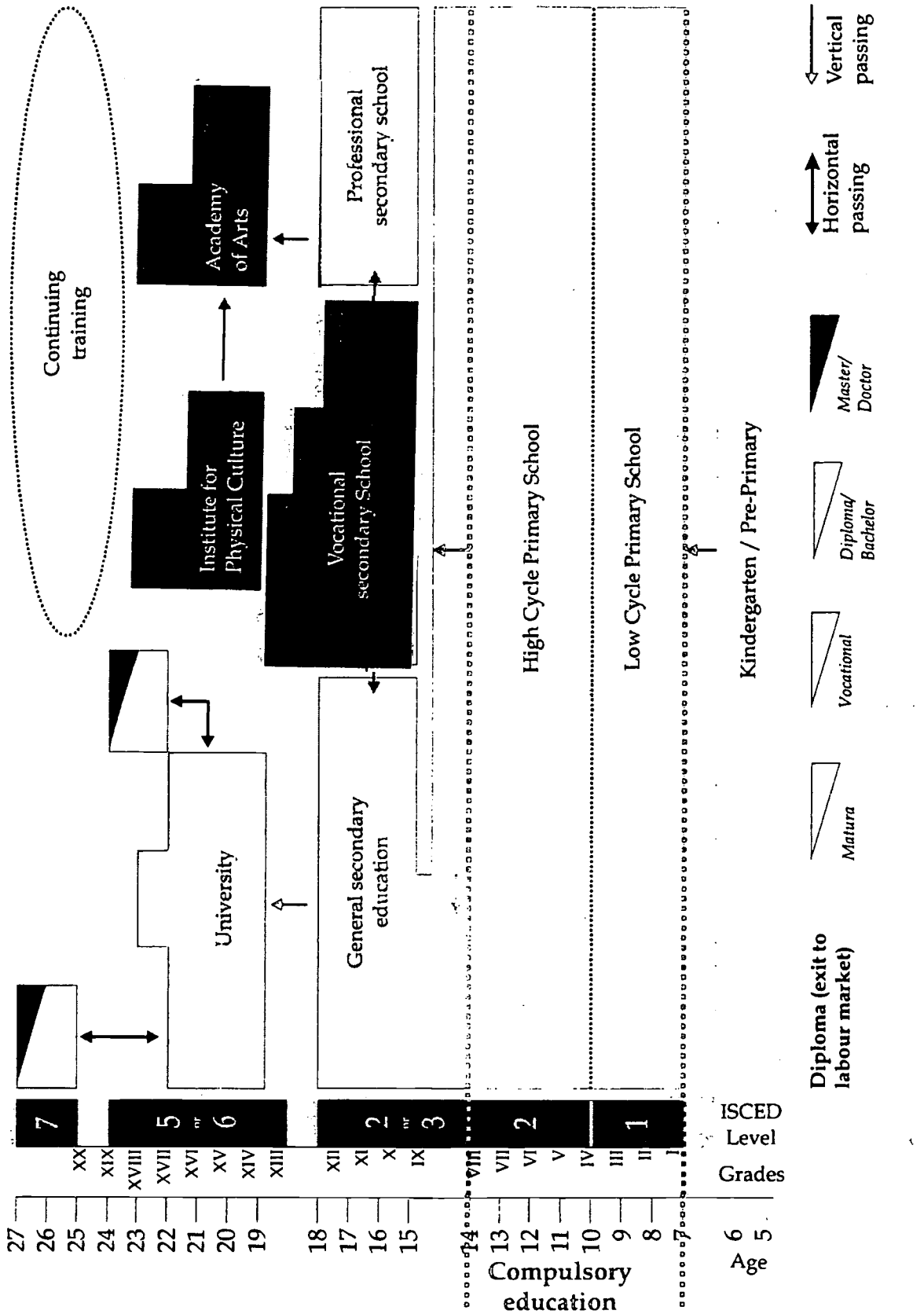
With a GDP per capita of about 1,000 PPS€ in 1999, Albania hasn't the financial resources to respond to rising demand for education, much of which is due to demographic growth. An already above-average proportion of population aged less than 15 years (32.4% in 1999 almost double than the EU-15 average) is expected to increase. A six-year-old child can expect to be enrolled in schooling for 9.5 years in 1999, which is two years less than in 1989 and six years less than the average for the OECD countries (15.4 years). In terms of employment, over dependence is clearly more acute in Albania than in any other country in the region. The concentration of employment in this category is over 70%. In 2000, the registered unemployment rate was 16.8% while the unemployment rate for people aged 15-19 was 13.4%. Young people are confronted with the uncertainties of the labour market and are not provided with transferable skills and broad knowledge, which will permit their flexibility. There is a lack of long term employment strategy.

The country had embarked upon a reform process in vocational education and training. Prior to 1990, in Albania, vocational schools provided agricultural and technical and industrial training and a high proportion of the education cohort (about 70%) attended such establishments. At present, secondary education is divided into general and vocational education. Programmes in general education last four years while the ones in vocational education last from three to five years but vocational education and training does not play an important role in the context of secondary education. During the transition, real resources for education have fallen with at least one percentage point during couple of years (from well over 4% of GDP in the early 1990s to 3% in 1999) and are well above the mean level for 19 transition countries (4.8% in 1998). As a result, chronic lack of resources had weakened the system year by year and the quality of education suffered.

There is a lack of continuity between initial vocational education and training and further adult training, and the concept of lifelong learning is totally unknown in the curriculum environment. Also the provision of the management training is inadequate to respond to the challenges and opportunities presented by the adaptation of existing and developing companies to technological change and the international market.

For data see Annex A4

A mapping of national education programmes to ISCED97 for the school/academic year 1999/2000 is provided in the framework of the joint UNESCO/OECD/Eurostat data collection 2001. It is also available on the Internet: http://forum.europa.eu.int/Public/irc/dsis/edtcs/library?I=/public/unesco_collection/programmes_isced97/school_1999_2000



This diagram represents the first stage in the ongoing development of a standard graphical model for vocational education and training systems. Future refinement may include the further alignment of terms, student enrolment and dropout figure, and local language terms.

Bosnia and Herzegovina

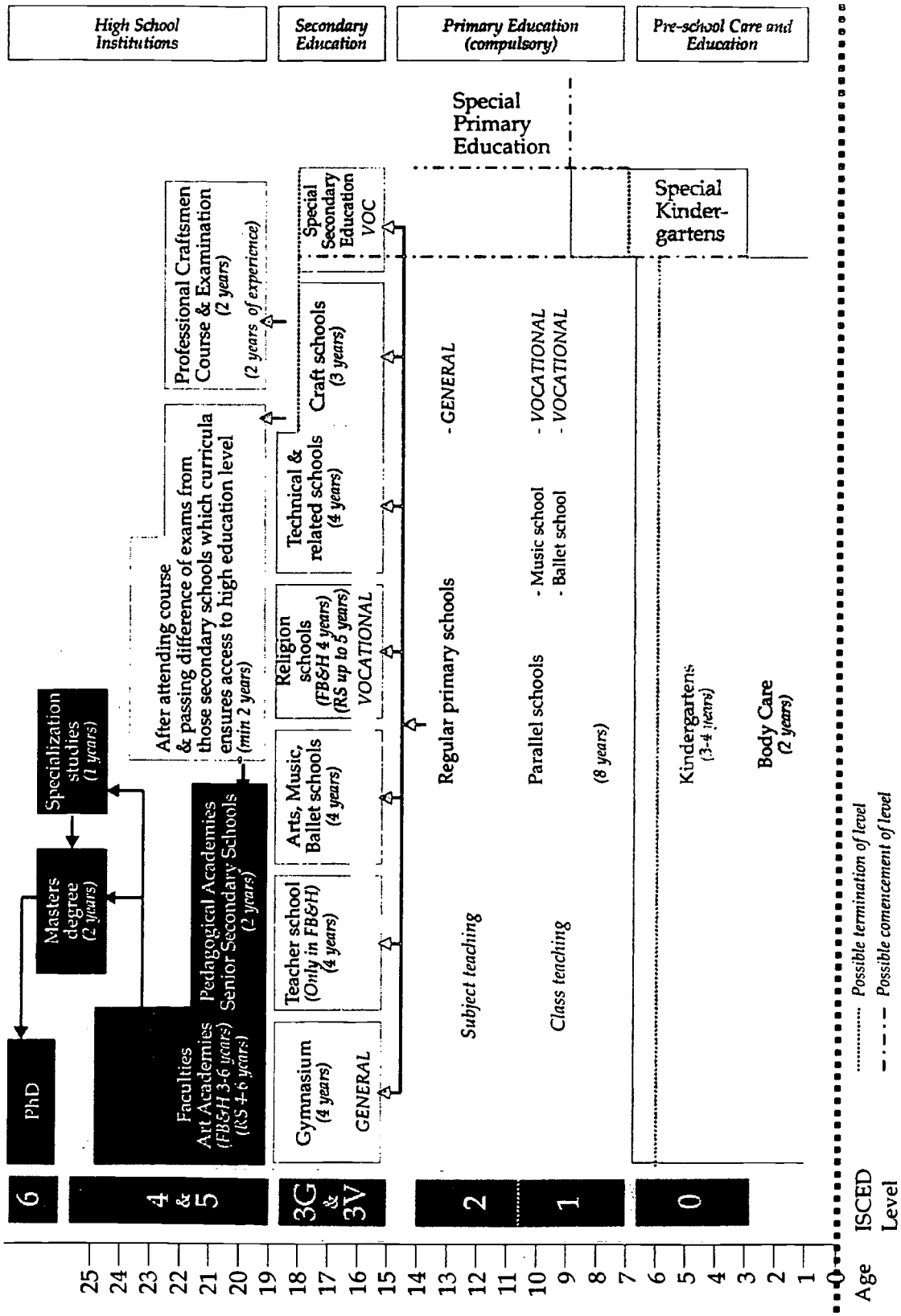
A comparatively low level of national income (about 1,000 USD in 1999), coupled with an above-average population represents a challenging economic and demographic environment for educational improvement. There is no comprehensive and comparable information on the state of the post-war economy[1]. The 'grey' economy (outside tax and social security law) remains large in Bosnia and Herzegovina. In 1999 it was said to account for 30-40% of the country's GDP, and 70,000 to 100,000 people counted in it. Unemployment has been a dominant problem as in the other countries in the region. In 2000 there were more than 400,000 registered unemployed but the unofficial estimates indicate an unemployment rate of 40% with peaks of 70% in rural areas. Only 2% of the registered unemployed benefit from training and employment services. Labour demand is restricted to specific fields and there is no co-ordination between the needs of the country and vocational education and training.

In Bosnia and Herzegovina, initial vocational education and training starts after the completion of compulsory education. The range of secondary schools includes 4-year technical schools covering approximately 20 technical fields, as well as 3-year vocational schools, which specialise in a broad range of particular trades and occupations. A comparatively large percentage of basic school graduates (about 90% in 2000) continued into secondary, 77% into some forms of vocational schooling and 23% into general secondary (data refers only to Federation). In 2000, about 55% of those who entered vocational secondary, went to 4-year technical schools that give access to higher education subject to passing the Matura examination while the other 45% entered 3-year craft schools (school-leaving certificate but no Matura exam. Financing of vocational education and training is devolved to cantons in the Federation of Bosnia. Funds are allocated to schools on the basis of the number of classes. In 2000, education expenditure represented about 10% of public spending (data refers only to Federation).

The existing infrastructure, legal basis and financing system for continuing training have not been updated after the war. The training centres operated by the Public Employment Services and the in-service training facilities of companies are insufficient for the needs. There is still a provision of training where jobs no longer exists, while training in newer occupations and skills is not provided to young people. However some management education is being offered through the Chamber of Commerce (transport, banking) and a private sector (for languages and IT) is slowly developing.

For data see Annex A4

1 Education and labour market data for Bosnia and Herzegovina must be treated with care because methods of collection vary and because of population shifts due to returning refugees, and, to a lesser extent, internal movements of people.



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Bulgaria

Despite a comparatively low level of national income (in 2000, GDP per capita was 6,000 PPS€), Bulgaria underwent important changes. The increase in real GDP growth was evident for 2000 (5% over the 1999 figure). Labour market developments were similar with the ones in Latvia or Lithuania as employment decline went along with a decrease in the size of the labour force. As a consequence, the unemployment rate rises at 16%, among the highest rates among the Future Member States.

Like in other Central and Eastern European countries, in Bulgaria in the last years there was a steady decline in the enrolment rates in compulsory education. In 2000, of the completers of compulsory education, about 57% of students entered vocational and technical schools, a proportion that has been stable in the last years. The number of students in vocational education and training decreased every year. By contrast, tertiary enrolments had risen by more than 50% compared to 1998. Education finance remains a very sensitive issue. With less than 4% of GDP allocated in education in 1999, Bulgaria is also facing difficulties with shrinking budgets in real terms.

In Bulgaria through the vocational education system, the Ministry of Education and Science training is provided for adults in vocational schools and high schools. Besides the vocational schools, a large number of training providers is from public, private and non-government sectors. The percentage of companies providing continuing vocational training is the second lowest among the countries that took part in the CVTS2. In terms of type of training, in Bulgaria the dominant form is planned job-related measures, organised by 65% of the companies that offered continuing vocational training.

For data see Annex A4

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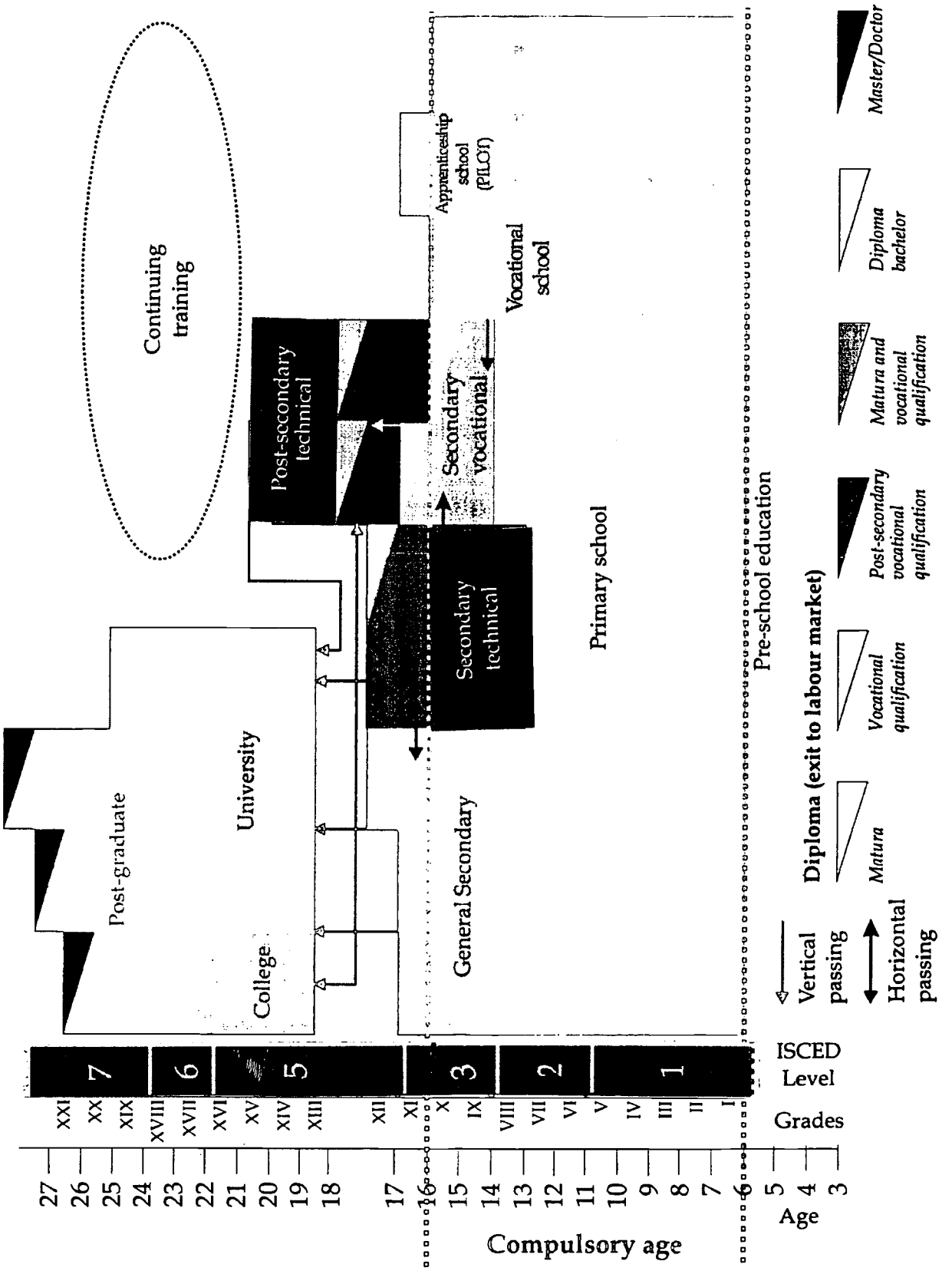

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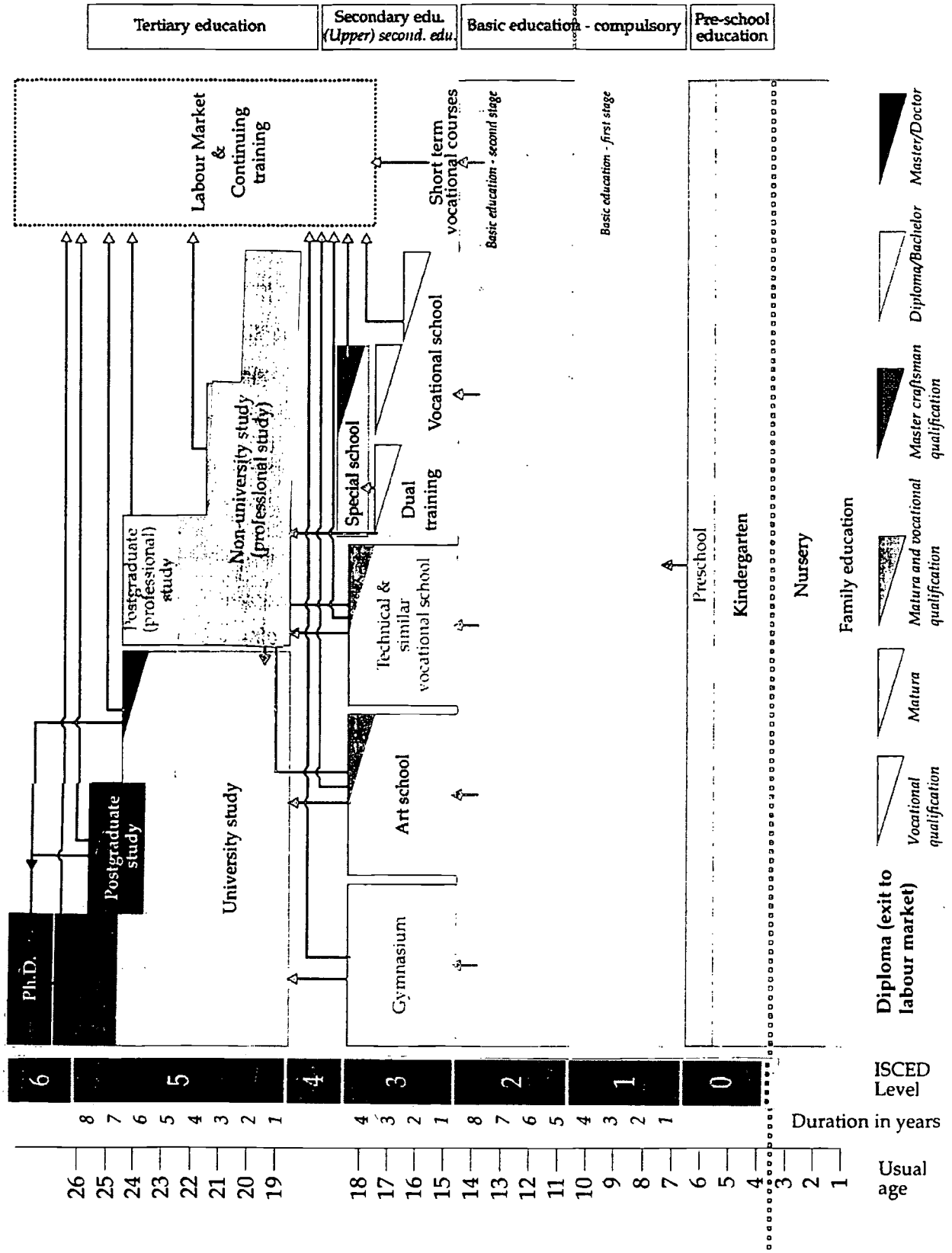
Croatia

Croatia was one of the most prosperous regions of the former Yugoslavia, with a per capita output of about one-third above the average of the country. The transition towards a market economy was disrupted and the war damage in the country produced different patterns of economic developments and led to cuts in spending on health, education and social welfare. In 2000, the structure of employment was 60% in services (close to the EU-15 average), 23% in industry and 12 % in agriculture. The GDP growth was still flat over the last years and GDP per capita was estimated at 4,000 PPS€ in 1999. Activity rate was 49% in 2000 while the unemployment rate was 17%, which is double than the EU-15 average.

In early 1995 some changes in the education system has been made, however the system is still highly centralised. Vocational education is organised in three- and four-year educational programmes. A characteristic of the system is the existence of a "dual system" of schooling with work placement. This three-year educational programme was introduced on an experimental basis in 1996 and now exists for more than 50 trades within the crafts sector. Four-year programmes are the most popular and more than 40% of the secondary school students have enrolled in these in 2000 while the industrial and craftmanships schools were attended by 30% of the students. The share of education of GDP went down over the last few years but is now increasing to about 3.4% (1999 estimate). The share of education expenses from the state budget was 16% in 1999 and the allocation mechanisms are rigid and base on incremental budgets relying on the allocation on the previous years.

The rapid restructuring of the Croatian economy, with the decline of the large state enterprises following privatisation have had substantial implication on continuing vocational training. The Public Employment Service have the responsibility for providing the training for the unemployed and those 'at risk' of unemployment due to industrial restructuring. However the lack of financial or development support have put constraints on the further expansion of the system for continuing training.

For data see Annex A4



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Czech Republic

During the early nineties, the Czech Republic managed to maintain a relatively stable macro-economic climate. After a recession period during 1997-1999, an economic upturn has showed in 2000 when the GDP growth rate was 3.3%, slightly below the EU average. The GDP per capita has increased to 13,200 PPS€ and is higher than that of Hungary or Poland, but below the EU average. Between 1994 and 2000 the activity rate declined slightly, especially for women whose rates in those years were 52.6% and 51.6%, respectively. An important decrease can be also observed for people aged under 20 years (from 35% to 15%) as a result of staying longer in school and high participation rates in education.

In 2000 the participation rate in education for people aged 16 years was over 95%, the highest among the Future Member States. Resources for education and training are limited. The public expenditure on education were estimated at 4.5% of GDP in 1999. An increase in public spending on education of up to 6% of GDP represents a policy objective for year 2005. Spending on education as a proportion of total public expenditure decreased from 10.5% in 1994 to 8.9% in 1999 but as a consequence of public administration reform, the funding mechanism was modified and the financial flows for initial vocational education are now channelled through the new regional authorities.

Vocational education and training has always been an important part of the education system given the high proportion of completers of basic education entering secondary vocational education and training (about 81.5% in 2000), among the highest in Europe. Over the previous years there has been a shift towards educational programmes leading to higher qualifications. According to national data, in addition to the 18.5% of basic education graduates entering secondary general education, 36.4% have chosen programs in secondary technical schools leading both to a professional qualification and *maturita*. The proportion of secondary students in programs that end in *maturita* was therefore about 55 to 60% in 2000 compared to just 43% in 1989. The reform of initial vocational education and training was mainly determined by a bottom-up approach, encouraged by the liberalisation of regulatory frameworks in the early nineties. In the context of current public administration reform and the establishment of regional self-governing bodies, the responsibility for secondary education was transferred to the regional authorities.

As a result of the emergence of a training market in the overall context of economic change **continuing vocational training has developed over the last decade** and has been both supply and demand-driven. The considerable expansion of continuing vocational training provision in the early 1990s (about 1200 private training providers currently active on the market), contributed to the adaptation of the training offer as a response to the newly evolving needs for re-training the delivery of the new and updated skills and competencies. Continuing training provided by companies is an important factor of the broader economic reforms as the results from the CVTS2 show. Enterprises also invest important resources for staff development.

For data see Annex A4

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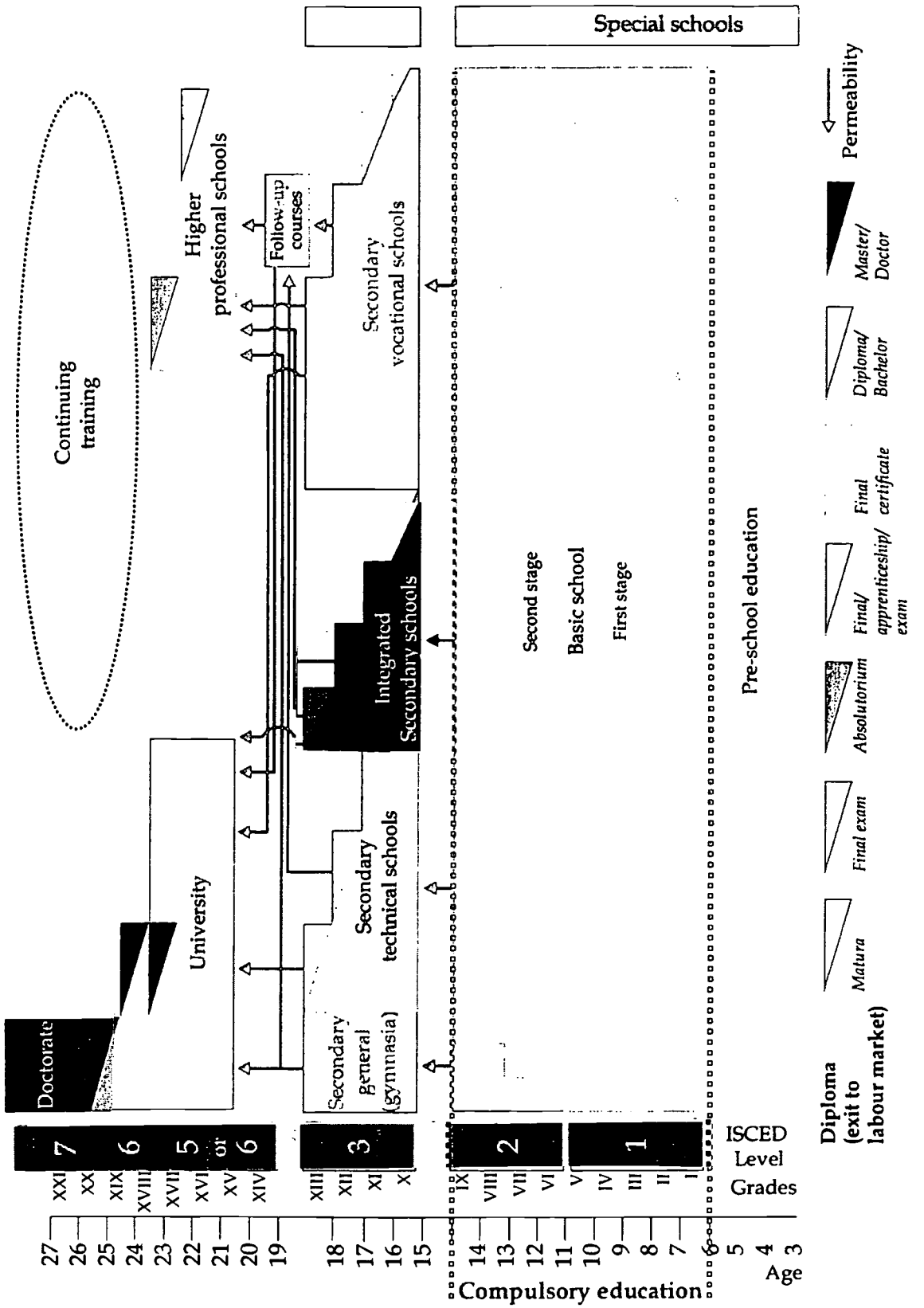

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Estonia

Estonia has the highest GDP per capita (8,200 PPS€) among the Baltic States. The proportion of the population participating in education and training (25 to 64 years) is well above the figures for the other Future Member States: 5.9 per cent. In 2000 the pace of employment decline has slowed down and the unemployment rate was 13.2%, lower than in the other two Baltic States.

Compulsory education starts at the age of seven and ends at the age of 17. The proportion of students enrolled in vocational education and training has remained rather stable since 1995. At the upper secondary education about 2/3 of the students are enrolled in general education and 1/3 in vocational education. One of the policy goals is aiming at **increasing participation in vocational education**. In Estonia the public spending on education as a percentage of GDP was estimated at 7.3 % in 1999, the highest among the Future Member States and well above the EU-15 average.

A **national strategy for lifelong learning** is under preparation and expected to be finished at the end of year 2002. The former idea of establishing a complementary Training Fund to finance continuous learning has been recalled and is under discussion. The proposed amendment of the Act on Adult Education will aim to widen access to continuing and enhance motivation of employers and employees for training.

Continuing vocational training in enterprises plays a more important role in Estonia. The proportion of enterprises providing continuing training is 63%. However, the participation rate in enterprises providing courses is 28%, lower than in Czech Republic (49%), Slovenia (46%) or Poland (33%). However, as in the other two Baltic States other forms of in-service continuing training (i.e. planned learning through job rotation, secondments, self-learning, etc.) are mainly offered.

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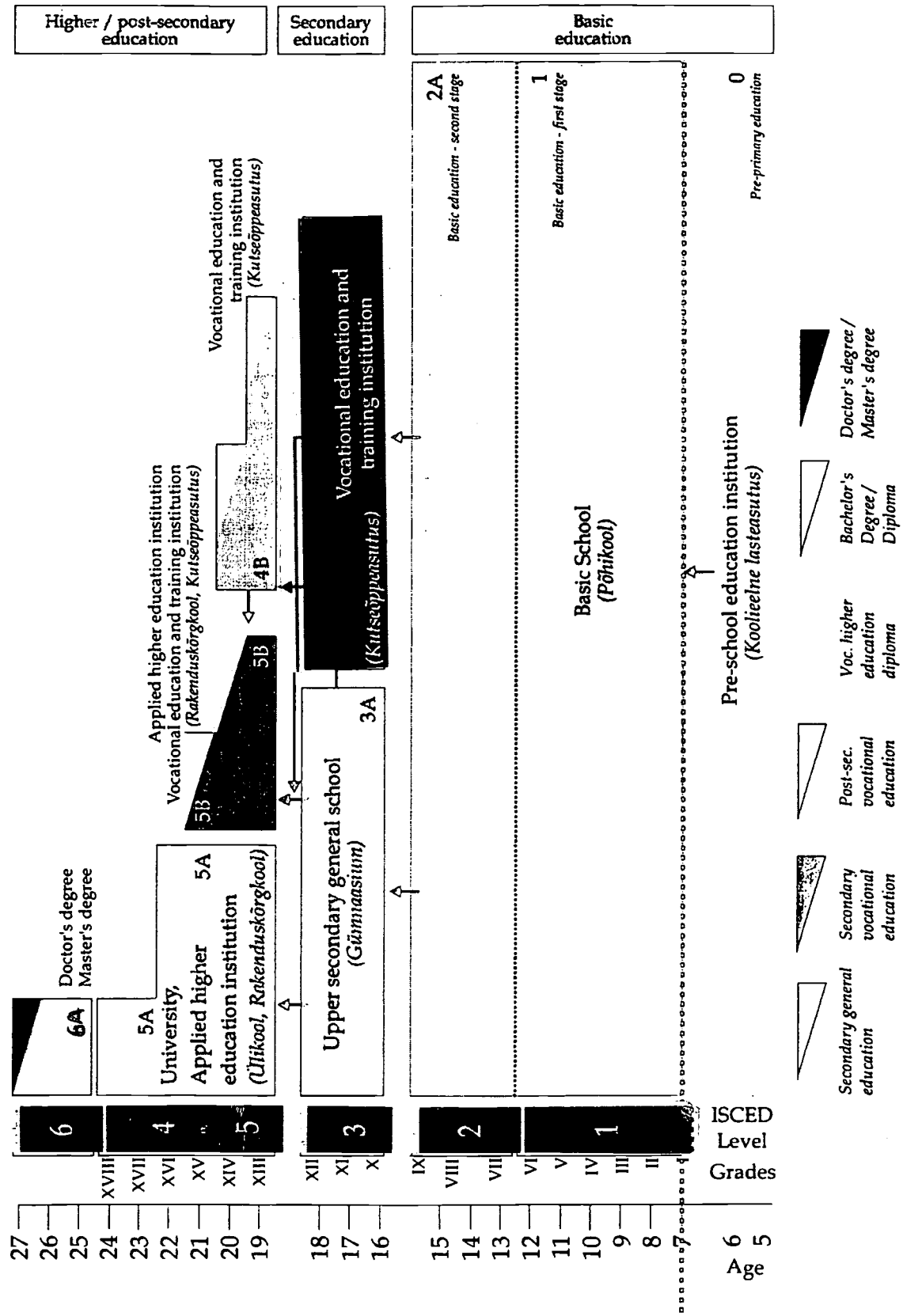

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Hungary

The Hungarian economy is a functioning market economy. The country has a comparatively favourable situation of available national income. In 2000 the employment went up to 55.9% while the unemployment went down to 6.6%, well below the EU-15 average. Hungary and Slovenia were the only two countries among the Future Member States that reported higher employment levels and lower unemployment rates in 2000 compared with 1999.

The initial vocational and education systems continues to move away from a system providing primarily basic vocational qualifications to one that provides intermediate and higher vocational qualifications. This is the result of the trend to later vocational specialisation (which is now deferred until the age of 18 for graduates of secondary vocational schools and 16 in vocational schools), a broader curriculum, the possibility for vocational students to obtain the maturity examination and the development of post-secondary technical education courses. In 2000 about 475,000 students and trainees were trained in more than 1,500 institutions of which 80% provided vocational training programmes.

The Development and Training Fund, financed by a specific contribution (called the Vocational Training Contribution at the rate of 1.5% of wage costs) from enterprises, is a sub-fund of the Labour Market Fund and is used to finance both initial vocational education and training and the training of the employed. However the results of the CVTS2 shows that only 37% of enterprises in Hungary provided training for employees. Among the Future Member States only Bulgaria and Romania reported lower levels of continuing training provision. Participation rates in continuing courses provided by companies are low (26% of employees) compared to 49% in Czech Republic or 46% in Slovenia.

For data see the Annex A4

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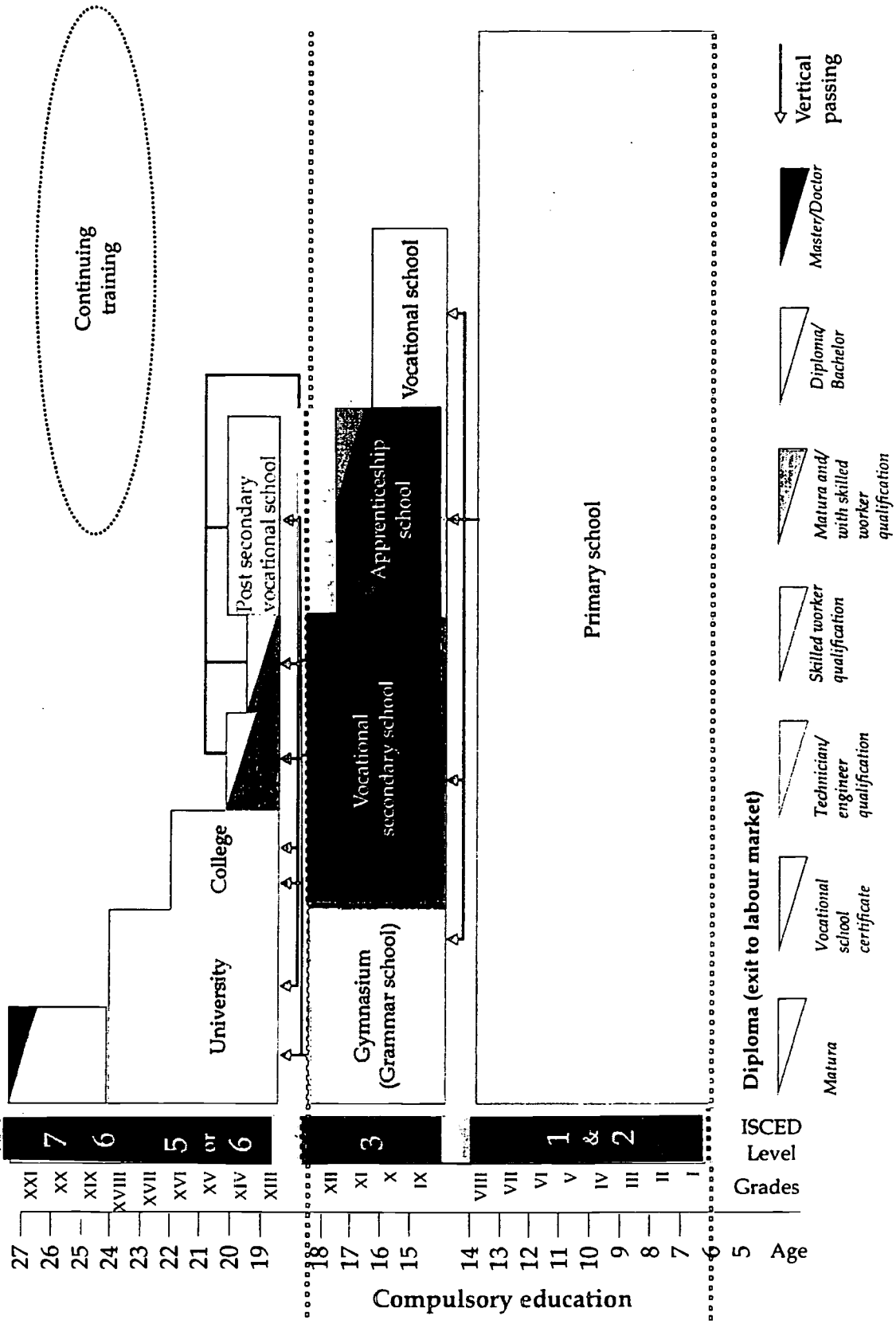

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Latvia

Latvia has the third lowest GDP per capita after Romania and Bulgaria: 6,700 PPS€. In 2000, the employment decline went along with a reduction in the size of the labour force without which the unemployment should have been even higher than 14%.

In 2000 about 30% of the students aged 15-19 were enrolled in vocational education and training programmes. Initial vocational education and training is provided in four types of programmes: *basic vocational* (1.5% of total enrolment in 2000), *vocational leading to qualification* (27% of enrolment), *secondary vocational* leading to vocational qualification level and giving access to higher education (68.5% of the total enrolment) and *vocational leading to vocational qualification level 4* (about 3% of enrolment). The qualification is awarded after passing graduation exams. Since September 2001, qualification exams have been unified both for graduates from initial vocational education and training and continuing vocational training.

The financing of initial vocational education and training in Latvia is made according to the number of students and classes. In 1999, public expenditure on education as a percentage of GDP were estimated at 6.3% and 0.7% earmarked for vocational education and training. Vocational schools are financed mainly from the national budget. School maintenance and teachers' salary costs account for 97% of the budget, with the remaining 3% going towards innovation. A reform of the financing system is currently being debated.

Continuing vocational training is decentralised in Latvia. However, according to the results of CVTS half of the training enterprises offers other forms of in-service continuing training (i.e. planned learning through job rotation, secondments, self-learning, etc.) Local governments offer adult education courses through the regional adult education centres while many companies and non-governmental organisations offer and implement a wide range of continuing training and adult education programmes.

For details see Annex A4

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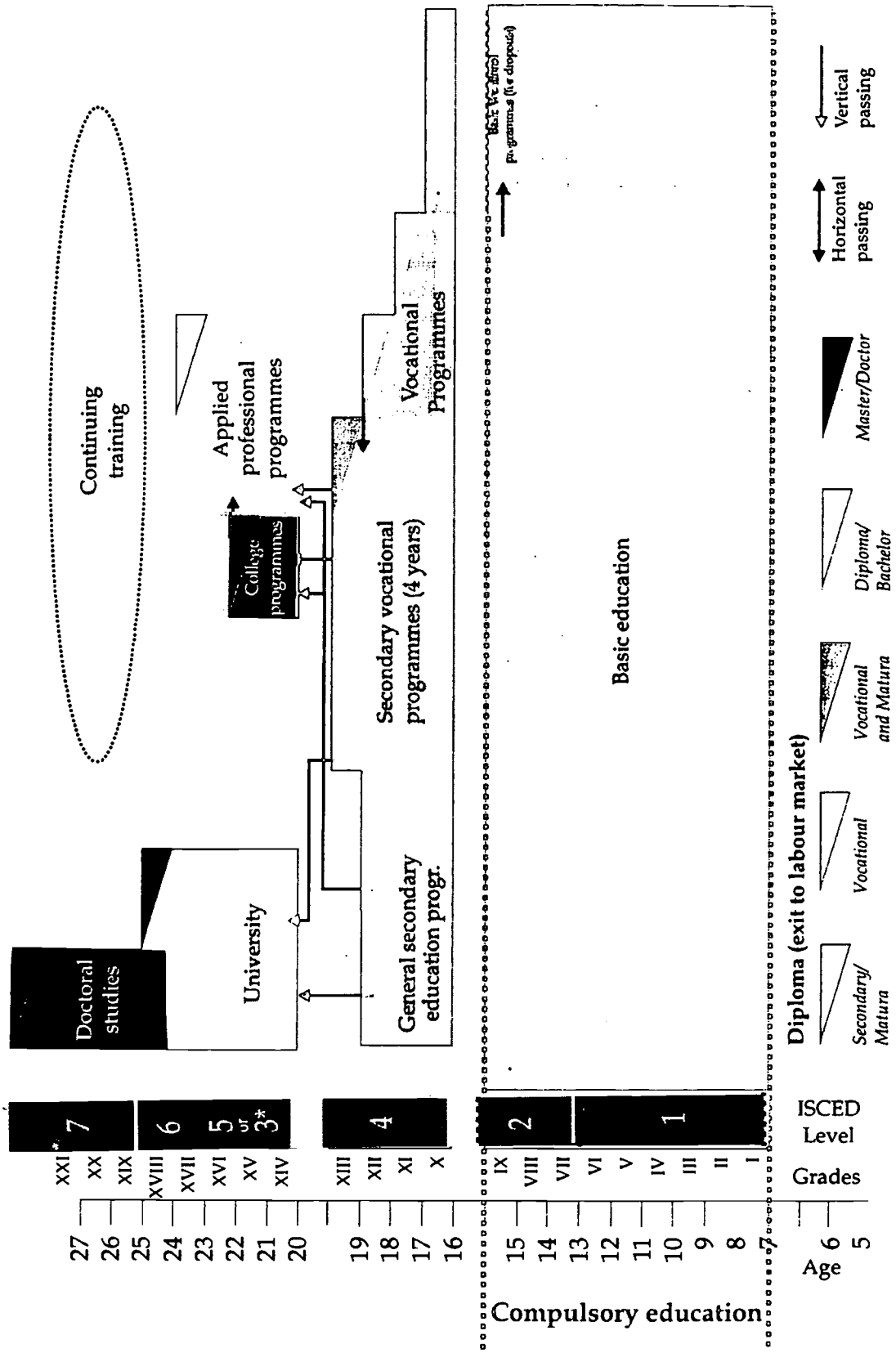

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Lithuania

In 2000 the overall and the youth unemployment rate were the highest in Lithuania among the Baltic States (15.6% and 27.5%, respectively). The decline of employment went along with downsizing/ decreasing of the labour force. The over-dependence on agriculture is a particular feature in Lithuania as in Romania or Poland as the employment rate in agriculture is relatively high (over 10%), only Greece and Portugal having comparable concentrations of employment in this sector. As in the other Future Member States in Lithuania the population decline has been a common trend during the last ten years but national projections show a slightly increase in the total population by the end of 2015. In 2000 the GDP grew with 3.9% and per capita income was 7,300 PPS€.

Starting with the school year 1999/2000 in Lithuania the basic education was extended to 10 years. The participation rate is tailing off after the end of compulsory education (72% at the 17 years age group). Between 1996 and 2000 the total number of students increased by more than 10%, with the largest increase, over 45% at the tertiary level (ISCED 5-6).

The reform of the vocational education and training, started in the early '90s has continued. A new law on vocational education and training has passed in 1997, followed by the White Paper on vocational education and training the following year, both documents setting out the national priorities in this field within the general framework of lifelong learning. The national priorities are related to the implementation of a national qualifications framework, including occupational and training standards and a national assessment, certification and quality assurance system for initial and continuing vocational training.

In Lithuania whilst 43% of enterprises offered some form of **continuing vocational training** to their employees, less than a quarter provided continuing vocational training courses. However the average number of course hours (at 41 hours per participant) was the highest among all the Future Member States except Romania. The highest training intensity took place in real estate, renting and business activities (Nace K) where participants spent on average 48 hours of continuing vocational training courses in 1999, followed by wholesale and retail trades (Nace G) at 45 hours per participant - the highest intensity in the Nace G category in all Future Member States. Overall, expenditure on CVT courses provided by employers represented only 0.8% of total labour costs as opposed to 1.8% in Estonia and 1.1% in Latvia. However, this varied between industries from 0.2% in Nace O (community, social and personal services) and 1.6% in Nace J (financial intermediation). With expenditure per employee on CVT courses at only 133 PPS€ Lithuania is, as are the other Baltic States, close to the bottom of the scale among Future Member States.

For data see Annex A4

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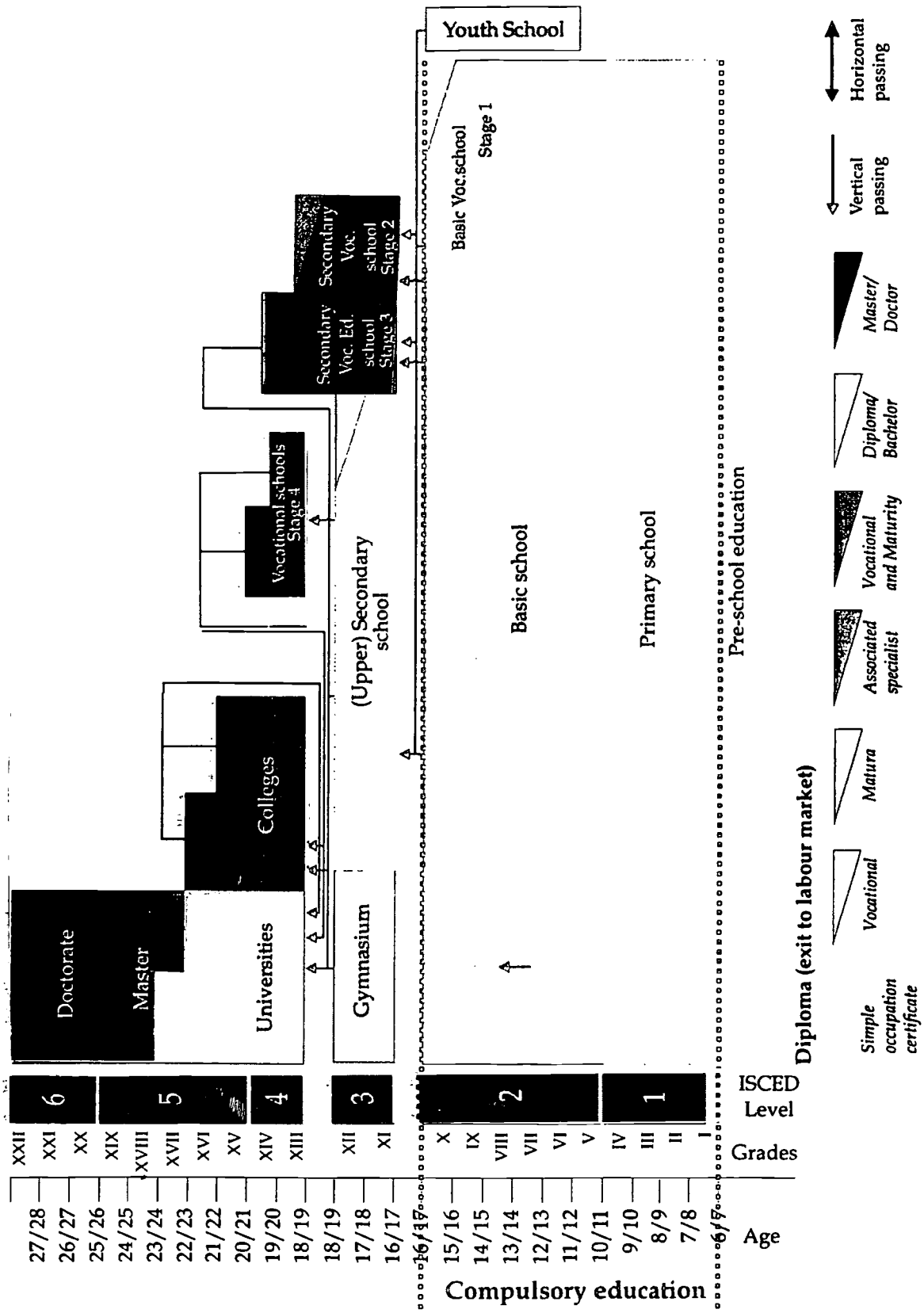

This diagram represents the first stage in the ongoing development of a standard graphical model for vocational education and training systems. Future refinement may include the further alignment of terms, student enrolment and dropout figure, and local language terms.

Former Yugoslav Republic of Macedonia

Of the six Yugoslav republics, Macedonia was one of the least developed economically. The increase in real GDP growth was evident for 2000 (4.6% over the 1999 figure). Labour market developments were similar with the ones in the region. The employment decline went along with a decrease in the size of the labour force. Unemployment has been a predominant problem, with the rate rising above 30% in 2000 and the proportion of long-term and young unemployed remains high.

The secondary level comprises two-, three-, and four-year vocational education and training, general high school, and special programmes for arts. Vocational education and training starts after the completion of primary education (i.e. after grade 8 of basic school). About 80% of the students who completed the compulsory education were enrolled in the secondary education in 2000. Enrolments at entry are 66% into vocational education and training and 34% into general secondary education and show a gradual decrease into vocational education in the last years. At present, more than 110 educational profiles are offered in the country's vocational secondary schools. These profiles are classified in 26 occupational clusters each containing a large number of subject curricula making them unwieldy and often unsuited to changing labour market needs. Approximately 30% of secondary school graduates continued into higher education. Expenditure on education as a percentage of GDP were estimated at 4% in 1999, down from 4.4% in 1996 but is not much worse than the average for the countries in transition. Funds are transferred directly from the Ministry of Education and Science to the schools, and they have to be refunded if they are not used. There is currently no public funding of education at a regional or local level. However, in addition to their allocation from the education budget, vocational schools can raise funds from other sources including student tuition fees, rents charged to other users of school premises and income generated from the sale of goods or services produced by the school. Due to a shortage of funds in the education budget, the costs of electricity, heating, water and similar facilities have usually to be met from the funds raised by the schools themselves. Within education expenditure, secondary education has received almost a quarter of the budget in 2000 while about 60% went to basic education.

There is a general lack of appreciation of the benefits of Continuing Vocational Training among the main stakeholders. Companies do not give a high priority to the training needs of their employees, preferring instead to devote resources to the purchase equipment and investment in new technologies. Consequently, continuing education and training is still under-developed in the country. It is largely limited to programmes in Workers' Universities although adults may also go back to school to improve their basic numeracy and literacy skills or to obtain certain school-level certificates.

For data see Annex A4

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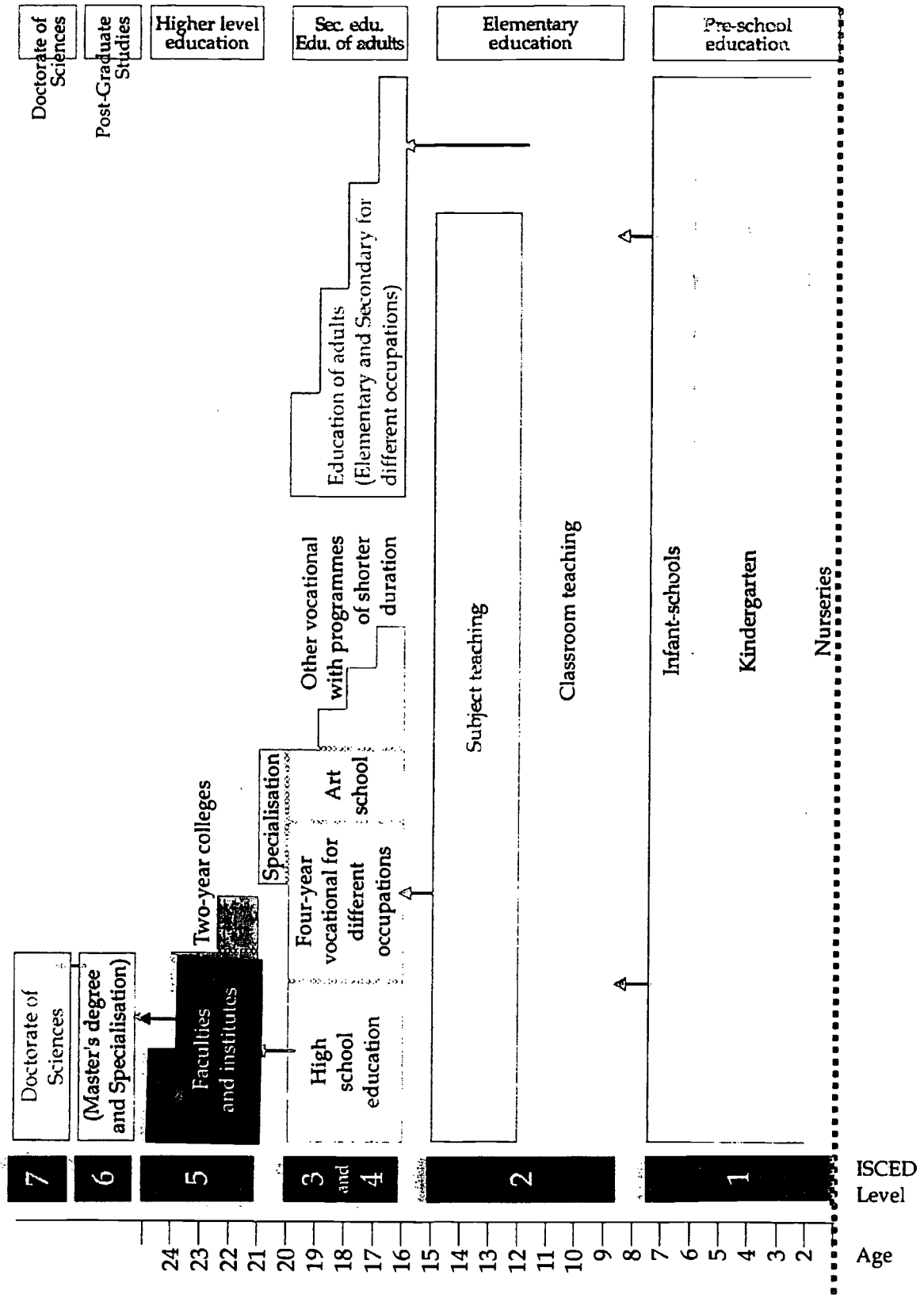

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Montenegro

Among the former Yugoslav republics, Montenegro has the lowest GDP per capita. According to national data[2] in 1998 the GDP per capita was 1,700 USD. Although the massive voucher privatisation has been completed, and the legal framework is in place, the economic stability is far from being achieved. In 2000, the employment in the private sector has grown up by 3.2% but the overall employment rate has decreased by 1.3% (based on LFS data, more than 180,000 persons were employed in 2000). The unemployment rate was 30% while the registered unemployment rate was 40%. During the last two years, new laws on employment taxation, customs, employment have been adopted or proposed (the Labour Law and the Law on Local Management). The new law on employment represent a good legal framework for active employment policies. According to the new law, the Public Employment Service can act as a training provider. Proposals have been submitted in the new law, to increase the flexibility for hiring and firing of persons, legal rights of employees for a training leave and for a compensation coupled with training rights for workers who lose their jobs.

The **education system** has suffered for many years of isolation, chronic lack of investment and general decline of infrastructure and quality. However, the system is functioning reasonably well considering its limited resources. Initial vocational education and training is provided only at secondary level, in four-year technical schools and vocational schools and three-years vocational school. Only the first two provide access to higher education. There is a serious lack of **post secondary vocational education and training**. At the end of vocational and general secondary education the only options are either to enter the tertiary education or the labour market. It is proposed to introduce a two years' post secondary vocational education. In 2000, about 60% of the people in the age group 15-19 were enrolled in the secondary education. The main source of funding of initial vocational education and training is the state budget. During the last 10 years financial resources made available to education and to vocational schools in particular, were limited. Salaries account for at least 88% of the current expenditures and not enough state funding is available for equipment, school materials and training of teachers.

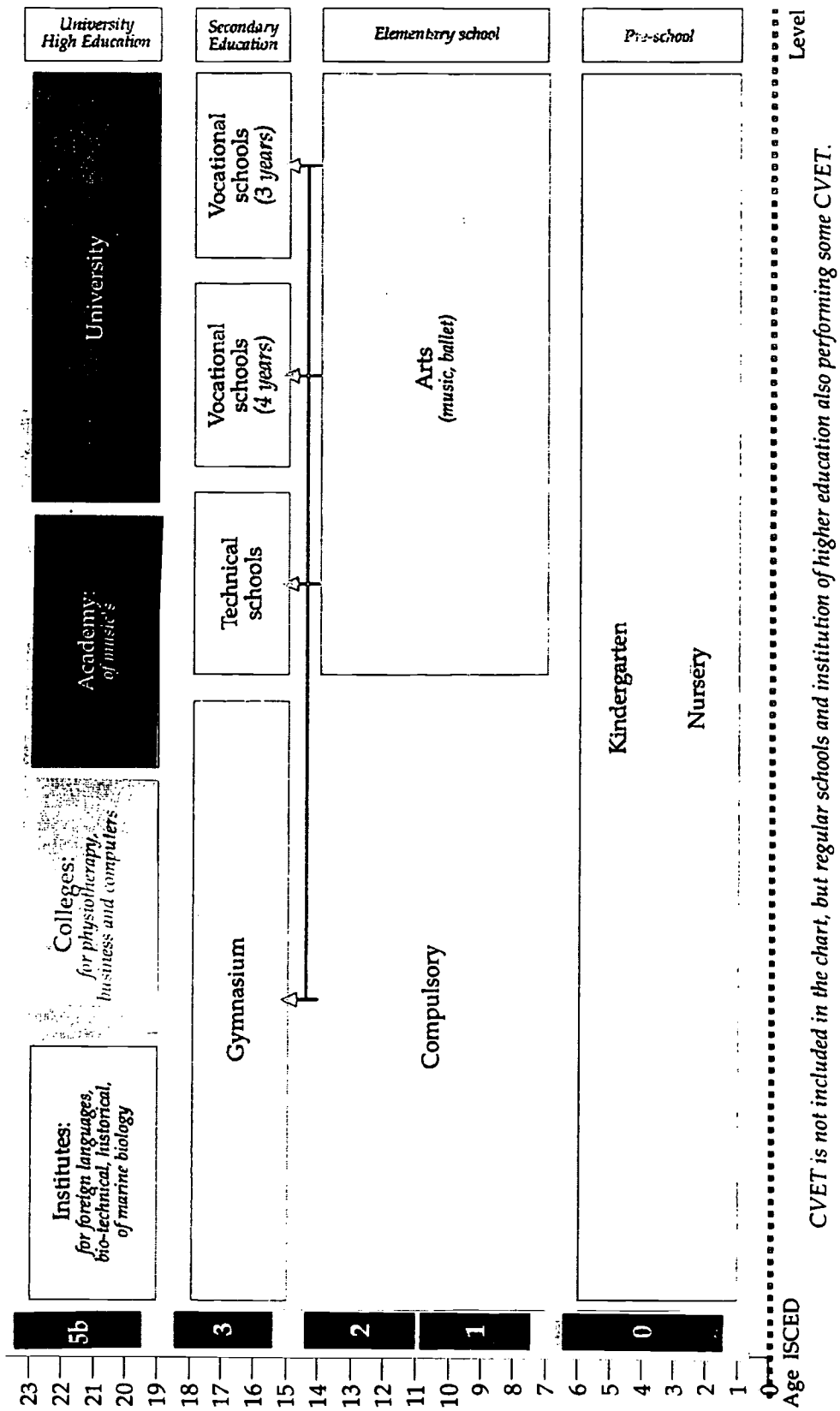
Overall, **continuing vocational training** provision is not systematically organized, it is under-funded, and it takes place in workshops that are not modernized. In the future effort should be put in the increase of the training volume while ensuring its quality and responsiveness to the needs of the economy. Traditionally, every enterprise has been making its own plan for the needs of re-qualification or additional qualification of its employees. Big enterprises had their own training centres for the training of their personnel. Smaller enterprises organise the provision of training for their employees in co-operation with the Employment Office and other competent institutions depending on the sector. Also the Employment Office of Montenegro is supporting the promotion and implementation of continuing vocational training courses for the unemployed.

During the last two years a reform process has been launched by the Ministry of Education to modernise the education and training system. One important area of change is related to increasing the responsiveness of vocational education and training to labour market needs through decentralisation, school management training and teacher education.

Among other priorities is institutional capacity building related to research and development inputs to vocational education and training and improving the quality of training by creating regional training centres and the modernisation of curriculum.

For data see Annex A4

2 All statistics must be treated with care given the poor state of Montenegro's statistical system. Data used in this report are based on information from the Republican Statistical Agency and Ministry of Education. Conflicting data from different sources are nearly inevitable for many of the indicators.



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Poland

In Poland the GDP per capita has increased to 9,000 PPS€ and represents about 40% of the EU-15 average. The **unemployment rate** as well as youth unemployment rate are very high in Poland (16.3% and 35.7% respectively in 2000, second highest rates among Future Member States after Slovak Republic) and represent a major concern.

Compulsory education ends at 18 years of age. At the end of basic education many students continue the education in vocational schools. In 2000 about 62% of the completers of basic education enter the vocational and technical schools. **Post-secondary education is also developing**, especially in private schools. **Enrolment in tertiary education is also very high. The student population almost doubled**, from 794 thousand in 1996 to 1.58 million students in 2000, and the entry rates of are well above the OECD average (59% as against 45%).

A comprehensive and ambitious **reform of the education system** has started in 1998, and will enter in a new implementation phase in the school year 2002/2003. However, close to implementation of this reform, the new government has **reintroduced** at the end of 2001 **the most important type of vocational education and training school** (*Technicum*) which lead to matura examination as well as the possibility to obtain vocational qualifications at that level. Also the Ministry of National Education has abandoned the approach of setting strategic quantitative targets concerning different schooling levels.

The reform, linked with the decentralisation, is aiming to increase access and participation in education, to raise quality and equal opportunities, and to increase autonomy of schools. However many reforms has been already implemented. A new system of **financing** the education has been introduced in 1999 as a consequence of the state administration reform and decentralisation of the school system. As a consequence the expenditures on education of the local government are increasing. General subsidies from the state budget are further distributed autonomously by local self-governments to schools.

The results of CVTS2 (which refers only to Pomorskie region) shows a high participation rate in continuing vocational training courses. However a comprehensive strategy for **continuing education and training policy** is still missing.

For data see Annex A4

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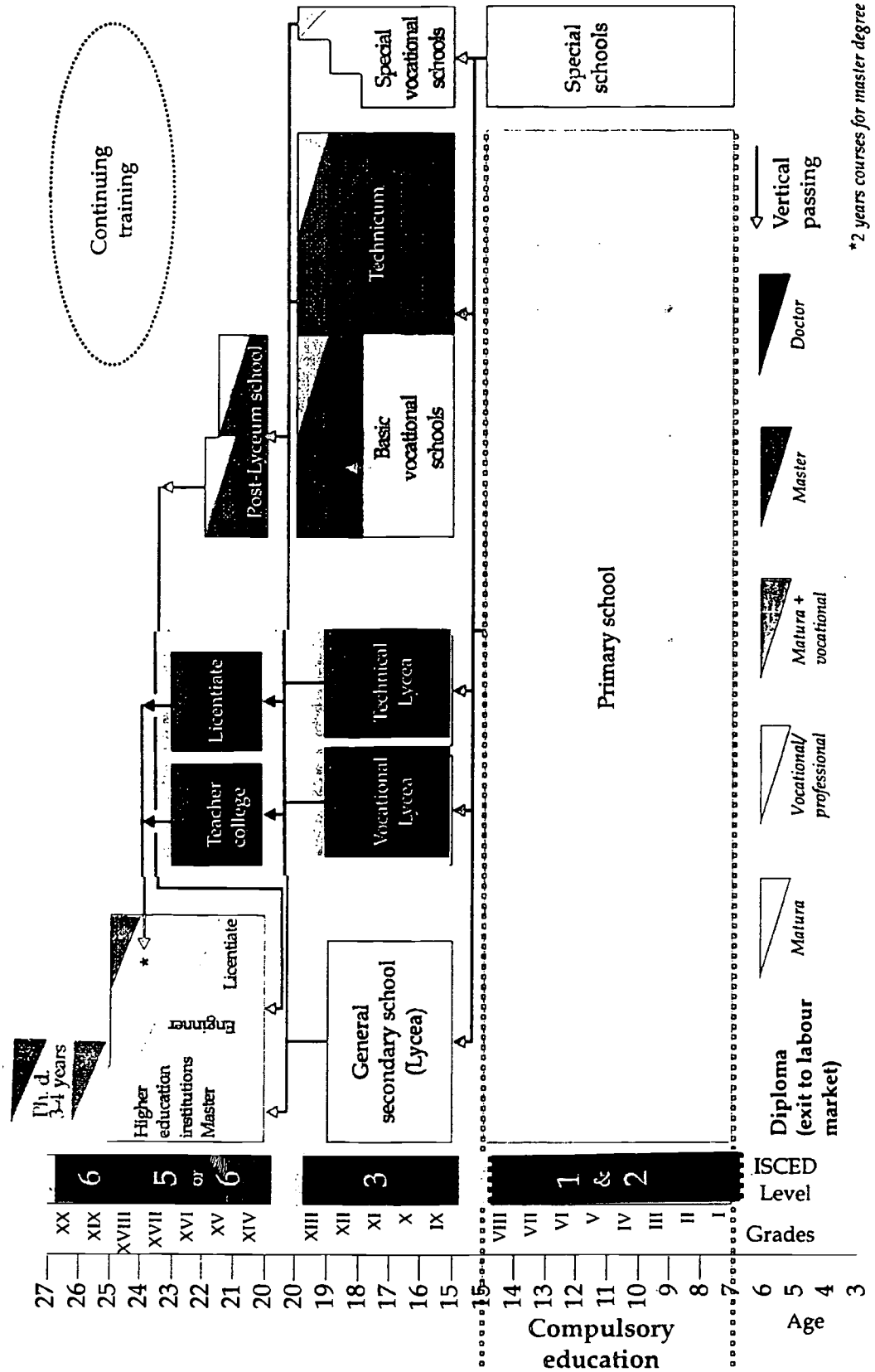

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Romania

Romania has a comparatively unfavourable situation of demand and available national income as GDP per capita was estimated at 5,500 PPS€ in 2000. It is not surprising that the participation rate in education is well below the ones in other Future Member States. The labour market developments in Romania have been unique in recent years. The decline in urban employment has been reflected in a massive job growth in agriculture (much of it of a subsistence nature) rather than in declining activity or rising unemployment. In 2000 the employment as well activity rates remained higher than in other Future Member States (64.2% and 69.6%, respectively) while the reported unemployment rate was among the lowest (7.0%).

In Romania, in the last years there was a steady and rapid decline in the enrolment rates at secondary level. Enrolment in vocational education and training in 1999 represented about 57% of total secondary education, a proportion that have been rather stable in the last years. The education system remains under-funded. In 1999, about 3.4% of GDP was allocated to education, the lowest level among the Future Member States. High pressure on recurrent costs against a background of budgetary austerity exacerbates the rapid decrease in capital expenditures. As a result of financial constraints in updating the equipment and in providing the necessary training to teachers, the reforms have had little influence on vocational education and training.

The consistency of technical and vocational education with continuing vocational training continues to be a priority from the legal and institutional point of view. Attempts to transfer some training costs to employers frequently failed because of their lack of financial resources. The percentage of enterprises offering training is very low, only 11% as it is the participation rate (20%).

For data see Annex A4

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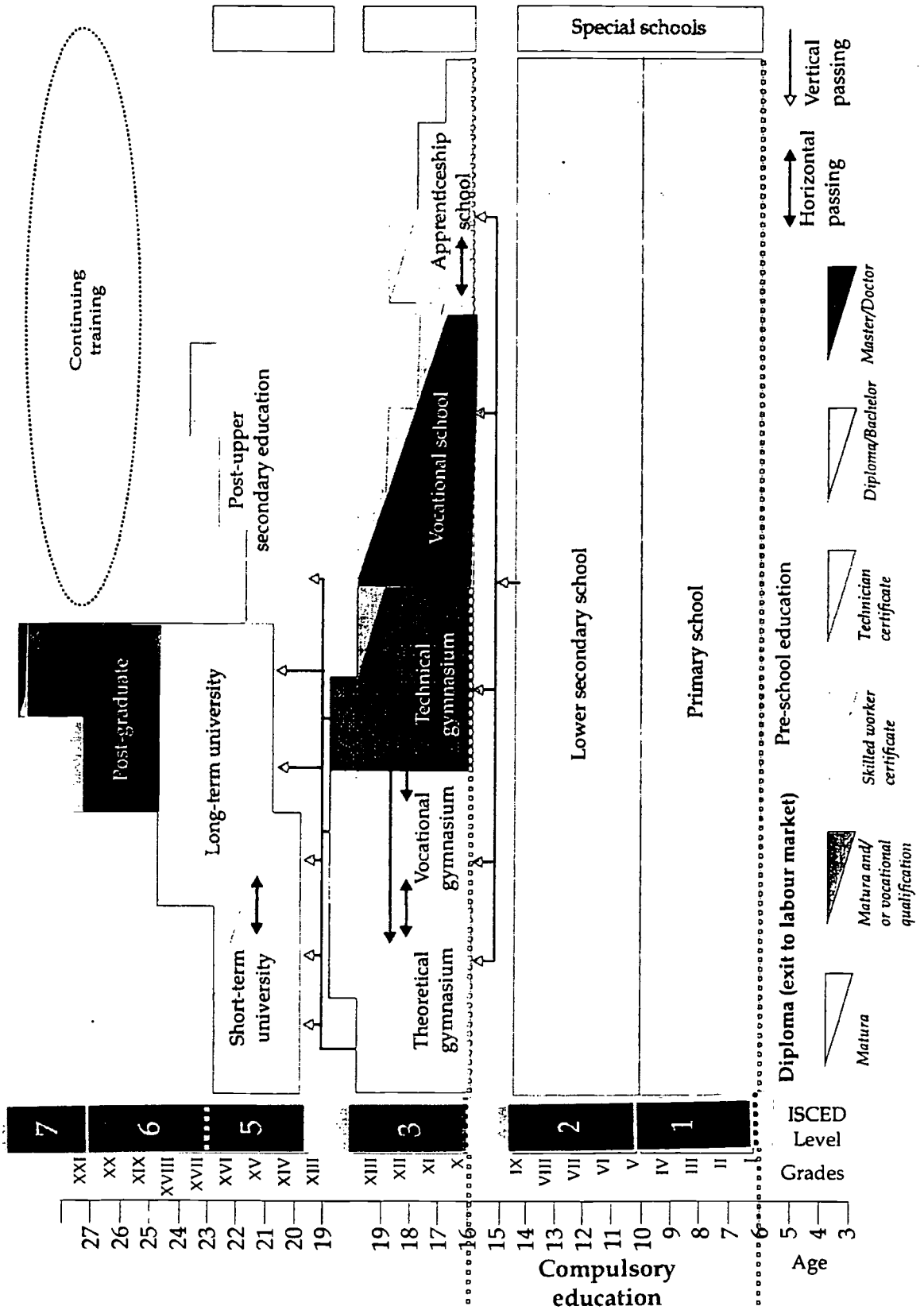

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Slovak Republic

Labour market statistics in the Slovak Republic shows slightly increase in the labour force but a continuing rise in unemployment along with a decline of employment. In 2000 the unemployment rate was 19.1%. Youth unemployment was also very high, over 35% in 2000. While the activity rate has remained stable (around 70%), the employment rate has followed a declining trend in 2000 (56.3%, down from 58% in 1999). This is partly explained by the growing participation in education for the first age group and the lower old-age retirement threshold (60 for men and 55 for women) in force as regards the second age group.

Data on enrolment in secondary education (ISCED 3) reveal an increasing proportion of students who participate in educational programmes leading to higher qualifications. In the school year 2000/2001, around 78% of the total student population were enrolled in programmes leading to maturita (22.3% in grammar schools and 55.5% in vocational schools). Public expenditure on education as a percentage of GDP were estimated at 4.3% in 1999 and the continuing decline in public financing of education gives serious cause for concern.

The concept of lifelong learning has been embraced by national authorities and current and draft legislation make provision for extending lifelong and life wide learning opportunities to all citizens. However, a structured and unitary framework for the provision, assessment and recognition of initial and continuing vocational education and training is lacking and this places a constraint on the promotion of lifelong learning opportunities. Moreover, the concept of lifelong learning is not well embedded at the regional and local level and the school network and infrastructure, which could provide a base for the provision of learning opportunities to the local community, tends to be used exclusively for internal, school activities.

For data see Annex A4

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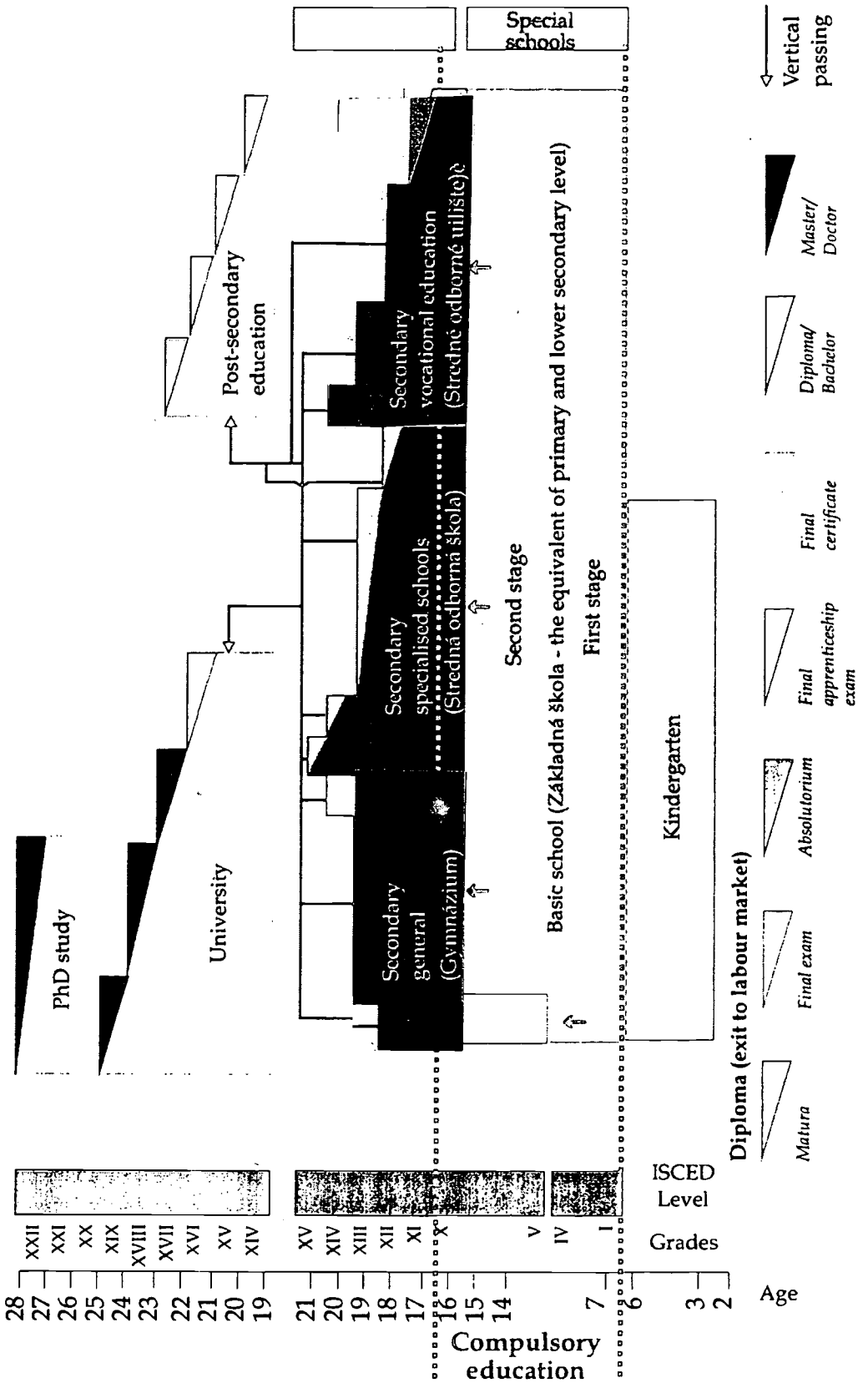

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Slovenia

Slovenia has the second highest GDP per capita (15,300 PPS€) among the Future Member States. According to recent estimates the economy will continue to grow at a rate of 3.3% in 2002 and of 4.0% in 2003. In the last years the activity rate continued to fall, from 68.8% in 1998 to 67.4% in 2000. The unemployment rate was 6.9% in 2000, down from 7.4% in 1998.

As in many Central and Eastern European countries, in Slovenia the young people aged 16 years old are likely to participate in education. Over the last years the number of students enrolled in general upper secondary education (ISCED 3) went up with more than 20%. At this level the proportion of female students enrolled in vocational education in 2000 was slightly lower (47%) than that of the male students. The participation rate in education for people aged 25-64 is also high, comparing to other countries for which data exists (4.2% in 2000). The funds for education are made available from the state and the municipal budgets. A special fund was created through a levy system to support the training of employees in the craft sector. In 1999, public spending in education as a proportion of GDP was estimated at 5.6%, down from 6% in 1998.

The **reform of the vocational education and training system has been conceived as an integral part of overall education reform** aimed at improving and increasing educational levels of the population. Bridging programmes and examinations allowing transition between general and vocational pathways are being currently in place at all levels of education. An alternative to the school-based secondary vocational path, through the dual system, has been also put in place with openings to the "master craftsman" degree and higher education. The objective is to establish a flexible system of secondary and tertiary education enabling to achieve similar qualifications through different pathways. Under the dual system in vocational education and training, the companies should organise the practical training for students.

In Slovenia the **continuing vocational training is regulated by a strong legal adult education framework** that defines the responsibilities of public authorities, national support institutions, the social partners (but mainly at the national level) and training providers, both public and private. Among the Future Member States, Slovenia has one of the highest participation rates in continuing vocational training courses. CVTS2 results shows a participation rate (participants as a proportion of the total number of persons employed) close to 46% higher than in the other Future Member States except the Czech Republic. According to the same survey, the instruction at conferences and workshops as a job-related way of continuing vocational training is widely spread in Slovenia.

For data see Annex A4

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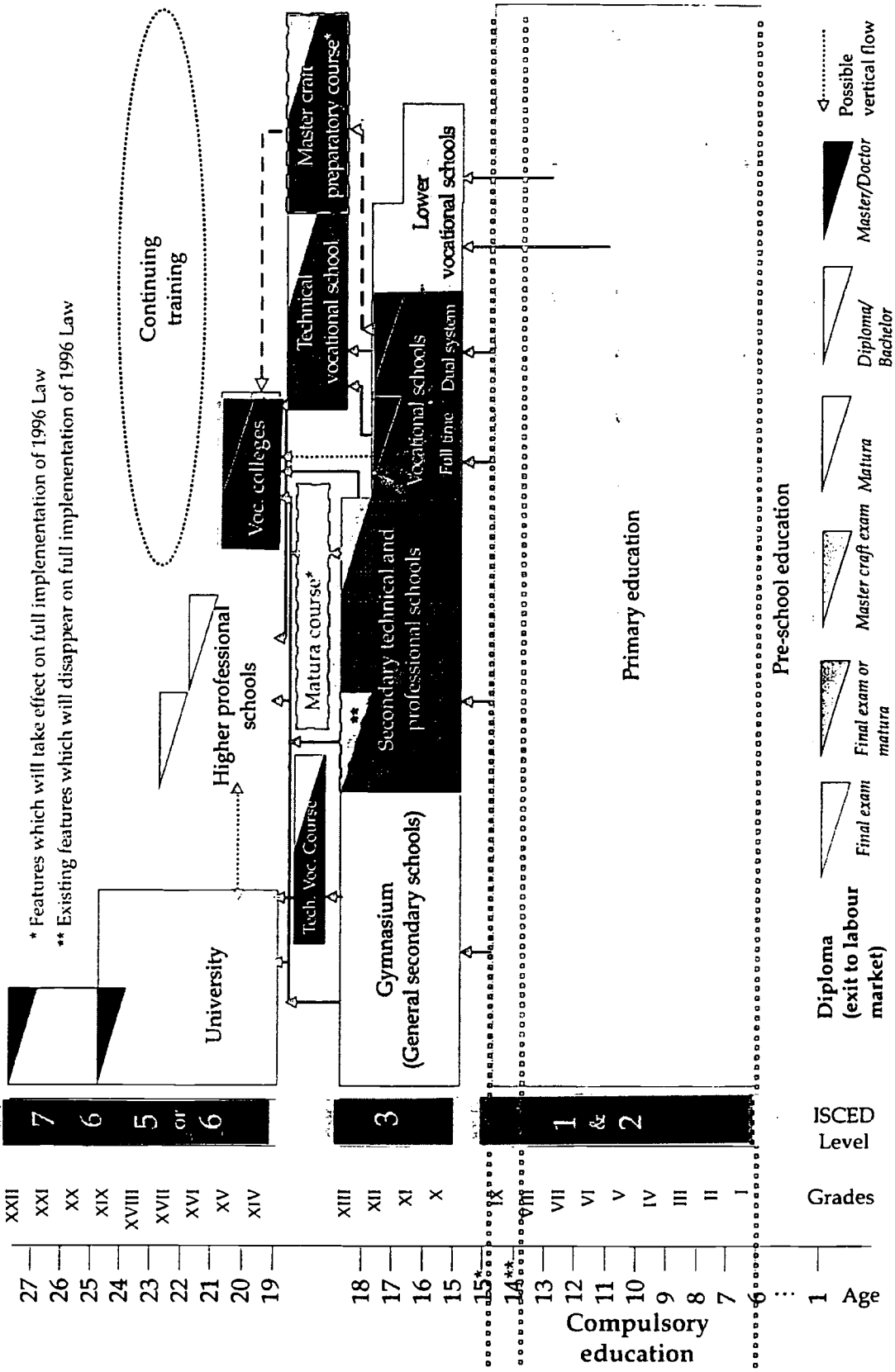

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2. Vocational education and training

All Central and Eastern European countries are undergoing a process of economic and societal reform in which a greater emphasis is put on education and training. An increasing value is therefore given to human capital. This part looks at participation in secondary education and levels of educational attainment in the adult population. It also presents basic information on the allocation of financial resources to education in Central and Eastern European countries.

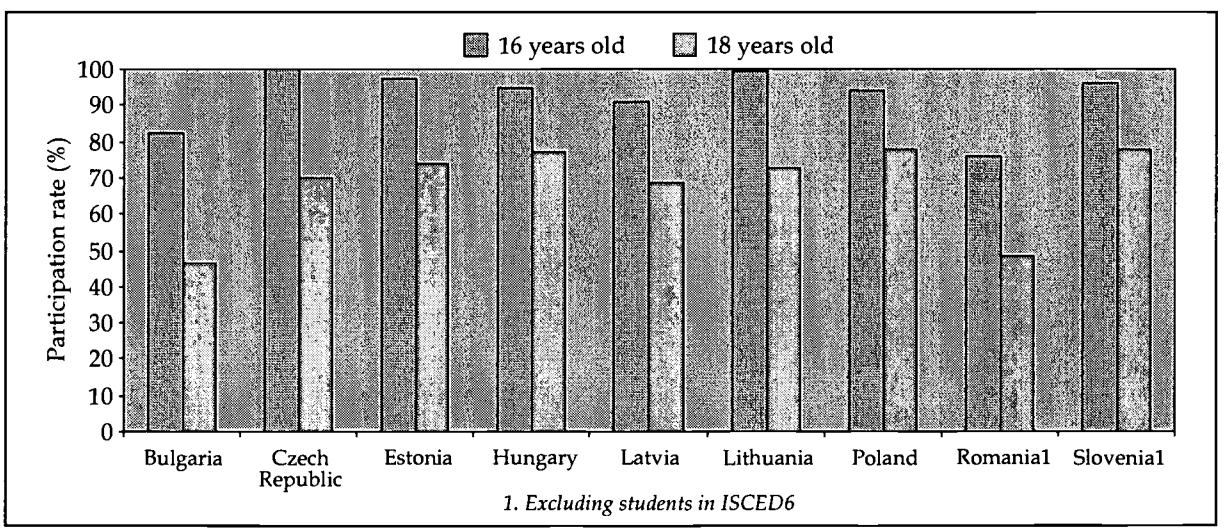
This part looks at participation in secondary education.

Most national policy-makers see the main challenges facing the education systems lying at the secondary and tertiary levels, reflecting the growing need to enhance human capital by raising levels of skills among the population in order to compete economically in an increasing global economy.

Growing diversity in educational provision has been one of the policy responses to increasingly variable demands for skills. Changes in participation rates and attainment levels of the population provide a picture of how countries have responded to increasing demands for education and training. Participation rates remain high in Central and Eastern European countries for 16 year olds but start to tail off after the end of compulsory education.

In almost all the Central and Eastern European countries participation rates remain high for 16 year olds.

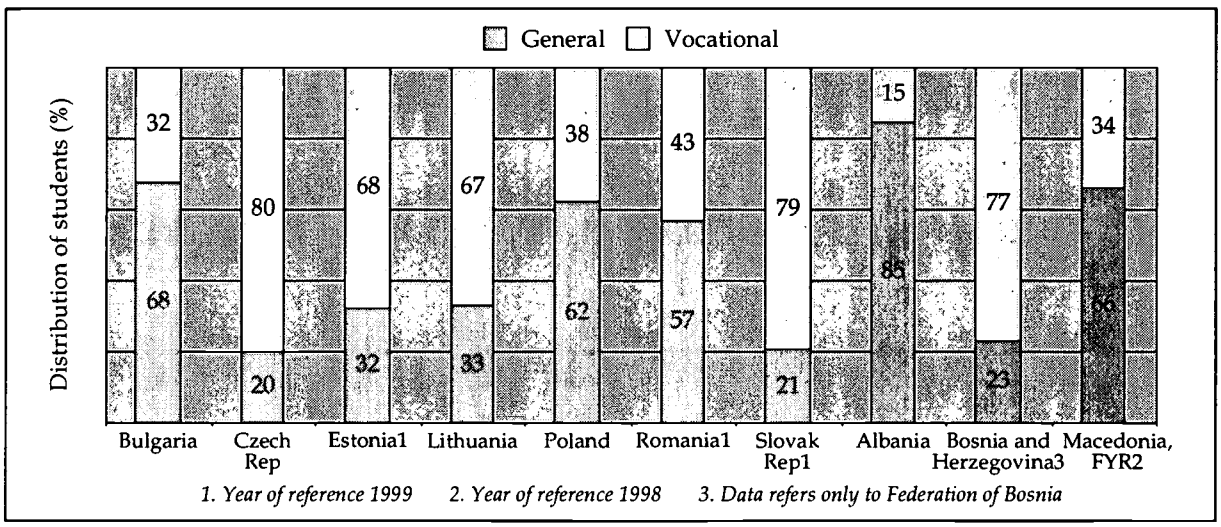
Figure 2.1 Participation rates in education (2000)



Source: Eurostat

Today, in almost all Central and Eastern European countries, an increasing number of young people are studying until the age of 20 to acquire either a general or a vocational qualification at upper secondary level. In countries like Czech Republic or Slovak Republic young people are more likely to follow a predominantly vocational programme. The distribution of students in at ISCED3 can be seen in the following figure.

Figure 2.2 Distribution of students in upper secondary education (2000)



Source: ETF Key Indicators database

In countries like Czech Republic or Slovak Republic young people are more likely to follow a predominantly vocational programme.

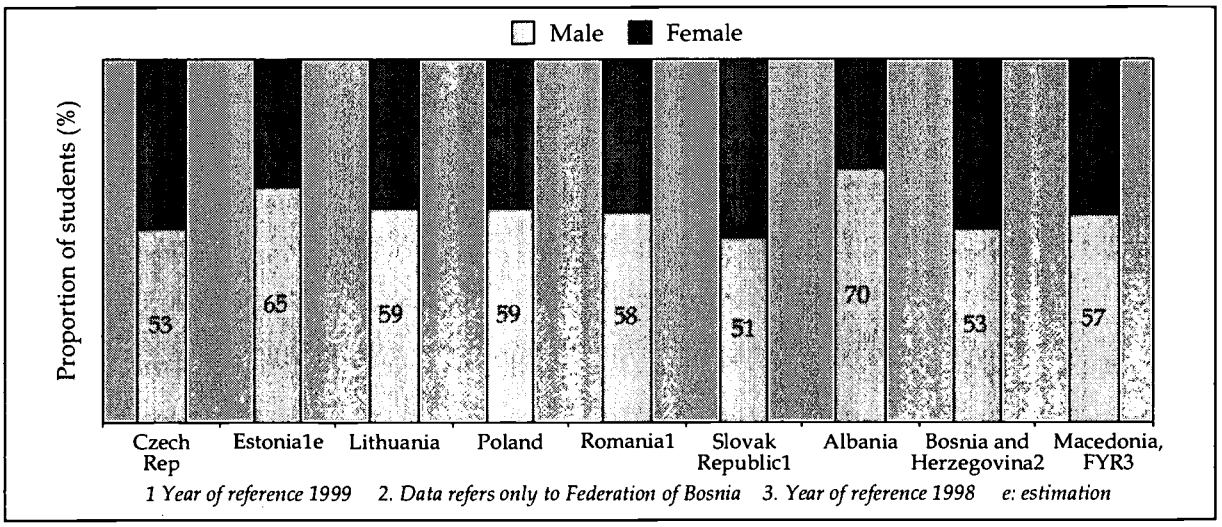
Also in many Central and Eastern European countries, in the last few years there has been a marked shift away from lower level vocational programmes towards programmes in secondary vocational and grammar schools leading to matura-type qualifications. For example in Czech Republic a high proportion of completers of basic education entering secondary vocational education and training (about 81.5% in 2000), among the highest in Europe. Over the previous years there has been a shift towards educational programmes leading to higher qualifications. According to national data, in addition to the 18.5% of basic education graduates entering secondary general education, 36.4% have chosen programs in secondary technical schools leading both to a professional qualification and *maturita*. The proportion of secondary students in programs that end in *maturita* was therefore about 55 to 60% in 2000 compared to just 43% in 1989.

... Some differences are still likely to exist between the enrolment patterns.

One important aspect of managing the development of education systems is to ensure that all sections of the population benefit and the disparities are reduced. Despite increases in overall participation and attainment levels, it cannot always be assumed that all groups are benefiting equally or that historical gaps present during the former political regimes are closing sufficiently rapidly.

Although the gaps seem to have been reduced in some countries they still exist in others. ETF data also show that differences are still likely to exist in some countries between the enrolment patterns of males and females in vocational education and training.

Figure 2.3 Distribution of students in vocational education by gender (2000)



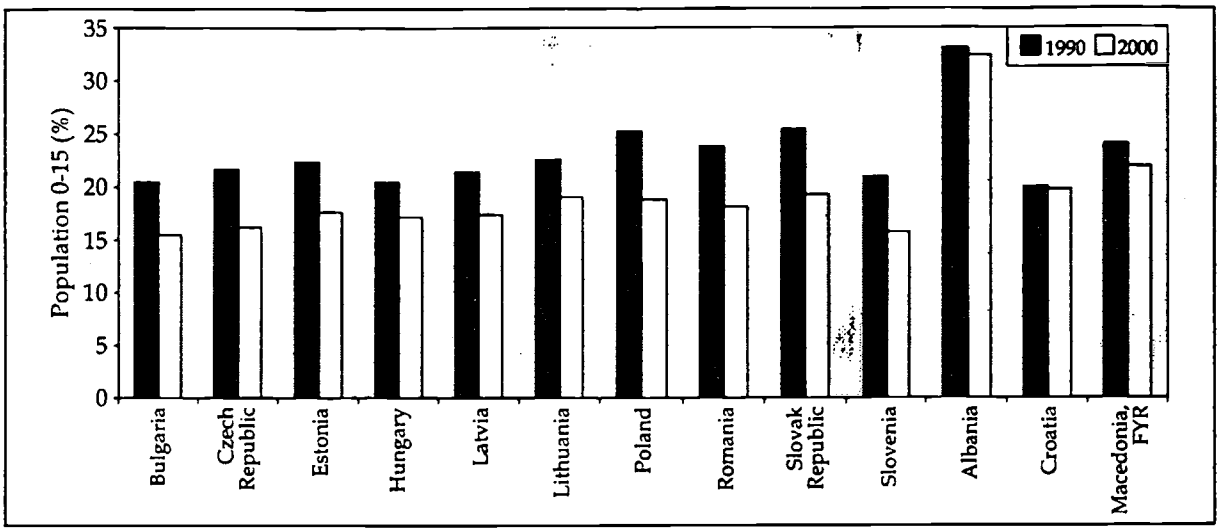
Source: ETF Key Indicators database

Demographic changes have a continuing impact on key education statistics. The slowdown in population growth over the last years is a common trend in many of the Central and Eastern European countries. Between 1996 and 2000 only Albania and Former Yugoslav Republic of Macedonia have reported a fairly substantial increase in the total population (crude rate of natural increase), while in Poland and Slovak Republic a slight increased was noted.

Although many Central and Eastern European countries have a young age structure, in almost all countries there has been a decrease in the child population as a result of rapidly declining birth rates. As a result, the next few years will offer a window of opportunity for many Central and Eastern European countries to implement policy and practice reforms in education as reduced cohort ease the demand for school places and allow access and quality issues to be addressed more easily.

There will be a window of opportunity for many Central and Eastern European countries to implement reforms in education and training.

Figure 2.4 Proportion of population under 15 years old

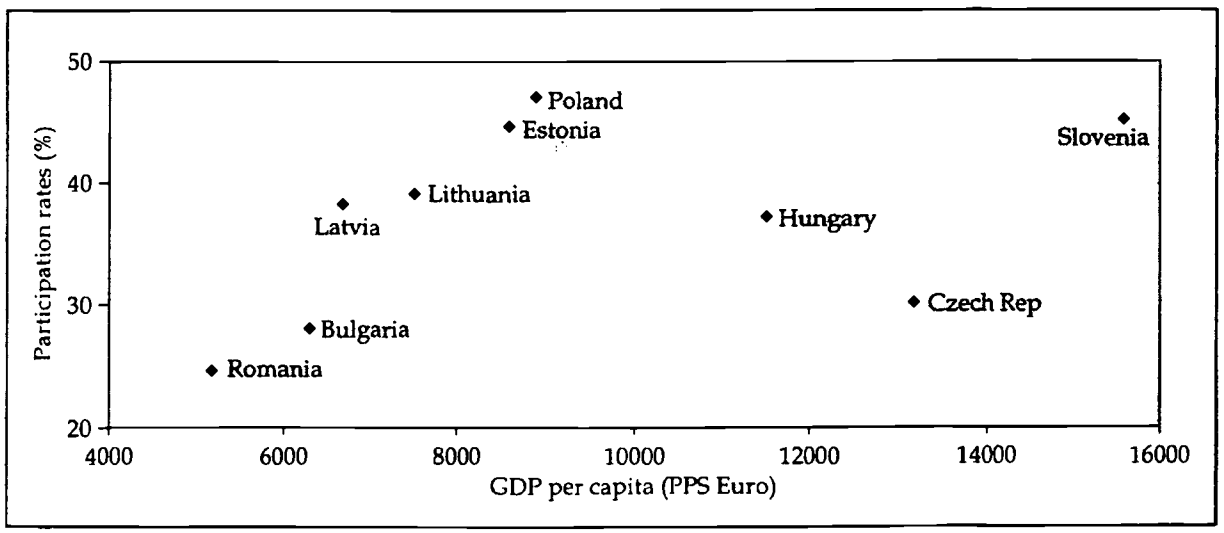


Source: Eurostat

Data on finance, teachers and students need to be considered in combination rather than in isolation.

A very important issue for most Central and Eastern European countries is the allocation of resources for education and training. When governments decide on their education budgets they must make choices between different educational priorities and their associated costs. If education costs are to be judged accurately, the data on finance, teachers and students need to be considered in combination rather than in isolation. Within limited education budgets, governments must make difficult decisions on how to invest their resources. The relationship between the GDP per capita and participation rates is shown below.

Figure 2.5 Participation rates in education (18-24 years) and GDP per capita (2000)



Source: Eurostat

The issue of resource allocation for education needs to be seen in a broader context. Central and Eastern European countries unable to match increases in participation especially at the post-secondary levels with increases in resources will be faced with difficult choices as to how to adjust the educational services provided so as to meet the demands of a larger student population. Countries in transition will experience particular challenges due to budget constraints, as trade-offs will be an inherent part of the allocation of limited financial resources.

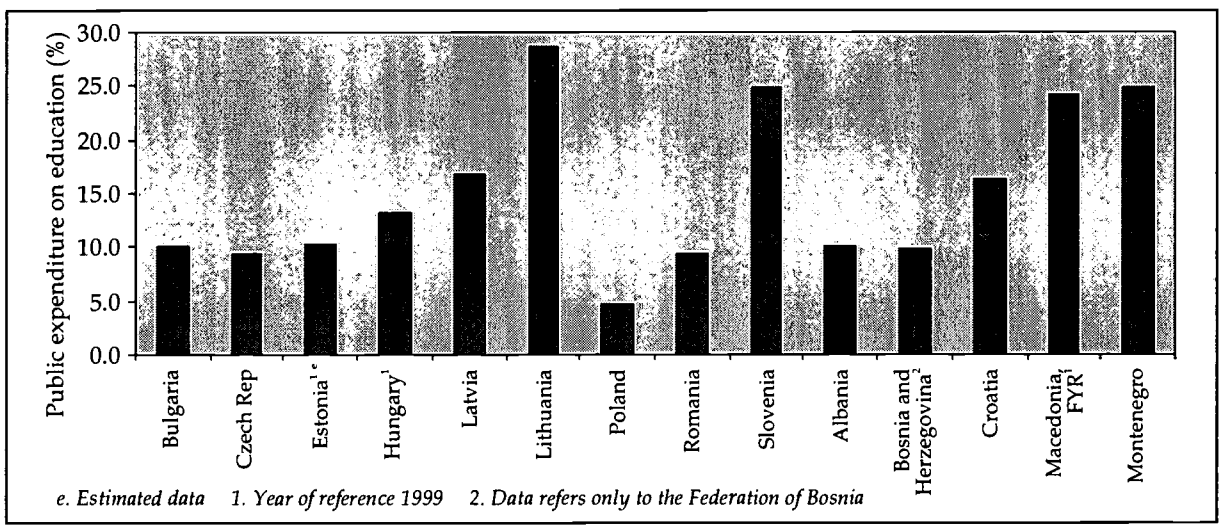
The relationship between the participation rates in education and GDP per capita is more varied between Central and Eastern European countries.

Changing the macro-economic conditions can have an immediate impact on the public resources available for education and training. Public spending on education as a percentage of GDP is often seen as the commitment which governments make to the provision of education. Central and Eastern European countries allocate a percentage of GDP for educational expenditure ranging from 7% in Estonia to less than 4% in Romania.

Central and Eastern European countries allocate between 4% and 7% of GDP to education and ...

A better measure of governments' commitment to education is the proportion of total public expenditure devoted to education. Some countries allocate a high percentage, as is the case in Lithuania and Slovenia where public spending on education accounts for more than 25% of total public expenditure.

Figure 2.6 Public expenditure on education as a percentage of total public expenditure (2000)



Source: ETF Key Indicators database

Although both indicators can offer a picture of a country's financial commitment to education, each of them takes into consideration different factors such as number of students and national wealth. Thus, even though some countries may spend less on education as a proportion of GDP, the percentage of total public expenditure devoted to education may be substantial. In countries like Estonia

... Even though some countries may spend less on education as a proportion of GDP, the percentage of total public expenditure on education may be substantial.

the sustained economic growth meant higher government revenue and hence a greater pool of potential resources for education and training. By contrast, countries in transition from heavily centralised systems have experienced particular challenges due to severe budget constraints.

Comparisons of how countries allocate financial resources between various categories of expenditure (e.g. salaries, teaching materials and equipment, etc.) can also provide some insight into variations in the organisation of an education system. As teacher salaries are the largest single component of educational expenditure (typically 70% or more of the total), the remuneration of teachers is a critical factor for policy-makers seeking to maintain both the quality of teaching and a balanced education budget.

Better measures of teacher compensation

In all Central and Eastern European countries teachers' salaries and allowances are the largest single components in the overall cost of providing vocational education and training. The level of teachers' compensation can affect the entry of new teachers into the profession, the motivation of teachers in their jobs and the retention of current teachers. The fact that many elements influence teacher remuneration and the teaching environment means that it is not easy to make international comparisons of teachers' salaries. One possibility, although not so far used by ETF, is to compare information on *statutory* salaries. These are the salaries, which accord with the national or official pay scales for teachers in, usually, public institutions.

It is not easy to make international comparisons of teachers' salaries.

The structure of compensation packages differs from one country to another. Gross salaries are the principle element of the total remuneration received by teachers but additional benefits may include a wide variety of monetary allowances or other forms of recompense. For example, in some countries teachers may receive bonuses on top of their gross salaries, monetary incentives for working in difficult circumstances or allowances according to the teachers' family status. Salary comparisons are also affected by differences in the salary scales used by governments to pay the teachers they employ. There is usually a difference between the starting salaries of newly qualified teachers entering the profession for the first time and those who have a number of years of experience.

The profile of teachers is not entirely consistent across different countries and problems associated with using head counts of teachers may arise depending on the prevalence of part-time employment amongst the teaching force. Individuals who are employed to work for fewer than the statutory working hours

required of a full-time employee are usually regarded as part-time teachers. A possible solution is to compare full-time equivalent (FTE) numbers of teachers instead. In this way, teachers are counted by expressing the workload of part-time teachers as a proportion of the workload of full-time teachers. For example, a part-timer who works half the statutory hours of a full-time teacher is equivalent to half a full-time teacher or 0.5 FTE. There are comparatively large numbers of part-time teachers in countries like Latvia, Slovenia or Slovak Republic where they make up over 20% of the teachers in secondary education. As a common pattern, in many Central and Eastern European countries part-time teachers are found mainly in upper secondary and tertiary education, with the exception of Latvia where the proportion of part-time teachers is higher in primary education.

Full-time equivalent (FTE) can offer a better measure of teachers' workload.

Student-teacher ratios based on head counts can also often be misleading whereas when FTEs are used, a more comparable indication of the teaching conditions can be obtained. Differences in student-teacher ratios between levels of education or for different educational pathways may indicate differences in the priority given to particular levels of education but they may also reflect delays in matching the teaching force to changing student populations.

Student-teacher ratio remains a very important indicator but ...

Table 1 Student-teacher ratio in general and vocational education (2000)

Country	Student-teacher ratio based on head counts		
	ISCED 3	ISCED 3 general	ISCED 3 vocational
Czech Republic	13.1	12.7	13.3
Estonia[2]	10.3	10.7	9.7
Poland[2]	18.1	20.3	17.1
Romania[1, 2]	14.4	15.3	13.9
Slovak Republic	14.1	13.7	14.2
Albania	18.1	19.8	12.0
Macedonia, FYR[1]	14.8	15.0	14.8

Source: ETF Key Indicators database
1. Year of reference 1999 - 2. Including ISCED4

By the same token the student-teacher ratio is one of the most often misinterpreted indicators. When used to assess the teaching conditions, it does not accurately reflect class size, the variable that offers a broader image of teaching conditions and which often influences broader education financing policies. On the one hand, larger class sizes may result in lower teacher costs per student – a

... class size often influences broader education financing policies.

factor that cannot usually be ignored by education planners. However, on the other hand, the costs associated with increasing class sizes must be weighed against other policy goals such as: increasing the quality of education, competitive salaries for teachers, investment in school infrastructure, equipment and supplies.

The transition from school to work has become a main policy focus especially in relation to the reform of vocational education and training systems in most Central and Eastern European countries. One reason why people pursue higher levels of education is the anticipated benefits in the labour market, not only in terms of the types of job for which they will be qualified, but also in terms of the ability to find employment, remain employed and earn higher salaries. The next part looks at some labour market indicators in relation to education.

3. The labour market

The proposed enlargement process of the European Union will have a major impact on the characteristics of labour markets in Central and Eastern European countries. One of the most important objectives within the enlargement process is to seek to monitor the labour market on a regular basis and within a common EU framework. More comprehensive and reliable measures of labour market issues are required in order to portray the trends in the Central and Eastern European countries on a comparative basis.

Even though national Labour Force Surveys have only been introduced within the last few years, in many Future Member States (FMS) they have already become one of the main instruments for monitoring developments in national labour markets. While all FMS have made substantial progress towards adopting the mandatory standards, concepts and definitions required by the European Labour Force Survey their full implementation is still far from complete in many countries.

LFS have already become one of the main instruments for monitoring developments in national labour markets in many Central and Eastern European countries.

Labour Force Surveys (LFS) are designed to meet a specific demand for good quality, reliable employment data across the national economy. Due to their inherent flexibility, the national surveys can easily be harmonised in terms of content, concepts, definitions, data processing and analysis. But what sort of information can be gathered through an LFS?

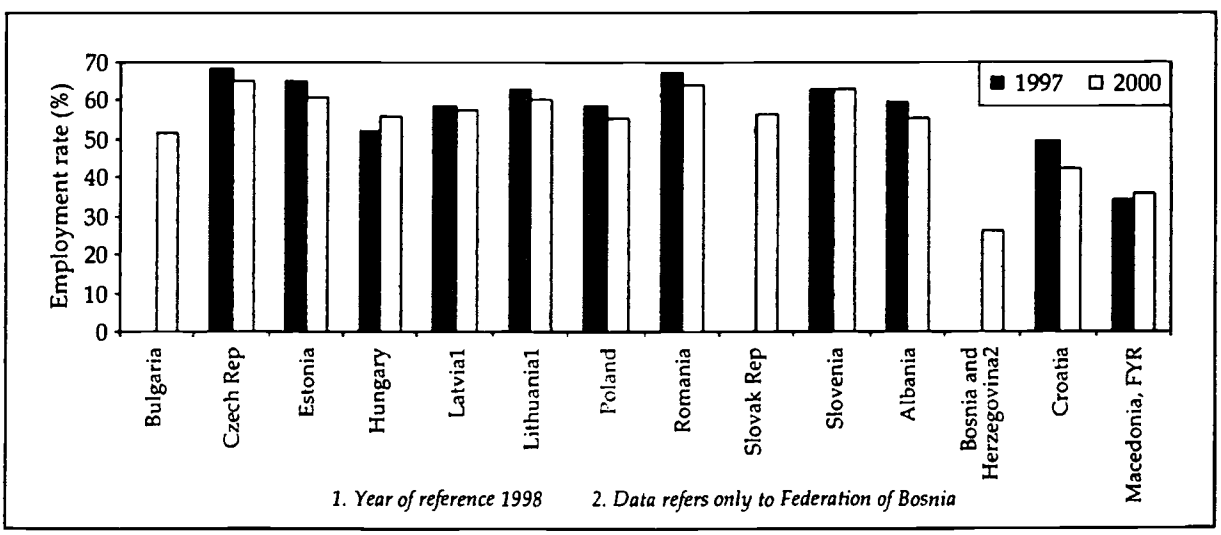
The central feature in all LFSs is the classification of people aged 15 or over according to their labour status (i.e. employed, unemployed or inactive). A number of statistics and indicators can be derived from age and labour market status: working age population, labour force activity rates, employment and unemployment rates. In addition, a number of concepts relating to specific conditions of employment, unemployment or inactivity can be also measured (e.g. long-term or youth unemployment, duration of unemployment, the number of hours usually worked per week).

A number of statistics and indicators can be derived from the LFS.

The implementation of the Labour Force Surveys in Central and Eastern European countries

One of the problems faced by countries is the coverage of the survey. The LFS is intended to cover the whole resident population in a country regardless of age or type of household in which they live (although results are usually only produced for the population aged 15 and over living in private households). However, in several countries the persons living in collective households are counted through their private household of origin. In such cases, they often cannot be identified separately from those living in private households due to the lack of corresponding questions or response categories and hence cannot be excluded from the key results. In some countries, persons in compulsory military or community service, who should normally be excluded from the LFS results, are in fact excluded entirely from the survey. For some countries there are also inconsistencies due to the use of different age limits for the respondents. For example, in Bulgaria, Lithuania or Poland, the LFS does not cover the under 15 population while in Estonia the age limit (15) is defined as of 1 January rather than the EU standard, which should be the last day of the reference or survey week. In Former Yugoslav Republic of Macedonia the LFS cover the persons aged 15 to 80. Finally, in Croatia starting with 1998 the LFS is carried out continuously, a part of the total sampled households being interviewed on a monthly basis and the results are being published semi-annually.

Figure 3.1 Employment rates as a percentage of working age population

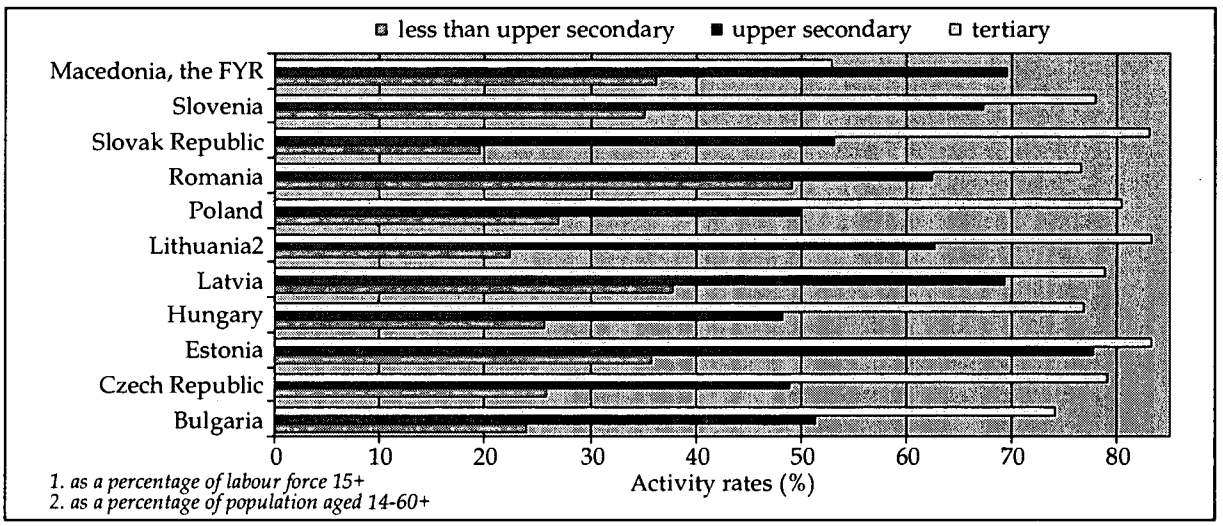


Source: Eurostat (LFS data), ETF Key Indicators database

Labour force participation (or activity) rates are one of the most important labour market indicators. In almost all Central and Eastern European countries, activity rates have fallen in the last few years. The patterns of labour force participation are different in many Central and Eastern European countries. Labour force activity rates rise with increasing levels of education but they do so much more for women than for men. In some countries as a result of staying longer in school and higher participation rates in education a marked decrease in the activity rate can also be observed for young people (the under 20's). For example, in the Czech Republic, for this age group, between 1994 and 2000 the activity rate went down from 35% to 15%.

Labour force activity rates rise with increasing levels of education.

Figure 3.2 Activity rate by educational attainment (2000)



Source: ETF Key Indicators database

According to ETF data, in 2000 the unemployment rate remained high in countries like Poland, Slovak Republic and Bulgaria, was stable in the Czech Republic and even fell in Hungary and Slovenia. Apart from these official unemployment rates, what sort of information is usually available to characterise unemployment?

Registered versus survey data

The information gathered from national Labour Force Surveys ensures that analyses are based on standardised sources, providing a consistent and comparable set of data. However, there are certain limits to the use of LFS for specific regional or sectoral analyses or to monitor trends over a short period of time.

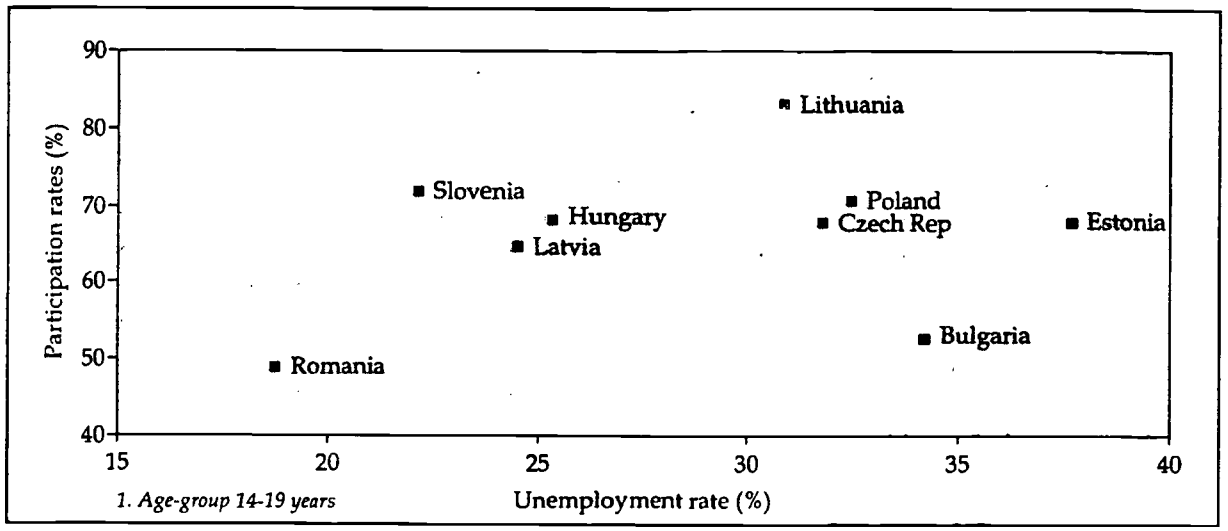
The differences in reporting practices often lead to problems with employment indicators at both national and international levels. In nearly all countries, including Central and Eastern European countries, information on registered unemployed persons usually held by public employment offices differs in coverage and definition from those used in LFSs.

As a result of differences between national laws governing the entitlement of job-seekers to benefits and other assistance (which normally form the basis for defining the coverage and definition of the registered unemployed) it is difficult to harmonise the two measures of the unemployed. As a result the figures for a given country can differ considerably. While the definition applied to this indicator is the same in the Labour Force Surveys of all FMS, the figures on registered unemployment are rarely comparable between countries, depending on the different regulations used in each country.

One important issue in many Central and Eastern European countries is the youth unemployment. The young adults are educated at school and then enter the labour market so that the transition from school to work is sequential. The next figure shows the relationship between unemployment and participation in education and training in Central and Eastern European countries. But is the information available through LFS sufficient to address this issue?

The relationship between unemployment and education participation rates is more varied between Central and Eastern European countries.

Figure 3.3 Participation in education and unemployment rate for people aged 15-19



Source: ETF Key Indicators database, Eurostat

Transition from school to work: better use of information

The central feature of the LFS is the labour status. One further dimension is needed, as in many countries there is less information available about youths that have left education but remain inactive in the labour market. One option, although not largely used in Central and Eastern European countries, is the "safety-net" approach. As opposed from the information requested through the LFS, the "safety-net" approach typically aim to track down young people who have left education and are neither employed nor registered with the public employment services or receiving social assistance. In countries where the non-student inactivity is high this information is valuable and can complement the data about people who are registered with the public employment service or receiving any other kind of benefits.

Comparisons between the FMS and the EU are needed to illustrate how these countries are performing. Data on education and labour market are compiled by different organisations from official responses to surveys or from reports provided by education authorities in each country and are used for monitoring, policy-making, and resource allocation. But for a variety of reasons many statistics fail to provide a complete and accurate picture of a country's systems and should, therefore, interpreted with caution as the coverage, definitions and data collection methods may vary across countries and over time.

This publication shows that comparative analysis could be a useful instrument for informing the debate.

While it is difficult to assess the effectiveness of the different policy options on a common basis, the information presented in this report shows that comparative analysis could be in any case a useful instrument for informing the debate. To advance the debate further, reliable and relevant information of good quality is needed. The provision of data, therefore, remains one of the most important objectives for the ETF Key Indictors project.

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Annexes

This following annex provides the data used in this publication as well as information on the definitions.

Annex A1 offers general notes about the coverage of data, the reference period and the main sources for the data.

Annex A2 provides definitions that are important for the understanding of the indicators presented in this report. The notes are organised alphabetically.

Annex A3 provides a cross-reference between tables and notes.

Annex A4 provides the full set of data used in this publication.

Annex A1 - General notes

Coverage of the statistics

The indicators presented in this report are collected by the European Training Foundation on a regular basis through the National Observatory network. In some cases they are supplemented by data collected by Eurostat and OECD. If not otherwise indicated data refer to the entire national education system regardless of the ownership or sponsorship of the educational institutions concerned and regardless of educational delivery mechanisms. Although a lack of data still limits the scope of the indicators presented all the partner countries are taking steps to improve the process of data collection and analysis.

Data sources

If not otherwise indicated, the data sources are the National Statistical Offices/Institutes, and the statistical units of different Ministries (i.e. education, labour and finance). Labour market indicators have been selected from the national Labour Force Surveys.

ISCED levels of education

ISCED (International Standard Classification of Education) is the internationally agreed system used for classifying and presenting statistics on education. The present classification approved by UNESCO in 1997 (also known as ISCED97) covers primarily two cross-classification variables: levels and fields of education and training. ISCED97 distinguishes among six levels of education: pre-primary, primary, lower secondary, upper secondary, post-secondary non-tertiary, and tertiary education. A mapping of national education programmes to ISCED97 for school/academic year 1999/2000 is provided in the framework of the UOE2001 at: http://forum.europa.eu.int/Public/irc/dsis/edtcs/library?l=/public/unesco_collection/programmes_isced97/school_1999_2000

International averages

The averages are often provided as a benchmark. Different approaches are often taken as a basis for comparison. For example, in many OECD publications two types of average are computed. The first is the **unweighted mean** of all data values for a particular group of countries for which data is gathered or estimated. Each country in the group contributes equally to the average and the purpose of this indicator is to illustrate how an indicator value for a country compares with the value of a typical or

average country. The other average is the **weighted mean** of the data values of all OECD countries (i.e. for which a value can be assigned to a certain indicator, either through a direct observation process or by estimation). This indicator is often used to compare finance data (e.g. expenditure per student or as a percentage of GDP) to analyse the spending patterns in one country as against the group of countries where the latter is regarded as a single entity. However, one problem with weighted averages is that the extreme values or extreme weights can have a substantial effect on the value of the indicator constructed for a group of countries. If not otherwise indicated, the averages used in this publication are unweighted.

Annex A2 - Definitions

Active population (also called labour force) consist of all individuals in the population who are either employed or unemployed. The definitions applied to persons aged 15 and over.

Activity rates are calculated by dividing the active population by the number of persons in the population aged 15-64 (times 100).

Attainment profiles used in this publication represents the percentage of the labour force or the percentage of the population with a particular employment status in a specified age group who have **completed** a specified highest level of education, defined according to ISCED97 (see notes on ISCED levels of education).

Employment rates in this publication are calculated by dividing the number of employed persons by the number of persons in the population in that age group (times 100).

Early-school leaving (rate) represents the percentage of population aged 18-24 whose highest level of education or training attained is ISCED 0, 1 or 2 and who had not received any education or training in the four weeks preceding the date at which they were surveyed.

Participation in education and training represents the percentage of population in a specified age group participating in any form of education and training over a period of time (i.e. in the LFS the period is four weeks prior to the survey).

Continuing vocational training (courses) are the events designed solely for the purpose of providing training away form the place of work (e.g. classroom or training centre) at which a group of people receive instruction from teachers/tutors/lecturers for a period of time planned in advance by the organisers.

Public expenditure for labour market programmes includes only the expenditure targeted on particular labour market groups. *Active labour market programmes* includes all social expenditure (other than education) which is aimed at the improvement of the beneficiaries' prospect of finding gainful employment or to otherwise increase their earnings capacity. This category includes spending on public employment services and administration, labour market training, special programmes for youth when in transition from school to work, labour market programmes to provide or promote employment for unemployed and other persons (excluding young and disabled persons) and special programmes for the disabled. *Passive or income maintenance programmes* in the context of labour market programmes consist of unemployment compensation programmes and programmes for early retirement for labour market reasons.

Public expenditure on education represents expenditures on education by local, regional and national governments, including municipalities (i.e. include not only central education authorities like the ministries of education but also local/regional authorities such as school inspectorates). We can distinguish between two main types of expenditure. *Current expenditure* includes expenditure on staff salaries and benefits, teaching materials, and other current expenditure such as equipment, minors repairs, telecommunications, etc. *Capital expenditure* are expenditure for assets that last longer than one

year. They include expenditure for construction, renovation and major repairs of buildings and the purchase of heavy equipment or vehicles.

Vocational education is designed mainly to prepare participants for direct entry, without further training, into specific occupations. Successful completion of such programmes normally leads to a labour-market relevant vocational qualification recognised by the competent authorities in the country in which it is obtained (e.g. Ministry of Education, employers' associations, etc.). Many vocational education and training programmes cannot be easily classified and the contents of a specific ISCED level may differ between countries, and even within countries over time between different age groups. However in many countries the following programmes of vocational education exists:

- *Vocational with qualification* refers to programmes that lead to a labour market-relevant qualification without giving access to the next level of education.
- *Vocational education with matura examination* refers to programmes that lead to a vocational qualification. Successful completion of such programmes gives access to the next level of education.

Student-teacher ratio is the average number of students per teacher in a grade or cycle or level of education in the given school year. In calculating student-teacher ratio, other educational personnel such as administrators and support staff are not taken into account.

Purchasing power standards are the rates of currency conversion, which eliminate the differences in price levels among countries.

Youth unemployment ratio is the number of unemployed aged 15-24 divided by the number of persons in the population in that age group.

Unemployment rate is the number of unemployed divided by the number of labour-force participants (times 100).

Annex A3 – Cross-reference between data tables and notes

Table 1	See notes on GDP, PPS, unemployment rate, participation in education and training
Table 2, 3	See notes on employment rate
Table 4	See notes on attainment
Tables 5, 6	See notes on activity rate, attainment
Table 7	See notes on youth unemployment rate/ratio
Tables 9, 10	See notes on vocational education
Tables 11, 12	See notes on continuing vocational training
Tables 13	See notes on student-teacher ratio
Table 14	See notes on early school-leavers
Table 15	See notes on public expenditure on education
Table 16	See notes on public expenditure on labour market programmes

Annex A4 – Data used in this publication

Symbols for missing data

a - data not applicable because the category does not apply
m - data not available
n - nil or negligible
xc - data included in another category/column of the table

Table 1 General background indicators (2000)

Countries	GDP (current prices) (billions €)	GDP per head (PPS[2]€)	Population (millions)	Population aged less than 15 years (%)	Unemployment rate[3] (%)	Participation in education of population aged 25-64 (%)[5]
Bulgaria	13.0	6,000	8.1	15.9	16.2	m
Czech Republic	55.0	12,600	10.3	16.6	8.8	m
Estonia	5.5	8,200	1.4 [p]	18.3	13.2	5.9
Hungary	50.3	11,400	10.0	17.1	6.6	3.1
Latvia	7.8	7,000	2.4	17.8	14.1	m
Lithuania	12.2	7,300	3.7	19.8	15.6	2.7
Poland	171.0	9,000	38.6	19.2	16.3	m
Romania	40.0	5,500	22.4	18.5	7.0	0.9
Slovak Republic	20.9	10,500	5.4	19.8	19.1	
Slovenia	19.5	15,300	2.0	16.1	6.9	4.2
EU-15	**8,524.0**	**22,600**	**376.5**	**17.0**	**8.4 [e]**	**8.4 [e]**
Albania	4.1	1,018 [1e]	m	m	16.8 [4]	m
Croatia	18.8	4,148 [1e]	4.3	19.8	17.0	m
Macedonia, the Former Yugoslav Republic	3.9	1,909 [e]	2.0	22.5	32.2	m
Yugoslavia, Federal Republic of	16.7 [1]	1,575 [1e]	10.6	19.8	12.7	m

1. *Year of reference 1999*
2. *Purchasing Power Standards*
3. *As a percentage of labour force 15+, LFS data*
4. *Registered data*
5. *As a percentage of the age group 25-64, LFS data*

p. Provisional data
e. Estimated data

Source: Eurostat

Table 2 Employment rate (2000)

Percentage of population	Aged 15-64	Aged 15-24
Bulgaria	51.5	20.5
Czech Republic	64.9	36.4
Estonia	60.6	27.4
Hungary	55.9	33.1
Latvia	58.2	30.4
Lithuania	60.1	26.7
Poland	55.1	24.1
Romania	64.2	34.0
Slovak Republic	56.3	28.3
Slovenia	62.7	31.2
EU-15	**63.1**	**39.9**
Albania[1]	55.1	m
Croatia[1]	42.4	m
Macedonia, the Former Yugoslav Republic[1]	35.8	m
Yugoslavia, Federal Republic of[1]	62.2	m

1. *As a percentage of total population*

Source: Eurostat, LFS data

Table 3 Employment by economic activity (2000)

Percentage of total employment in	Industry	Agriculture	Services
Bulgaria	32.8	13.2	54.0
Czech Republic	39.9	5.2	54.8
Estonia	34.7	7.0	58.3
Hungary	33.8	6.5	59.8
Latvia	26.8	14.4	58.7
Lithuania	27.4	18.4	54.2
Poland	31.1	18.7	50.3
Romania	25.8	45.2	29.0
Slovak Republic	37.3	6.9	55.8
Slovenia	37.7	9.6	52.7
EU-15	**29.0**	**4.3**	**66.8**
Albania	5.5	71.8	21.5
Croatia	22.7	11.7	59.7
Macedonia, the Former Yugoslav Republic	m	m	m
Yugoslavia, Federal Republic of	m	m	m

Source: Eurostat, LFS data

Table 4 Employment by educational attainment (2000)

Percentage of the labour force completing	Less than upper secondary	Upper secondary	Tertiary %
Bulgaria	18.3	58.1	23.6
Czech Republic	8.8	79.2	12.0
Estonia	10.8	58.0	31.2
Hungary	17.4	65.4	17.2
Latvia	16.2	62.0	21.8
Lithuania	11.4	42.7	45.9
Poland	14.8	71.1	14.1
Romania	35.8	55.1	9.1
Slovak Republic	6.9	80.7	12.4
Slovenia	19.9	62.9	17.2
Albania	15.8	49.4	34.8
Croatia	19.6	58.1	22.3
Macedonia, the Former Yugoslav Republic[1]	33.4	48.8	17.8
Yugoslavia, Federal Republic of	m	m	m

1. *Year of reference 1999*

Source: ETF Key Indicators database

Table 5 Activity rate

	1997	2000 %
Bulgaria	m	61.6
Czech Republic	71.7	71.2
Estonia	72.7	70.0
Hungary	57.1	59.9
Latvia	m	68.0
Lithuania	m	71.5
Poland	66.2	66.1
Romania	71.5	69.6
Slovak Republic	m	69.5
Slovenia	67.4	67.4
Croatia[1]	m	49.0

Source: Eurostat, LFS data

1. *Source: ETF Key Indicators database*

Table 6a Activity rate[1] by educational attainment (2000)

Percentage of the labout force	Less than upper secondary	Upper secondary	Tertiary
Bulgaria	23.8	51.3	74.1
Czech Republic	25.9	49.0	79.1
Estonia	35.8	77.7	83.2
Hungary	25.6	48.3	76.9
Latvia	37.9	69.2	78.7
Lithuania[2]	22.3	62.6	83.2
Poland	26.9	49.8	80.4
Romania	49.1	62.5	76.5
Slovak Republic	19.5	53.2	83.0
Slovenia	35.3	67.2	78.0
Macedonia, the Former Yugoslav Republic	36.2	69.5	52.9

1. *As a percentage of labour force 15+*
2. *As a percentage of population aged 14-60+*

Source: ETF Key Indicators database

Table 6b Activity rate[1] by educational attainment (2000)

Percentage of the labout force	ISC3 gen	ISC3 voc	ISC4
	2	3	4
Bulgaria	51.3	72.3	x3
Czech Republic	49.0	72.0	79.1
Estonia	77.7	68.3	78.6
Hungary	48.3	74.1	m
Latvia	69.2	x2	x2
Lithuania[2]	62.6	79.1	82.8
Poland	49.8	72.4	77.7
Romania	62.5	67.6	64.8
Slovak Republic	53.2	77.8	x3
Slovenia	67.2	x2	a
Macedonia, the Former Yugoslav Republic	69.5	x2	a

1. *As a percentage of labour force 15+*
2. *As a percentage of population aged 14-60+*

Source: ETF Key Indicators database

Table 7 Youth unemployment (2000)

	Rate[2]	Ratio[3]
Bulgaria	33.3	10.2
Czech Republic	17.0	7.5
Estonia	23.7	8.5
Hungary	12.3	4.6
Latvia	21.2	8.2
Lithuania	27.5	10.1
Poland	35.7	13.4
Romania	17.8	7.4
Slovak Republic	36.9	16.5
Slovenia	16.4	6.1
EU-15	**16.1**	7.6
Albania	m	m
Croatia[1]	43.1	m
Macedonia, the Former Yugoslav Republic[1]	59.8	m
Yugoslavia, Federal Republic of[1]	49.6	m

1. *People aged less than 25, as a percentage of labour force*
2. *As a percentage of labour force 15-24*
3. *As a percentage of population aged 15-24*

Source: Eurostat, LFS data

Table 8 Unemployment rate of people aged 15-19 (2000)

%

Bulgaria	34.2
Czech Republic	31.8
Estonia	37.7
Hungary	25.4
Latvia	24.6
Lithuania[1]	30.9
Poland	32.5
Romania	18.8
Slovenia	22.2
Albania	13.4
Croatia[2]	33.6
Macedonia, the Former Yugoslav Republic[3]	66.3

1. *Age group 14-19*
2. *Age group 15-24*
3. *Year of reference 1999*

Source: ETF Key Indicators database

Table 9 Enrolment in vocational training (ISCED3) by gender (2000)

thousands

	Males	Females	Total
Albania	m	m	16.3
Bosnia and Herzegovina[2]	47.5	38.7	86.3
Macedonia, the Former Yugoslav Republic[1]	33.7	25.3	59.0
Bulgaria	53.9	70.6	124.5
Czech Republic	205.2	184.8	390.0
Estonia	11.7	6.3	18.0
Lithuania	19.5	13.6	33.1
Poland	1,030.7	703.9	1,734.6
Romania	303.7	219.0	523.0
Slovak Republic	106.3	100.3	206.6

1. *Year of reference 1999*
2. *Data refers only to Federation*

Source: ETF Key Indicators database

Table 10 Enrolment in vocational education and training (ISCED3) by type of programme (2000)

thousands

	Vocational education and training with qualification	Vocational education and training with *matura*
Albania	16.3	a
Bosnia and Herzegovina[2]	40.8	45.5
Macedonia, the Former Yugoslav Republic[1]	15.0	44.0
Bulgaria	0.6	123.9
Czech Republic	160.5	229.5
Estonia	0.7	17.3
Lithuania	4.3	28.8
Poland	555.4	1,179.2
Romania	222.0	301.0
Slovak Republic	57.5	149.1

1. *Year of reference 1999*
2. *Data refers only to Federation*

Source: ETF Key Indicators database

Table 11 Proportion of companies providing CVT courses and participation rate

	CVT providers as% of all companies		Participation rate (%)
	CVT courses	Other forms of CVT	
Bulgaria	17	25	28
Czech Republic	61	59	49
Estonia	47	57	28
Hungary	24	30	26
Latvia	26	50	25
Lithuania	21	39	20
Poland	26	36	33
Romania	7	7	20
Slovenia	33	39	46

Source: Eurostat, CVTS2 (for details see Statistics in Focus, Theme 3 - 2/2002)

Table 12 Participation in CVT courses by gender

%

	Males	Females
Bulgaria	33	20
Czech Republic	53	41
Estonia	27	29
Hungary	27	25
Latvia	26	24
Lithuania	21	19
Poland	33	33
Romania	20	20
Slovenia	46	47

Source: Eurostat, CVTS2 (for details see Statistics in Focus, Theme 3 - 2/2002)

Table 13 Student-teacher ratio (based on head counts) at ISCED3

	ISCED3	ISCED3 general	ISCED3 vocational
Albania	18.1	19.8	12.0
Bosnia and Herzegovina[2]	9.2	m	m
Macedonia, the Former Yugoslav Republic[1]	14.8	15.0	14.8
Montenegro	13.0	m	m
Czech Republic	13.1	12.7	13.3
Estonia[3]	10.3	10.7	9.7
Latvia	8.9	m	m
Lithuania	13.7	m	m
Poland[3]	18.1	20.3	17.1
Romania[1, 3]	14.4	15.3	13.9
Slovak Republic	14.1	13.7	14.2

1. *Year of reference 1999*
2. *Data refers only to Federation*
3. *Including ISCED4*

Source: ETF Key Indicators database

Table 14 Share of population aged 18-24 with lower secondary education and not in education and training (2000)

%

	Total	Male	Female
Bulgaria	m	m	m
Czech Republic	m	m	m
Estonia	14.3	16.6	12.1
Hungary	13.8	14.3	13.2
Latvia	m	m	m
Lithuania	17.2	19.1	15.2
Poland	m	m	m
Romania	22.3	23.3	21.3
Slovak Republic	m	m	m
Slovenia	7.4	8.8	5.7
EU-15	**19.7[e]**	**22.2[e]**	**17.1[e]**

e. Estimation

Source: Eurostat, LFS

Table 15 Public expenditure on education (2000)

Country	As a percentage of total public expenditure		As a % of GDP[1]
	Education	Higher education	
	2	3	
Bulgaria	10.0	x2	m
Czech Republic	8.1	1.3	4.4[p]
Estonia	m	m	7.4[p]
Hungary	m	m	4.7[p]
Latvia	16.9	x2	6.3[p]
Lithuania	28.6	4.7	4.6[p]
Poland	1.3	3.5	5.0[p]
Romania[1]	7.8	1.7	3.4[p]
Slovak Republic	m	m	4.3[p]
Slovenia	24.8	x2	m
Albania	10.1	x2	2.7[e]
Bosnia and Herzegovina[1]	9.8	x2	m
Bosnia, Federation of[1]	6.0	x2	m
Croatia[1e]	16.3	x2	3.4[e]
Macedonia, FYR[1]	24.2	x2	4.0[e]
Montenegro[2]	22.1	2.8	m

1. *Year of reference 1999*
2. *Including expenditure for science*
e. Estimated data
p. Provisional data

Source: ETF Key Indicators database, Eurostat

Table 16 Public expenditure on labour market programmes as a percentage of GDP (2000)

Categories	Active measures			Passive measures	
	Public Employment Service	Labour market training	Youth	Unemployment compensation	Early retirement
	2	3	4	5	6
Czech Republic	0.08	0.02	0.02	0.24	n
Hungary	0.11	0.07	n	0.37	0.01
Poland	m	0.01	0.08	0.84	n

Source: OECD

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