Vocational education and training in Central and Eastern Europe

REPORT

Key indicators

European Training Foundation

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The European Training Foundation is an agency of the European Union which works in the field of vocational education and training in Central and Eastern Europe, the New Independent States, Mongolia and the Mediterranean partner countries and territories. The Foundation also provides technical assistance to the European Commission for the Tempus Programme.

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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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Introduction

This is the second European Training Foundation statistical publication on the vocational education and training systems and the labour market in the candidate countries of Central and Eastern Europe. As in the first publication, data has been collected from the Statistical Offices and Statistical Services of the Ministries of Education, and forwarded to the Foundation by the National Observatories[1]. EU data has been provided by Eurostat.

In order to ensure cross-country comparability of the data (in the candidate countries and between them and the EU Member States), international definitions and classification have been applied in its collection and presentation. The specific data on education, training and educational attainment of the population has been gathered and presented on the basis of the categories of the ISCED classification. Furthermore, data on the labour market (activity rates and unemployment rates) is presented on the basis of ILO definitions. All data on the labour market has been taken from the national Labour Force Surveys. However, it is important to note that the divergences between national data collection methods reduce the accuracy of cross-country comparability.

In this second edition more emphasis has been put on the development of the different variables and supplementary information has been taken from the joint European Training Foundation/Eurostat publication "Education Statistics and Indicators in the Phare countries 1996/97" (produced within the frame of the Phare multi-country programme in higher education), and from the 1998 National Observatory reports.

The information provided does not represent an in-depth analysis of achievements and problems in vocational education and training in the candidate countries of Central and Eastern Europe. Nevertheless, it is sufficient to illustrate the main issues for further discussion and deeper analysis.

The publication is made up of five chapters. Chapter 1 presents the labour market context of vocational education and training. It also shows the link between educational attainment levels of the population and their effect on the labour market. Chapter 2 explains the developments in young people's participation in education and training. Chapter 3 analyses early school. Chapter 4 deals with education and training financing and Chapter 5 presents the main conclusions of the analysis made in the previous chapters along with recommendations for action. Related areas on which further information should be collected in the future are also contained in this chapter.

The report complements a series of country reports, factsheets and trans-national reports which the European Training Foundation, in collaboration with the National Observatories, is producing on the vocational education and training reform process in each of the partner countries. All publications can be obtained from the Information & Publications Department of the European Training Foundation and can be consulted on the Foundation's web site at www.etf.eu.int.

Acknowledgement

We should like to thank the National Observatories and also the experts in the various statistical offices who provided expertise and assistance to the National Observatories and to the European Training Foundation in the preparation of this document.

1 The network of National Observatories was set up by the European Training Foundation in partnership with the national authorities of the partner countries in order to ensure accurate and up-to-date information on the progress of reform in vocational education and training. The National Observatories, which are hosted mainly within existing organisations involved in the reform process, gather and analyse information on vocaitonal education and training issues on the basis of a common framework agreed with the Foundation. Since 1996, the National Observatories have been set up in 25 countries which are eligible for support under the EU Phare and Tacis Programmes.

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Educational Attainment and the Labour Market

Key Findings

Educational attainment levels

Educational attainment levels of the population are improving as a result of an increase in the percentage of people who acquire a minimum of a secondary/middle level qualification (ISCED level 3 and above). Nevertheless, the percentage of people who receive a higher level qualification (ISCED 5-7) still remains low (in comparison to the EU average). As in the EU Member States, activity rates increase with educational attainment level.

Better-educated people are less likely to face unemployment although this only applies to the highly educated. In some countries people with middle level qualifications are equally or even more exposed to unemployment than the very low qualified. This applies to women in Estonia, Latvia, Lithuania and Romania and men in Hungary. In Lithuania 25-29 year olds are affected by this. Furthermore, the unemployment rates of highly qualified people differ significantly between countries, ranging from 0.9% in the Czech Republic to 8.9% in Lithuania.

Gender differences

Overall more highly educated women have higher activity rates but discrepancies between the genders remain within each educational attainment group. Bulgaria, Romania and Slovenia have achieved a significant reduction in the educational level gender gap. In other countries however, such as Hungary, it remains high even for highly educated women. This implies that education alone is not enough to motivate women to be active in the labour market. Adverse economic conditions, tight labour markets and the absence of an adequate social policy (including childcare) may counteract the positive effect of education on the participation of women in the labour market. Excluding the older generation (50 and over), the highest gender gap is in the 25-29 age group for women with both low and middle level qualifications in all countries, and highly educated women in Bulgaria, Estonia, Hungary, Lithuania and the Slovak Republic.

Women are improving their attainment levels much faster than men, which often leads to a better qualified female population particularly in younger generations. This applies to all countries except Hungary and Romania, while in the Czech Republic women do not perform as well, but their rate of improvement is higher than that of men.

Young people

Young people (24 and below) present significantly lower activity rates to the rest of the population due to their continued participation in education and training (and as a result of military service in the case of young men). Particular attention should be paid to the low activity rates of young people with low level qualifications (ISCED level 0-2) when these are combined with low participation in education and training (such as in Hungary and Romania). The combination of the three factors (low activity rates, low level qualifications and low participation rates in education and training) can lead to the social marginalisation of such groups.

Young people have higher unemployment rates than the rest of the population in all countries. Those with low qualifications and those who enter the labour market with a certificate of general secondary education face the most serious problems.

1.1 Educational attainment levels of the population

Graph 1.1

Educational attainment levels are increasing. There is a higher percentage of young people with middle level qualifications (ISCED level 3) and above (ISCED 5-7). The percentage of people in the labour market with low qualifications (or without qualifications at all) is therefore decreasing. Younger generations of women have made drastic improvements in terms of educational levels and are now very often better educated than men.

The Baltic States, and the Czech and Slovak Republics have the highest percentage of people who acquire at least a middle level qualification, while Bulgaria, Romania and Hungary have the highest percentage of people with no, or low level qualifications[2]. The countries with the highest percentage of people with middle level qualifications are the Czech and Slovak Republics, while those with the highest percentage of higher qualifications are Estonia, Lithuania[3] and Bulgaria.

In comparison to the EU average, all countries show lower percentages of low qualified people and higher percentages of those with a middle level qualification (except Lithuania which is compensated for by a significantly higher percentage of people with high level qualifications (ISCED level 5)). On the other hand most countries present lower percentages of highly qualified people. The exceptions are Estonia and Lithuania (due to a high percentage with a vocational qualification at ISCED level 5). Furthermore, Bulgaria (19%) is close to the EU average (20%). (See Table 1.1 in Annex)

Gender differences

In half of the countries (the Czech Republic, Hungary, Romania, the Slovak Republic and Slovenia) relatively more women (than men) leave the education system with low or no qualifications. This is also true for 25-29 year olds although gender differences are tending to even out and in Slovenia they are actually being reversed. In the majority of countries (apart from the Czech Republic, Hungary, Romania and the Slovak republic) a higher percentage of women (particularly 25-29 year olds) acquire a higher level qualification.

Young people

The percentage of 25-29 year olds leaving the education system with no, or low level, qualifications is decreasing. This is due to an increasing number of young people acquiring a middle level qualification. In parallel, the data shows a standstill (Poland and Slovenia), or a decline (all other countries), in the number of young people acquiring a higher qualification (ISCED level 5-7). This pattern concerns mainly young men. The proportion of young women acquiring a higher level qualification (with the exception of Estonia), on the other hand, increased (or at least remained stable in the Czech Republic, Hungary, Latvia and Poland). However, the data analysed refers to the completed level of education, and may be influenced by the fact that young men in this age group are still studying. Part time studies (often combined with work) and military service may delay the acquisition of a higher level qualification.

Definitions

Educational attainment levels of the population: refers to the highest qualification received by the individual in the formal education and training system. Individuals are allocated to different ISCED '76 levels on the basis of the highest level of education completed. They are then clustered in three categories:

- **People with no or low qualifications** including all those who have not completed an education programme at ISCED level 1 or have completed an education progamme at ISCED level 1 or 2. The term low qualified is also used in the text.
- **People with a middle level qualification** including all those who have completed an education programme at ISCED level 3
- **People with a higher level qualification** including all those who have completed an education progamme at ISCED level 5-7. The term highly qualified is also used in the text.

Description of ISCED '76 levels

ISCED level 0 (pre-primary education): education which precedes primary education and is generally not compulsory.

ISCED level 1 (primary education): schooling which begins between the ages of 5 and 7, is compulsory in all cases and lasts for 5 or 6 years as a rule.

ISCED level 2 (lower secondary education): schooling which is compulsory in all candidate countries. The end of this level often corresponds to the end of full-time compulsory schooling.

ISCED level 3 (upper secondary education): schooling which begins around the age of 14-16 and refers to either general or vocational education. It may lead to the standard admission requirement to tertiary/higher education and/or to a vocational qualification.

ISCED level 5 (tertiary/higher education non-university degree): programmes which require successful completion of upper-secondary level and do not lead to the award of a university degree or equivalent.

ISCED level 6 (tertiary/higher education first stage university degree or equivalent): programmes leading to a primary university degree and equivalent

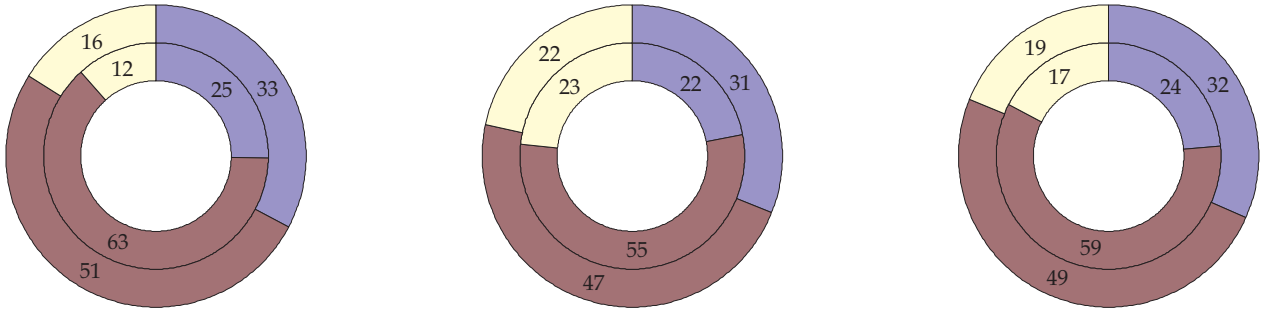
ISCED level 7 (tertiary/higher education second stage university degree): programmes leading to a post-graduate university degree.

2 Data for Poland should be interpreted with caution because it covers all people with a "basic vocational education" qualification. This type of education lasts for three years after eight years of primary school and one year of preparatory education. Similar types of education in other countries are allocated to ISCED level 3.

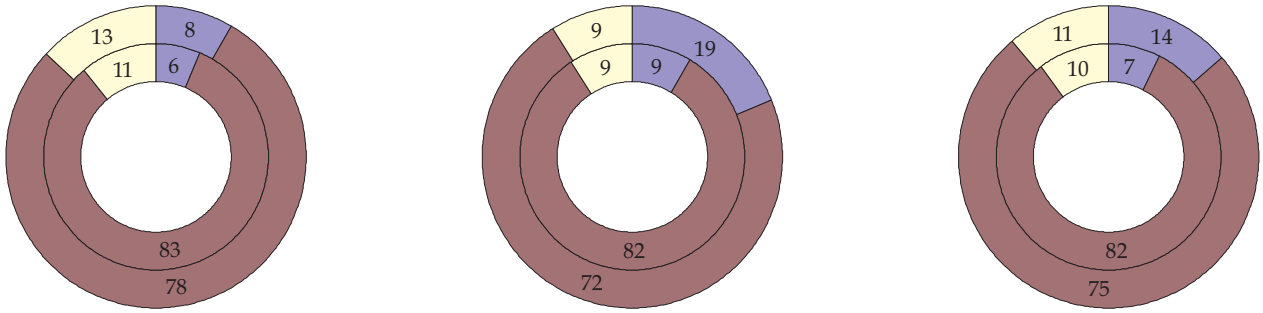
3 This is due to the structure of the vocational education and training system in Estonia and Lithuania. Both countries have vocational education and training programmes which are classified at ISCED level 5. The majority of people in the ISCED 5-7 category have actually acquired a vocational qualification of this type.

Graph 1.1 Educational attainment levels of 25-29 and 25-59 year olds, 1997

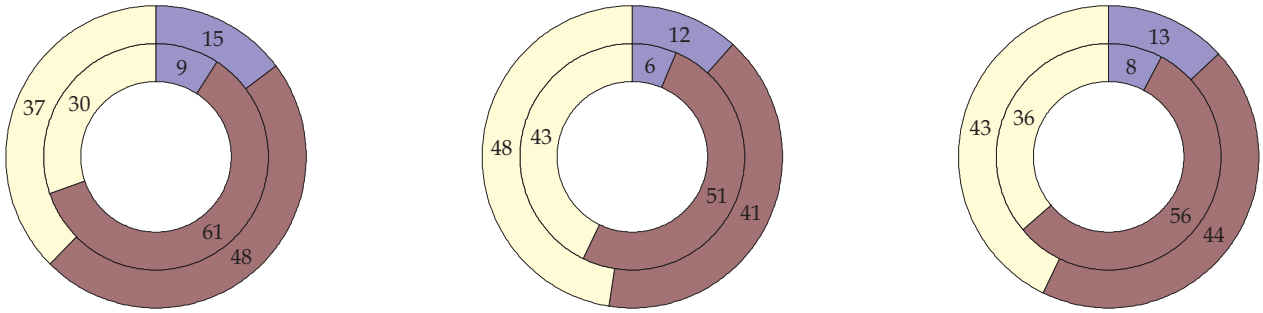
Bulgaria



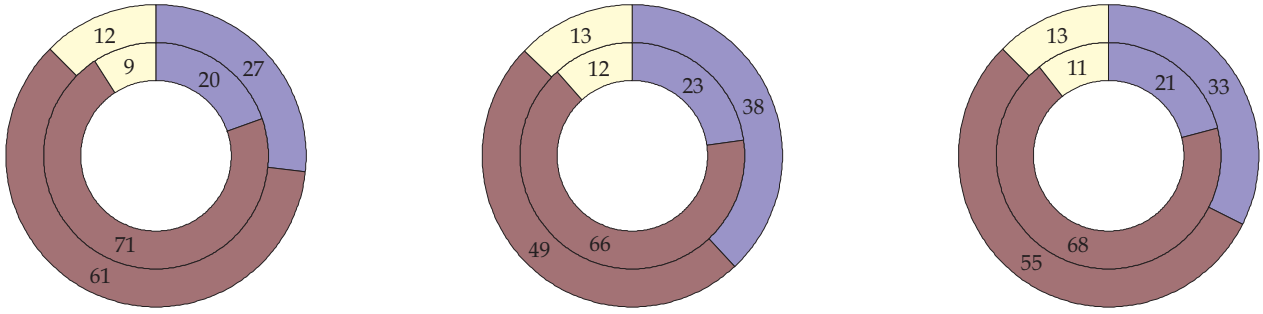
Czech Republic



Estonia



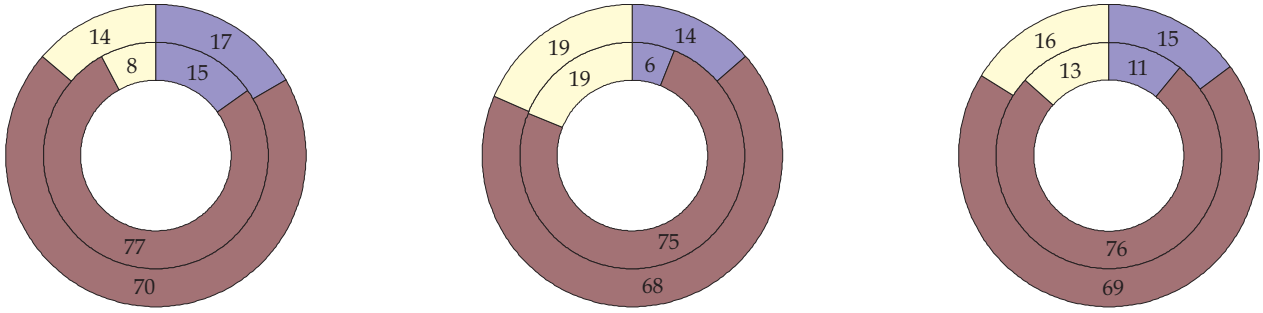
Hungary



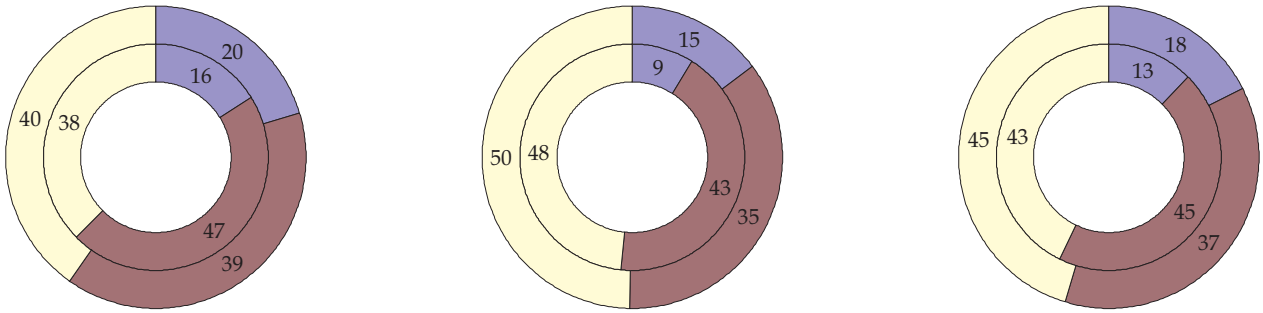
Inner circle: 25-29 year olds
Outer circle: 25-59 year olds

0-2 3 5-7

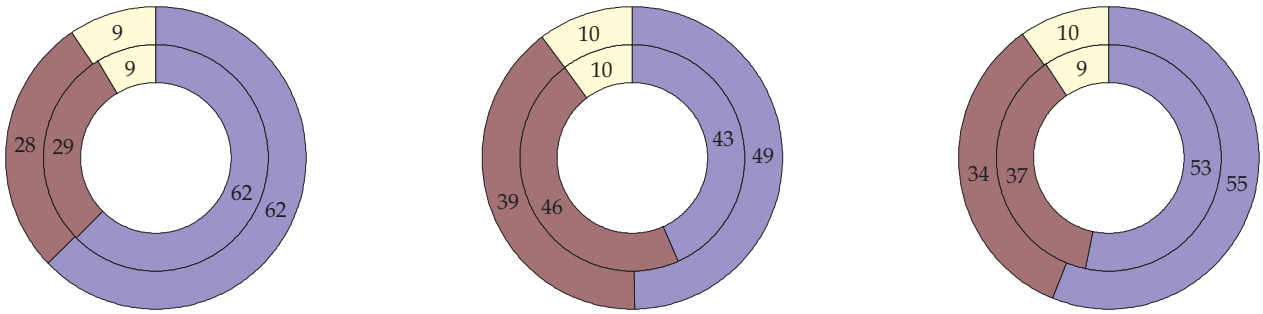
Latvia



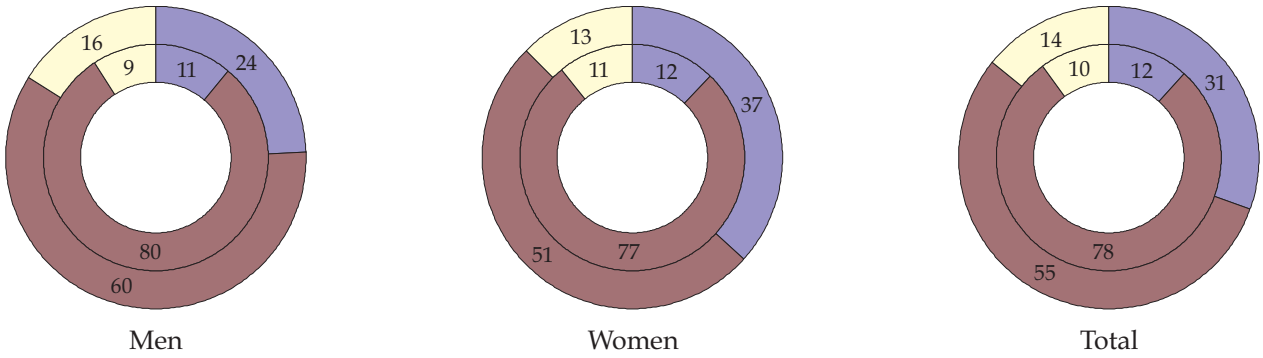
Lithuania



Poland



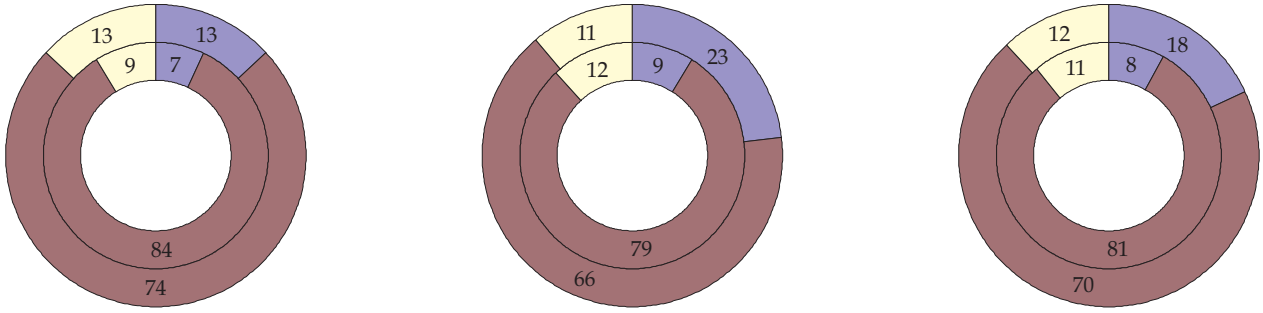
Romania



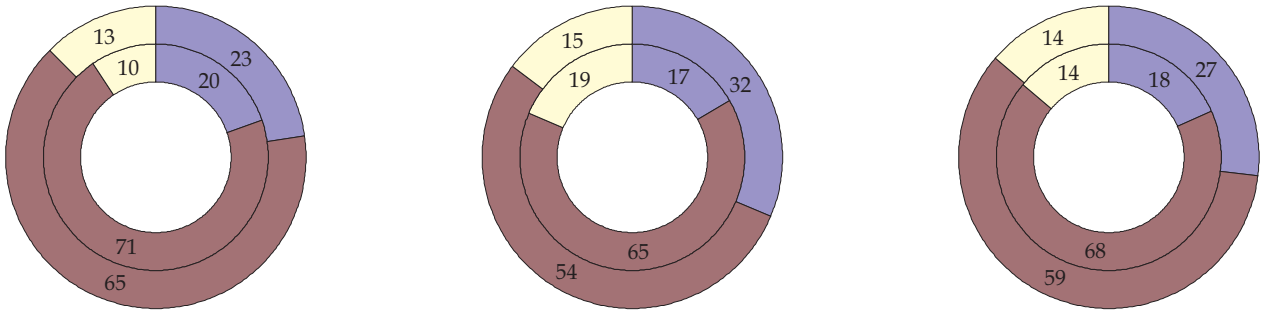
Inner circle: 25-29 year olds
Outer circle: 25-59 year olds

0-2 3 5-7

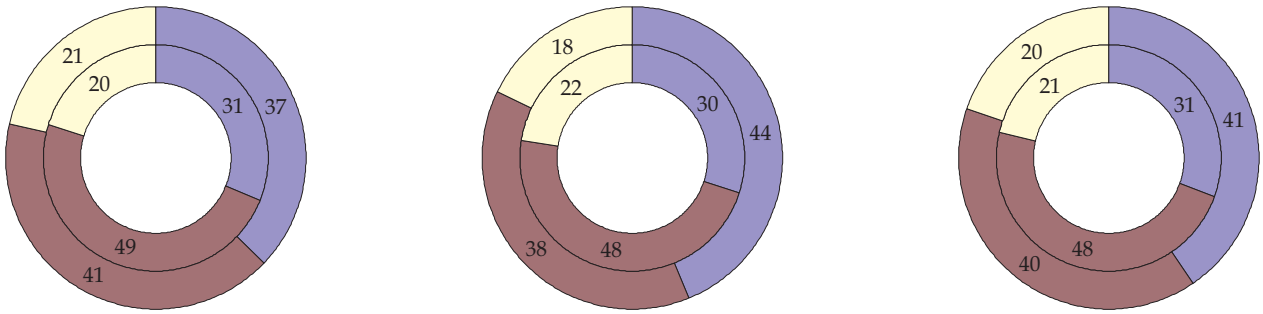
Slovak Republic



Slovenia



EU'15



Inner circle: 25-29 year olds
Outer circle: 25-59 year olds

0-2 3 5-7

1.2 Education and labour market participation[4]

Graph 1.2, 1.3, 1.4

Since the beginning of the reform process all countries have experienced decline in the activity rates of the population. The groups affected most have been people close to retirement, women and young people. A number of factors have lead to this situation:

- rising unemployment
- increased number of long term unemployed
- encouragement of early retirement
- closure of child care facilities
- lower salaries for women
- young people staying at school for longer[5]

In 1997, the activity rates of the population ranged from 46% to 68% compared to an average of 55% in the EU. Hungary and Bulgaria have the lowest rates.

In 1997, the activity rates of young people were significantly lower than those of the rest of the population (ranging between 19% and 48%) against an average of 46% in the EU (see Table 1.3 in annex). The countries with the largest differences are Hungary, Estonia and Bulgaria. This could be due to the fact that many young people are still in the education system or that young people facing unemployment (see Chapter 1.3) become discouraged and remain inactive. This is possibly the case in Bulgaria and Hungary, which also show low participation rates in education and training (see Chapter 2). Against this general background, there seems to be a positive relationship between educational attainment levels and labour market participation i.e. better educated people have higher activity rates. This is true for both men and women with few exceptions.

Gender differences

Women, independent of qualification level, have lower activity rates (ranging from 41% to 62%) than men (ranging from 52% to 74%) (i.e. for highly educated women in Slovenia in the 25-49 age group, in Bulgaria in the under 25 and 40-49 age groups, and in Romania in the 25-29 age group) (see Graph 1.2). However, the differences between the two genders are smaller among young people (under 25's). This could be as a result of military service or the fact that women now tend to have children later in life.

The question arises as to whether discrepancies in the activity rates between the two genders decrease with educational level. There seems to be a clear pattern (at least for women between the ages of 15 and 49) in only three countries (Bulgaria, Romania and Slovenia). This suggests that education encourages women to participate more actively in the labour market. There is little difference in the activity rates of highly educated men and women and in these three countries women are actually more active. Hungary, however, is at the other extreme and even highly educated women are much less active than men. In general, age appears to play an important part in the different activity rates. The 25-29 age group seems to be quite critical for women with low and middle level qualifications in all countries, and for women with high level qualifications in Bulgaria, Estonia, Hungary Lithuania and the Slovak Republic. On the other hand, there is little difference between the genders in the 40-49 age group for all educational levels.

Young people

Young people (under 24's) in the ISCED 0-2 educational attainment group have much lower activity rates than the rest of the population (see Table 2 in Annex 1). Hopefully, this is mainly due to their participation in education and training. At the same time, the countries with the highest activity rates of young people are the Baltic States and Slovenia (see chapter 2). In the Baltic States this can be explained by the high percentage of young people who combine work (or at least labour market participation) with participation in education and training. On the other hand, the particularly low activity rate of young people in the ISCED 0-2 group in Hungary and Romania is worrying if we take into account that these countries also have low participation rates in education and training. This may lead to the conclusion that a part of the young population is at risk of exclusion from both education and the labour market.

Definitions

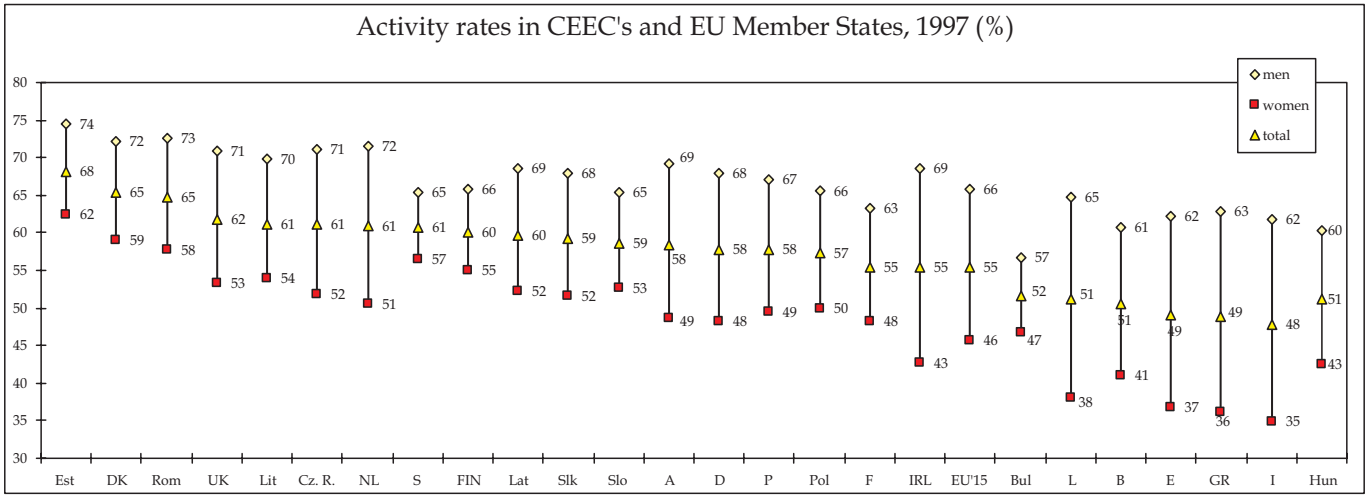
Active population is the employed and unemployed population according to the International Labour Organisation definition

Activity rate of the population is the percentage of employed and unemployed people as a percentage of the population of the relevant age group.

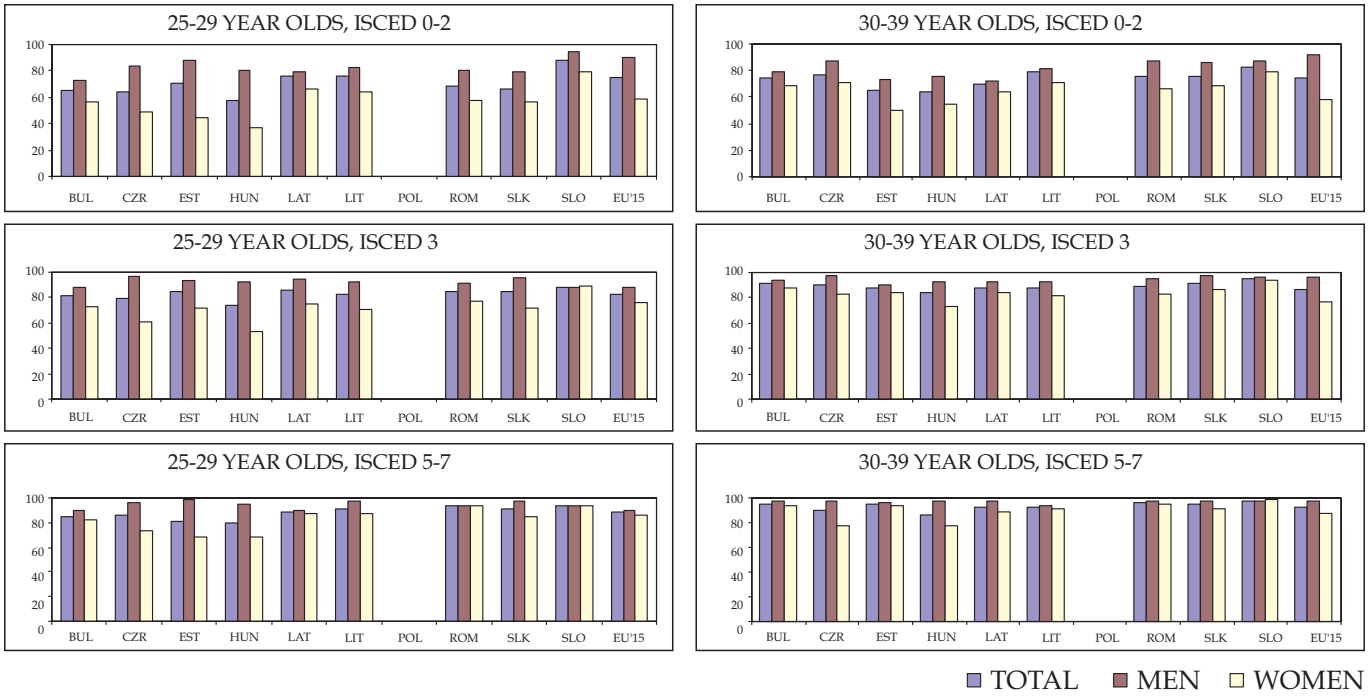
4 Labour market participation is determined by the activity rates of the population.

5 Source: Background Studies for Employment Policy Reviews recently undertaken by the European Training Foundation for the European Commission.

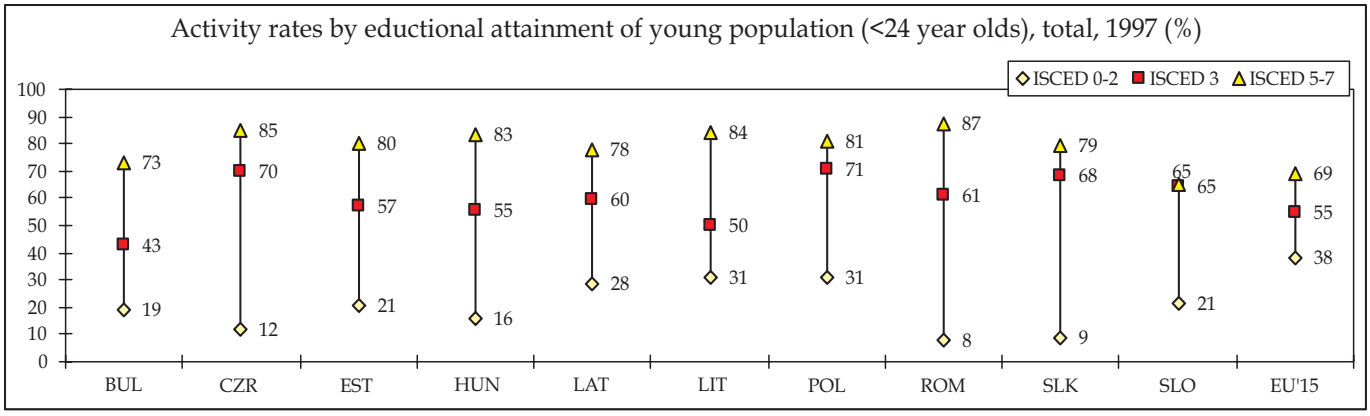
Graph 1.2 Activity rates in the candidate countries of Central and Eastern Europe and the EU Member States, 1997 (%)



Graph 1.3 Activity rates by educational attainment level of the population 25-29 and 30-39 year olds, 1997 (%)



Graph 1.4 Activity rates by educational attainment level of the young population (under 24 year olds); 1997 (%)



Exact figures can be found in Annex 1 - tables 1.2 and 1.3

1.3 Education and unemployment

Graph 1.5, 1.6

In 1997, unemployment rates ranged from 4.3% to 15% compared to an 11% EU average. The under 25 age group tended to face higher unemployment rates (ranging from 6.7% to 36% compared to an average 21% in the EU) than the rest of the population (between 3.8 and 12.9% compared to 9% in the EU) (see Table 1.4 in annex).

As in the EU, in all candidate countries there is a negative correlation between unemployment and educational attainment levels, i.e. better educated people face are less likely to unemployment. This generally applies to both genders with the following exceptions: women with middle level qualifications face higher unemployment rates to those with low, or no, qualifications in the Baltic States and Romania, and the same is true for men in Hungary.

Within this general pattern it is worth noting that there are differences between the countries in the extent of the reduction of the unemployment rate from the lower to the higher qualified. In some countries the importance of having or not having a qualification is more pronounced than in others. For example, in the Czech and Slovak Republics unemployment rates decrease sharply between those with no, or low, qualifications and those with middle level qualifications (from 12.4% to 3% and from 23% to 8% respectively). While the differences between those who have a middle level qualification and those who have a higher level qualification are smaller (although recent evidence in the Czech Republic shows that they are increasing[6]. On the other hand, in Bulgaria, Estonia and Slovenia the reduction in the unemployment rates from lower to higher qualification levels is more even (see Table 1.5 in Annex).

In other countries the level of qualification itself is important. This is the case in Latvia, Lithuania and (to a lesser extent) Poland where the unemployment rates of those with low, or no, qualifications are quite similar to those of middle level qualifications while those with higher level qualifications are much less likely to face unemployment. Furthermore, in Hungary and Romania where unemployment rates rise from the low, or not, qualified to those with middle qualifications and decrease again for the highly qualified.

Gender differences

Unemployment rates of women are higher than those of men in Bulgaria, the Czech Republic, Poland, Romania and the Slovak Republic, in four countries they are roughly equal and in Hungary, slightly lower.

This is mainly due to the higher unemployment rates of women with middle level qualifications. On the other hand, contrary to the situation in the EU, low qualified women have lower unemployment rates than men in the majority of countries (except Hungary, Lithuania and Poland), while unemployment rates are almost equal between the two genders in the population with high level qualifications.

This pattern changes significantly for female 25-29 year olds. Young women face higher unemployment levels than young men in all educational attainment levels in all countries except Bulgaria and Hungary. Other exceptions to this rule are highly educated women in Estonia (with equal unemployment rates to men) and Lithuania (with lower unemployment rates).

Young People

Young people of all educational levels face higher unemployment than the total population. Nevertheless, attention should be drawn to two elements:

1. the absolute number of young unemployed is significantly lower than that of other age groups; and,
2. the length of unemployment for young people is generally shorter than that of other age groups[7].

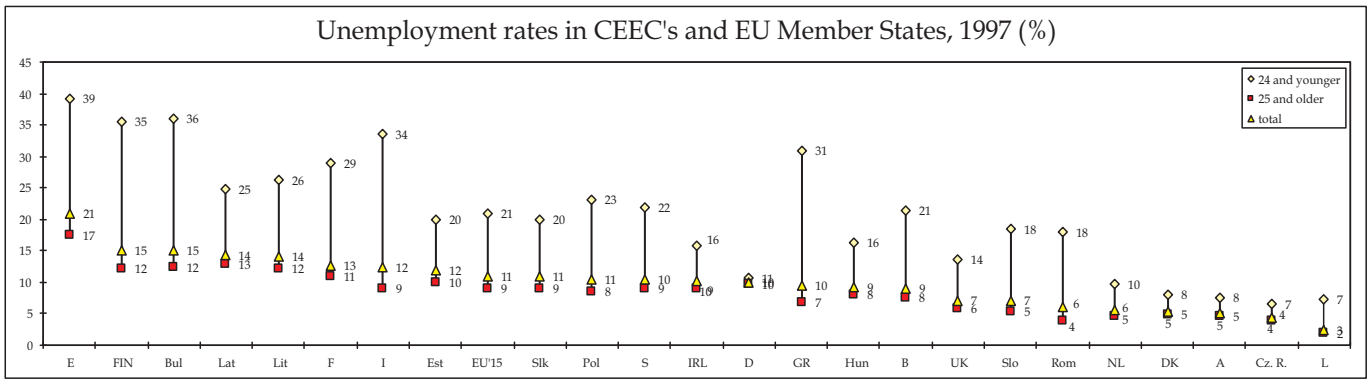
At the same time the negative correlation between unemployment and educational level also applies to the young population. Only two countries show slight divergences from the model. The first is Lithuania where the unemployment rates of those with middle level qualifications are higher than those with low levels. This may be due to fact that those who complete general secondary education and then enter the labour market encounter particular problems in finding employment. The second is Romania where young people with higher level qualifications have the same unemployment rate as those with middle level qualifications.

The above analysis makes the distinction between levels of qualification. Nevertheless, within the group of those who have completed ISCED level 3, a distinction should be made between those who have acquired a vocational qualification and those who have accomplished general secondary education. The latter seem to face particular problems in finding employment and their unemployment levels seem to be comparable to those who left the education system without qualifications at an earlier stage. Despite the fact that these people have a much higher level of knowledge from an educational point of view, they are considered unqualified in the labour market. The general tendency for higher participation rates in secondary general education (see chapter 2) and its combination with the (still) limited possibilities for post-secondary qualifications may endanger the future careers of those people who enter it. Accordingly, policy actions should focus on providing these people with sufficient and valid post-secondary opportunities and/or valid alternatives at secondary level. (see box 3)

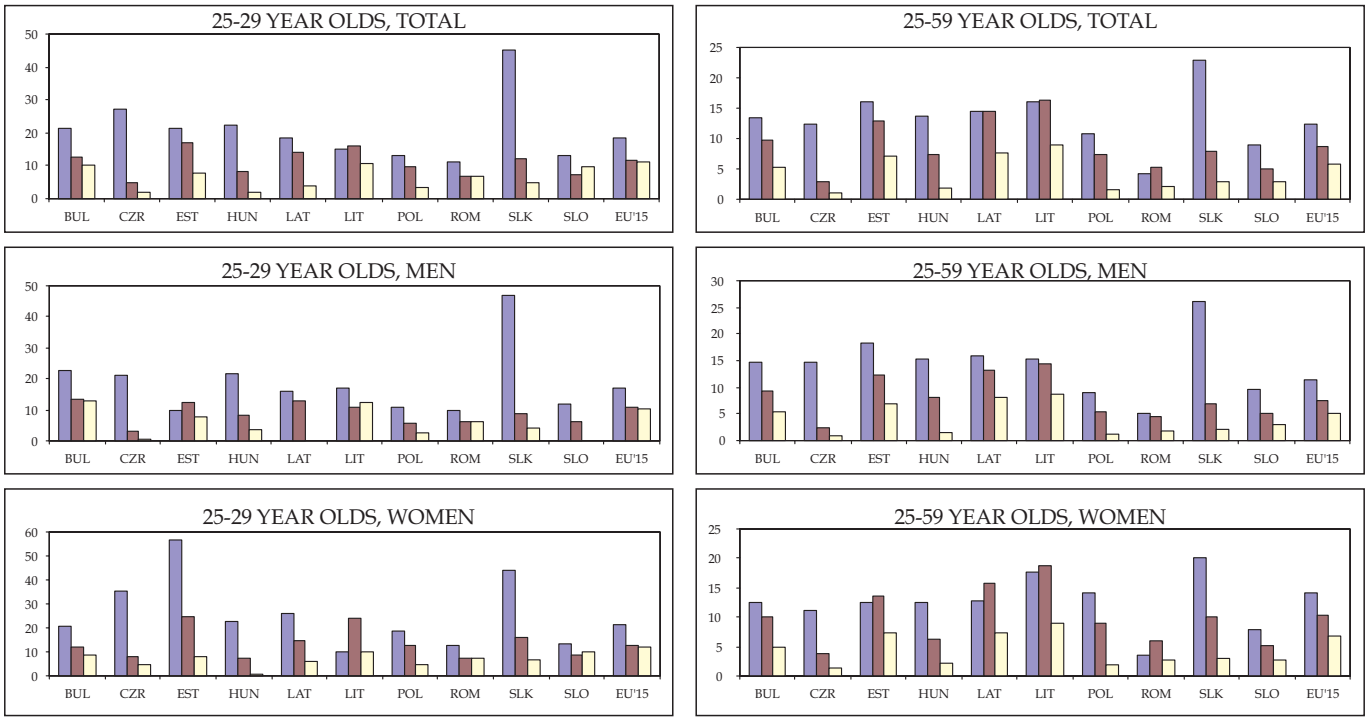
6 In the 2nd quarter of 1998 the unemployment rate among those qualified at ISCED level 3 was 6% (equal to the average unemployment rate) and among those qualified at ISCED level 5 it was only 2%.

7 Source: Background studies for Employment Policy Reviews in the candidate countries of Central and Eastern Europe conducted by the European Training Foundation for the European Commission (DGV).

Graph 1.5 Unemployment rates. Candidate countries of Central and Eastern Europe and EU Member States, 1997 (%)



Graph 1.6 Unemployment rates by educational attainment level of the population, 1997 (%)



Exact figures can be found in Annex 1 - tables 1.4 and 1.5

Graduates of secondary general education

Unemployment of those who have completed general secondary education without qualification (extracts from National Observatories reports 1998)

Bulgaria In 1997, 32% of all unemployed had general secondary education compared to 40% with basic and lower education. 18% have secondary vocational education

Latvia According to registered 1997 data 30% of the unemployed had general secondary education, 26% had basic or unfinished education and 6% higher education.

Lithuania According to data from the Labour Force survey half of the unemployed have received no formal qualification i.e. have graduated from general secondary or lower secondary (basic school). 22% of the unemployed are graduates from vocational schools. Unemployed with a university diploma count for around 6% of the unemployed, the rest being graduates of colleges.

Poland According to registered data unemployment rates by educational attainment in Feb. 98 were: 2.4% higher education; 9.2% secondary technical school; 12.5% comprehensive school (general secondary education); 13.1% basic vocational school.

Slovenia According to the Labour Force survey unemployment rates decline as the level of education increases. In the second quarter of 1998, the highest unemployment rate was for those who do not have a qualification (15.6%) while the lowest unemployment rate is among those who have a higher education degree (2.1% for those with a non-university degree and 4% for those with a university degree). Furthermore, those having completed four or five years upper secondary school had a lower unemployment rate (7.3%) compared to the average (7.7%) and those having completed elementary, one/two year upper secondary school and 2-3 year upper secondary school had 9.1%, 9.6% and 8.3% unemployment rates respectively.

Chapter 2
Access to education and training

Key Findings

Participation rates in education and training

A slight increase was noted in the participation rates of 14-19 year olds in education and training between 1995-97. This increase was most pronounced in Estonia, Latvia and Lithuania.

Participation rates of 14-16 year olds (particularly in basic education or in the first stages of upper secondary education) exceed the EU average in all countries except Romania, Bulgaria and Hungary. Nevertheless, participation rates in education of this age group are lower compared to the EU average. This is mainly due to the low participation (compared to the EU average) of 17-19 year olds (typically at the secondary and post-secondary level) in all countries except Poland and Slovenia. This means that young people in Central and Eastern Europe tend to leave school earlier than in the EU often at the expense of acquiring higher level qualifications.

Participation rates in vocational training

Participation rates in vocational education and training have stagnated. Nevertheless, a high percentage (37% compared to the EU average of 30%) of young people (14-19 year olds) participate in vocational education and training. However, this high participation rate is due to the younger people in this age group (14-16 year olds) (41% on average compared to 22% in the EU) while 17-19 year olds lag behind (33% against 37% in the EU). The countries with the lowest participation rates in vocational education and training are the three Baltic States and Bulgaria and those with the highest participation rates are the Czech Republic, Hungary, Slovenia and the Slovak Republic.

The demand for the final secondary examination (baccalaureat or matura) is very high among young people in the candidate countries of Central and Eastern Europe, in particular when it is combined with a vocational qualification. This can be deduced by the increase in enrolment in vocational education programmes offering a double qualification since 1993. The attractiveness of these programmes is due to the combination of higher level studies and a qualification for the labour market. The only countries in which participation in general education is higher than participation in these programmes is in the three Baltic States.

Participation rates in post-secondary education

Participation in post-secondary education remains limited despite the fact that some countries have experienced high increases in enrolment over the last few years.

Overall, taking into account participation rates of 14-19 year olds in education and training, we can identify two main models. The Central European model (in the Czech Republic, Hungary, Poland, the Slovak Republic, Slovenia and Romania) shows high participation rates in vocational education and training at secondary level and is often accompanied by low participation rates in post-secondary (particularly higher) education (with the exception of Slovenia). The second model covering the three Baltic States and Bulgaria shows low participation rates in secondary vocational education and high participation rates in post-secondary (vocational and higher) education.

Participation rates by gender

Young girls show higher participation rates for all age groups, particularly in general education programmes and vocational programmes providing a double qualification.

2.1 Participation rates in education and training

Graph 2.1, 2.2

The majority of the candidate countries of Central and Eastern Europe showed a slight increase in the participation rates of 14-19 year olds in education and training in the period 1995-97. Exceptions are the Czech Republic (where there was a small reduction), Bulgaria and Poland (where participation remained unchanged). The greatest increase in participation rates was in Estonia, Latvia and Lithuania.

Despite this increase, participation rates of 14-19 year olds remain below the EU average (80%) in all countries except Poland (84%), Slovenia (82%) and Estonia (80%). The countries with the lowest participation rates were Romania (59%), Bulgaria (65%) and Hungary (67%).

Within this general trend, a distinction should be made between 14-16 year olds, i.e. the typical group in compulsory education, and 17-19 year olds, i.e. the typical group in upper-secondary education and post-secondary education.

Participation rates for 14-16 year olds increased in the three Baltic States, Hungary and slightly in Romania (mainly due to a steady increase in the participation rates of 14 year olds - see Table 2.1) while they remained stable, or slightly decreased, in the rest of the countries. In 1997, participation rates of this age group were above the EU average (93%) in seven countries while Bulgaria, Hungary and Romania lagged behind.

Participation rates for 17-19 year olds increased in all countries except the Czech Republic (although an increase was noted for 17 and 18 year olds, it was nevertheless outweighed by a decrease in the participation rates of 19 year olds - see Table 2.1). In 1997, participation rates of this age group were below the EU average (67%) for all countries (except Slovenia).

It is worth noting that the participation rate of girls is higher than that of boys for all age groups which is also the case in the EU.

The changing length of basic education

Over the past few years many countries have passed laws to increase the duration of basic education, i.e. the compulsory education which is offered during the first years of schooling. During basic education all children follow a common core curriculum. Dispersal to different types of vocational education or general education takes place after the end of basic education. Accordingly, the increased length of basic education delays the age at which young people enter vocational education. In the academic year 1997/98 starting age, finishing age and the duration of basic education were as follows.

Age	Starting age of basic education	Finishing age of basic education	Duration of basic education	End of compulsory schooling
Bulgaria	7	15	8	16
Czech Rep (1)	7	16	9	16
Estonia	7	16	9	16
Hungary (2)	7	15	8	16
Latvia	6/7	15/16	9	15
Lithuania (3)	6/7	15/16	9	16
Poland	7	15	8	18
Romania (4)	7	15	8	16
Slovak Republic (5)	6	15	9	16
Slovenia	7	15	8	15

(1) In the academic year 1996/97 the extention of basic education from 8 to 9 years was implemented
(2) In the academic year 1998/99 the end of compulsory education was extended from the age of 16 to 18
(3) In the academic year1998/99 basic education was extended from 9 to 10 years
(4) In the academic year 1999/2000 basic education will be extended from 8 to 9 years

Definitions

Education and training: includes general education together with vocational education and training at all levels. The term "education system" is also used to describe education and training in its entirety.

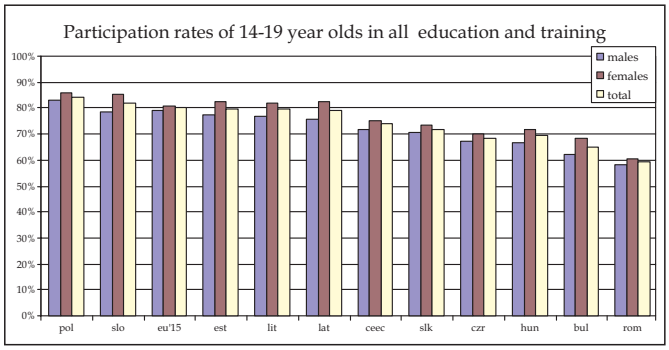
Participation rates in education and training: students of a given age group as a percentage of the population in the same age group.

Vocational education and training includes programmes/schools which aim to provide people with employable skills and which lead to a vocational qualification. In international statistics these programmes are allocated to ISCED levels 2,3,4 and 5.

Vocational programmes leading to a double qualification: includes vocational programmes/schools which provide both a vocational qualification (or vocational preparation) and access to a final secondary examination which is a prerequisite for entrance to higher education. Normally, these programmes start after completion of lower secondary education and last 3-4 years. They are classified at ISCED level 3.

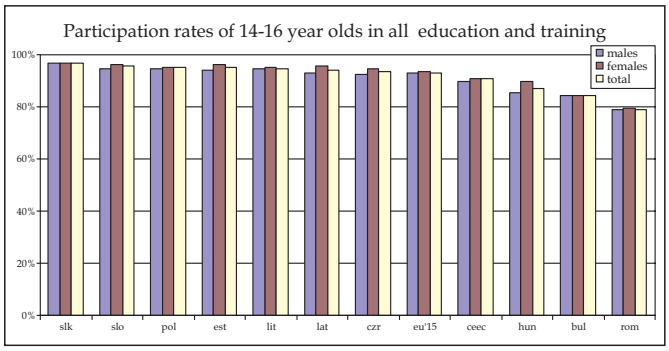
Graph 2.1 Participation rates in education and training - 1997/98

14-19 year olds



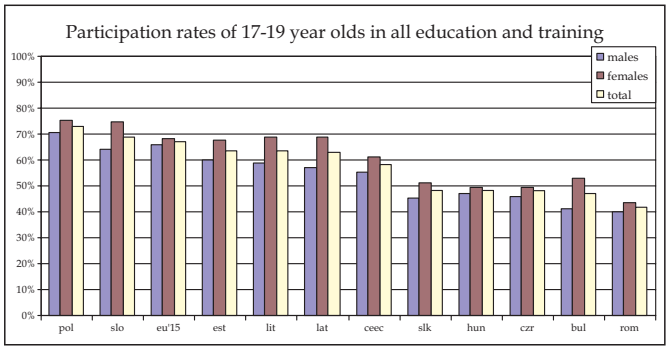
	pol	slo	eu'15	est	lit	lat	ceec	slk	czr	hun	bul	rom
Males	83%	79%	79%	78%	77%	76%	72%	70%	67%	67%	62%	58%
Females	86%	85%	81%	82%	82%	83%	75%	73%	70%	72%	68%	60%
Total	84%	82%	80%	80%	79%	79%	74%	72%	69%	69%	65%	59%

14-16 year olds



	slk	slo	pol	est	lit	lat	czr	eu'15	ceec	hun	bul	rom
Males	97%	95%	95%	94%	95%	93%	93%	93%	90%	85%	85%	79%
Females	97%	97%	96%	96%	95%	96%	95%	94%	91%	90%	85%	80%
Total	97%	96%	95%	95%	95%	94%	94%	93%	91%	87%	85%	79%

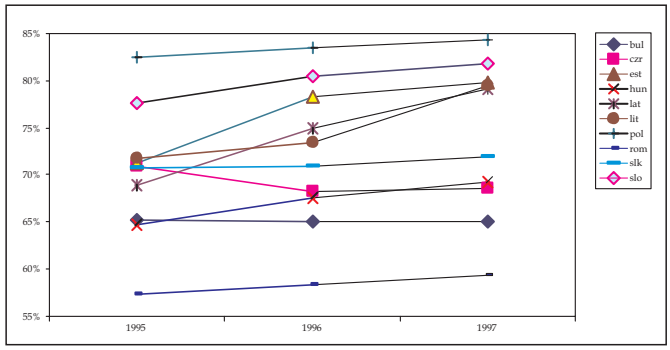
17-19 year olds



	pol	slo	eu'15	est	lit	lat	ceec	slk	hun	czr	bul	rom
Males	70%	64%	66%	60%	59%	57%	55%	45%	47%	46%	41%	40%
Females	76%	75%	68%	68%	69%	69%	61%	51%	49%	49%	53%	44%
Total	73%	69%	67%	64%	64%	63%	58%	48%	48%	47%	47%	42%

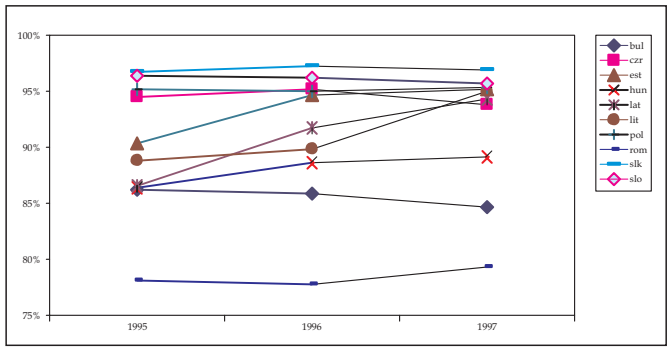
Graph 2.2 Participation rates in education and training - Trends 1995/96-1997/98

14-19 year olds



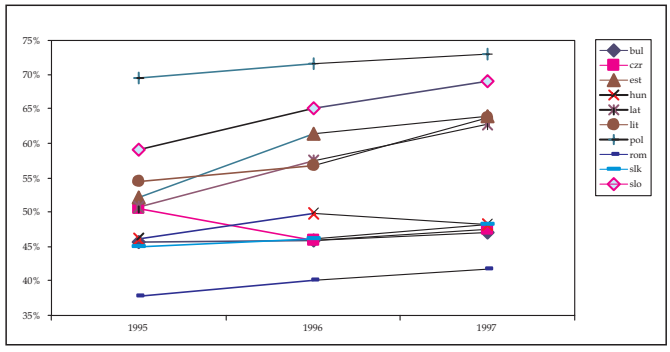
	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1995	65%	71%	71%	65%	69%	72%	83%	57%	71%	78%
1996	65%	68%	78%	68%	75%	73%	83%	58%	71%	80%
1997	65%	69%	80%	69%	79%	79%	84%	59%	72%	82%

14-16 year olds



	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1995	86%	95%	90%	86%	86%	89%	95%	78%	97%	96%
1996	86%	95%	95%	89%	92%	90%	95%	78%	97%	96%
1997	85%	94%	95%	87%	94%	95%	95%	79%	97%	96%

17-19 year olds



	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1995	46%	50%	52%	46%	51%	55%	69%	38%	45%	59%
1996	46%	46%	61%	50%	57%	57%	71%	40%	46%	65%
1997	47%	47%	64%	48%	63%	64%	73%	42%	48%	69%

Source: European Training Foundation - Key Indicators database

2.2 Participation in vocational training

Graph 2.3, 2.4, 2.5

Participation rates of 14-19 year olds in vocational education and training were at a standstill between 1995-97[8]. However, vocational education and training presents an important option (as opposed to general education) for young people in Central and Eastern Europe. 37% of 14-19 year olds are enrolled in this type of education which exceeds the EU average (26%). The countries with the highest participation rates in vocational education and training are Slovenia, the Slovak Republic and Hungary while those with the lowest participation are the three Baltic States and Bulgaria.

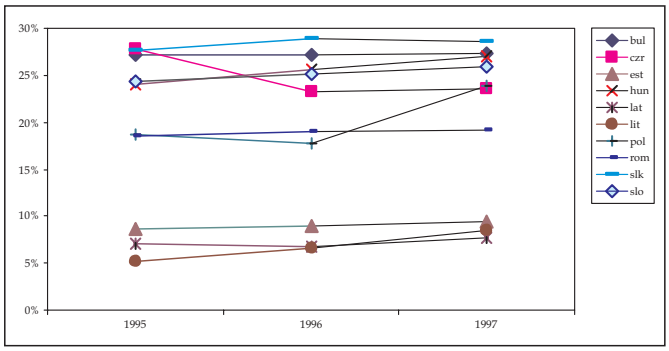
The standstill in participation rates is accompanied by important structural changes. First, it seems that young people enter later and/or stay longer in vocational education and training. This is demonstrated by a stability, or slight decline, of participation in vocational education and training among 14-16 year olds and an increase among 17-19 year olds in six countries (Bulgaria, Hungary, Latvia, Lithuania, Slovak Republic and Slovenia – see Table 2.2). This is, to a certain degree, due to the prolongation of basic education (during which general education is normally provided - see box 2) and the subsequent postponement of the beginning of vocational education. This is a positive development if we take into account that in 1997, participation in vocational education in Central and Eastern Europe (with the exception of the Baltic States) was higher (41%) than the EU average (22%) for 14-16 year olds but lower (33%) than the EU average (37%) for 17-19 year olds (only Poland and Slovenia with 45% and 42% respectively exceeded the EU average).

The second structural change relates to an increase in participation in vocational programmes which lead to a double qualification (i.e. a vocational qualification and an educational qualification - matura or baccalaureate) at the expense of programmes which provide a vocational qualification only. Six countries (Hungary, Lithuania, Poland, Romania, the Slovak Republic and Slovenia) have seen increases or stagnation. Only in the Czech Republic has there been a decline in total participation in vocational training which is again due to the introduction of the 9th grade in basic education. Nevertheless, this decline was much lower than that of participation in vocational training leading to a qualification.

Vocational education and training is less popular for young girls, who present lower participation rates than young boys in all age groups (except in the Czech and Slovak Republics in the 17-19 age group). Moreover, participation rates of young girls in vocational education programmes providing a double qualification are higher than those of boys.

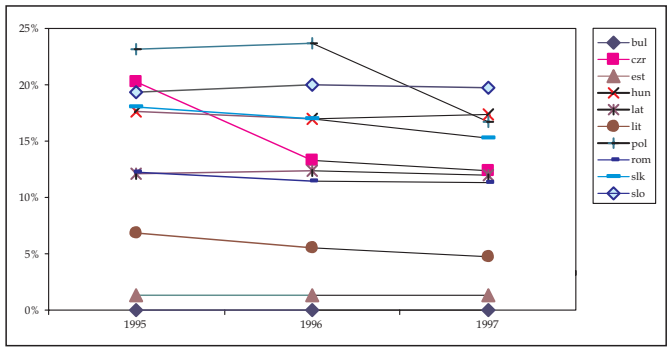
Graph 2.3 Participation rates in vocational education and training of 14-19 year olds - Trends 1995/96-1997/98

Vocational training leading to a double qualification



	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1995	27%	28%	9%	24%	7%	5%	19%	18%	28%	24%
1996	27%	23%	9%	26%	7%	7%	18%	19%	29%	25%
1997	27%	23%	9%	25%	8%	8%	24%	19%	29%	26%

Vocational training leading to a professional qualification only

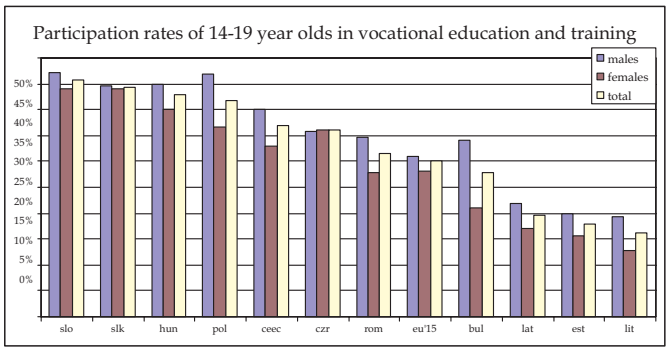


	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1995	0%	20%	1%	18%	12%	7%	23%	12%	18%	19%
1996	0%	13%	1%	17%	12%	6%	24%	11%	17%	20%
1997	0%	12%	1%	17%	12%	5%	17%	11%	15%	20%

8 The exception is the Czech Republic where there was a significant reduction in participation rates in vocational education and training between the academic years 1995/96 and 1996/97 as a result of the introduction of a new law in 1995 according to which the duration of basic education was extended from 8 to 9 years, i.e. in 1996 no new enrolment in vocational education was possible.

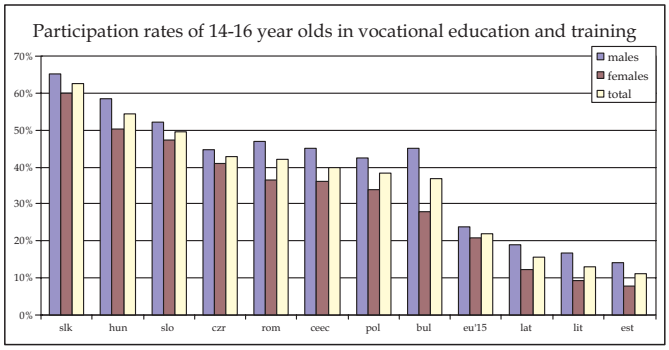
Graph 2.4 Participation rates in vocational education and training - 1997/98

14-19 year olds



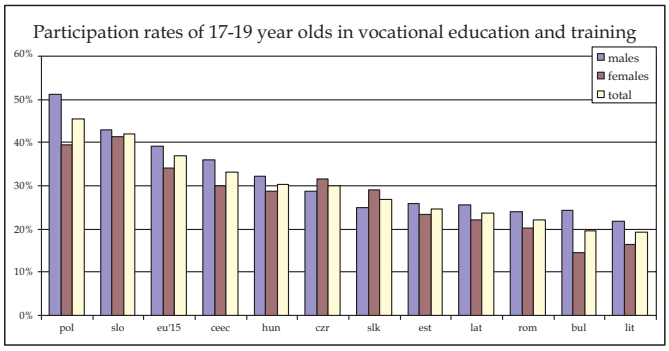
	slo	slk	hun	pol	ceec	czr	rom	eu'15	bul	lat	est	lit
Males	47%	45%	45%	47%	40%	36%	35%	31%	34%	22%	20%	19%
Females	44%	44%	40%	37%	33%	36%	28%	28%	21%	17%	16%	13%
Total	46%	44%	43%	42%	37%	36%	31%	30%	28%	20%	18%	16%

14-16 year olds



	slk	hun	slo	czr	rom	ceec	pol	bul	eu'15	lat	lit	est
males	65%	59%	52%	45%	47%	45%	42%	45%	24%	19%	17%	14%
females	60%	50%	47%	41%	37%	36%	34%	28%	21%	12%	9%	8%
Total	63%	54%	50%	43%	42%	40%	38%	37%	22%	16%	13%	11%

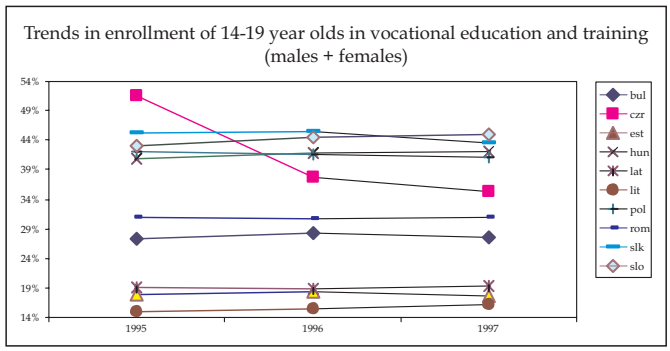
17-19 year olds



	pol	slo	eu'15	ceec	hun	czr	slk	est	lat	rom	bul	lit
males	51%	43%	39%	36%	32%	29%	25%	26%	25%	24%	24%	22%
females	39%	41%	34%	30%	29%	32%	29%	23%	22%	20%	14%	16%
Total	45%	42%	37%	33%	30%	30%	27%	25%	24%	22%	20%	19%

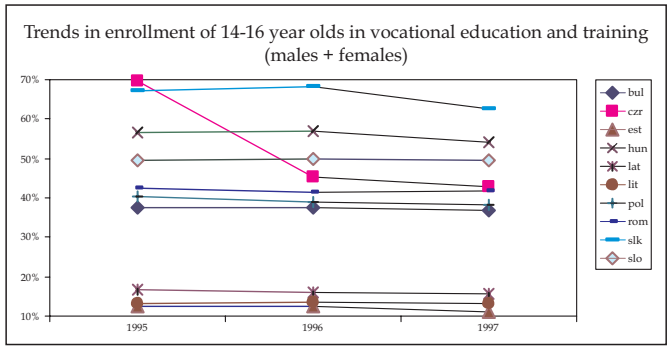
Graph 2.5 Participation rates in vocational education and training - Trends 1995/96-1997/98

14-19 year olds



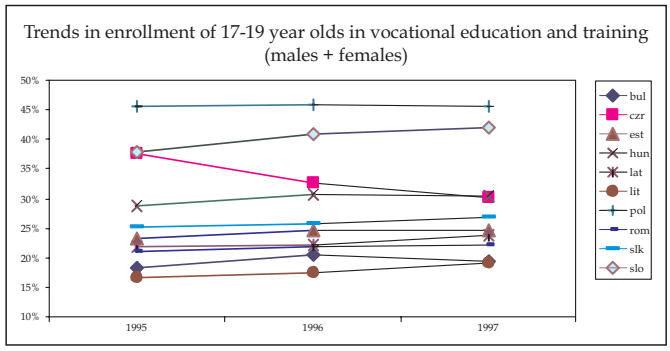
	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1995	28%	52%	18%	42%	19%	15%	43%	31%	46%	44%
1996	29%	38%	18%	43%	19%	16%	42%	31%	46%	45%
1997	28%	36%	18%	43%	20%	16%	42%	31%	44%	46%

14-16 year olds



	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1995	38%	70%	13%	57%	17%	13%	40%	42%	67%	50%
1996	37%	45%	12%	57%	16%	14%	39%	41%	68%	50%
1997	37%	43%	11%	54%	16%	13%	38%	42%	63%	50%

17-19 year olds



	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1995	18%	38%	23%	29%	22%	17%	46%	21%	25%	38%
1996	21%	33%	25%	31%	22%	17%	46%	22%	26%	41%
1997	20%	30%	25%	30%	24%	19%	45%	22%	27%	42%

Source: European Training Foundation - Key Indicators database

2.3 *Vocational education and training at upper secondary level*

Graph 2.6, 2.7, 2.8

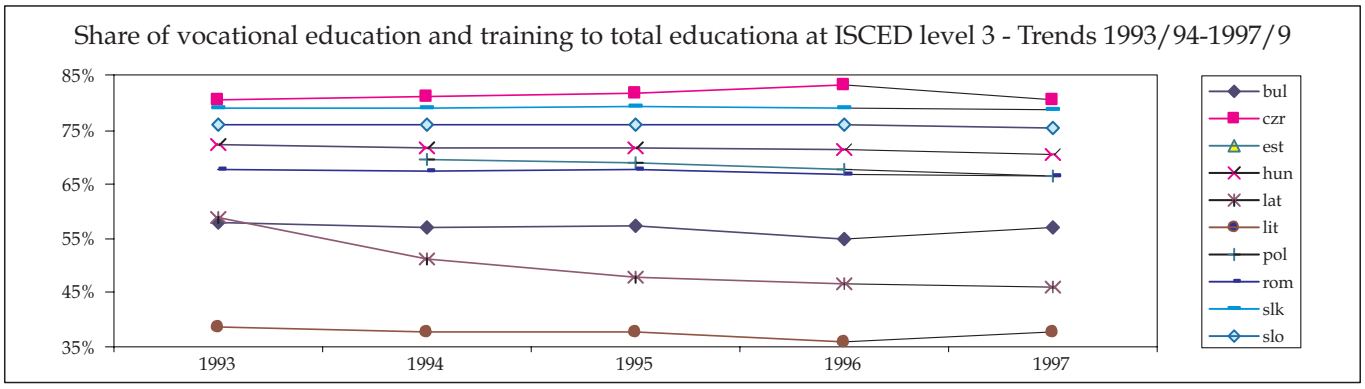
Since 1993, vocational education and training has retained its position at upper secondary level, having experienced only a slight decrease in most countries. During this period the share of young people enrolled in vocational education programmes compared to the total enrolment at upper secondary level decreased by 1% in six countries and remained stable in the Czech Republic. The only countries that faced significant reductions, in favour of general education, were Latvia (where it decreased by 14%) and Poland (3%).

Nevertheless, it must also be noted that there was an important shift of enrolment in favour of vocational courses offering a double qualification (at the expense of those which offer only a vocational qualification).

In fact in 1997, a very high percentage (the majority in the Czech and Slovak Republics) of young people enrolled at upper secondary level, followed a programme that provided them with a double qualification. The exceptions to this rule were the Baltic States where the majority of young people were enrolled in general education - see table 2.3.

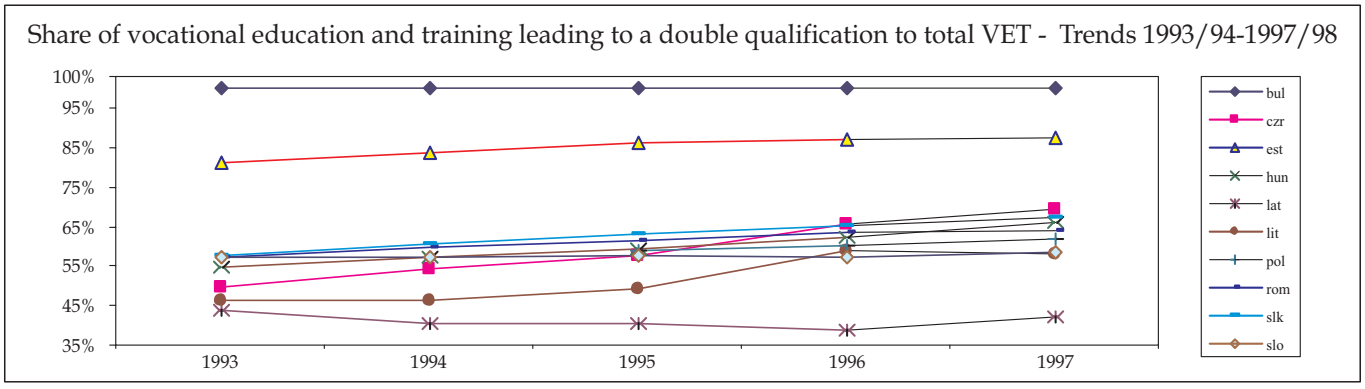
The share of girls in general education and vocational programmes that provide a double qualification is higher than that of boys in all countries see table 2.8.

Graph 2.6 Share of vocational education and training compared to total education at ISCED level 3 - Trends 1993/94-1997/98 (enrolment)



	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1993	59%	82%	28%	74%	60%	39%		69%	81%	78%
1994	58%	83%	26%	73%	52%	38%	71%	69%	81%	78%
1995	58%	84%	26%	73%	48%	38%	70%	69%	81%	78%
1996	55%	85%	26%	73%	47%	36%	69%	68%	81%	77%
1997	58%	82%	27%	72%	46%	38%	68%	68%	80%	77%

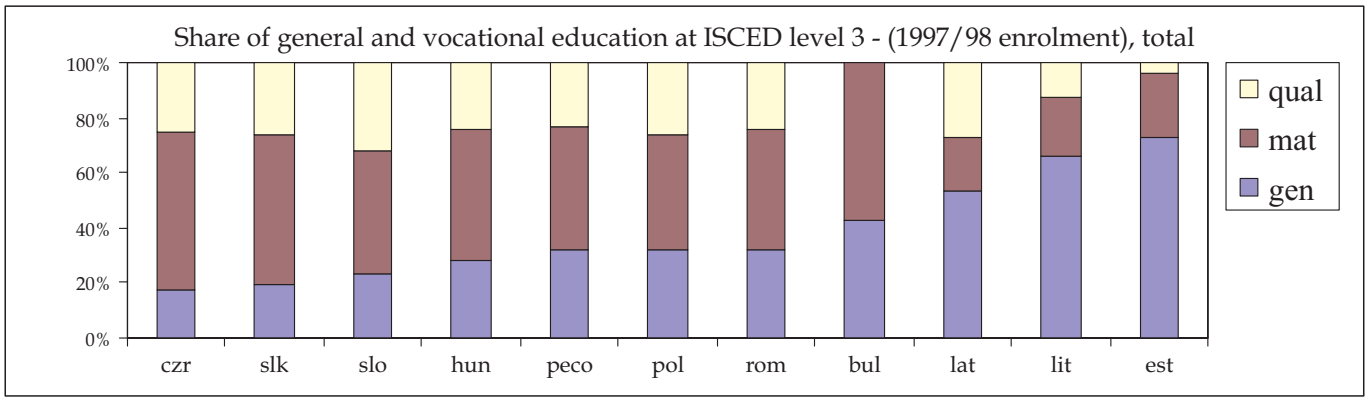
Graph 2.7 Share of vocational education and training leading to a double qualification compared to total vocational education and training - Trends 1993/94-1997/98 (enrolment)



	bul	czr	est	hun	lat	lit	pol	rom	slk	slo
1993	100%	50%	81%	55%	44%	46%		57%	58%	57%
1994	100%	54%	84%	57%	40%	46%		60%	61%	57%
1995	100%	58%	86%	59%	41%	49%	59%	61%	63%	57%
1996	100%	66%	87%	62%	39%	59%	60%	63%	65%	57%
1997	100%	69%	87%	66%	42%	58%	62%	64%	67%	58%

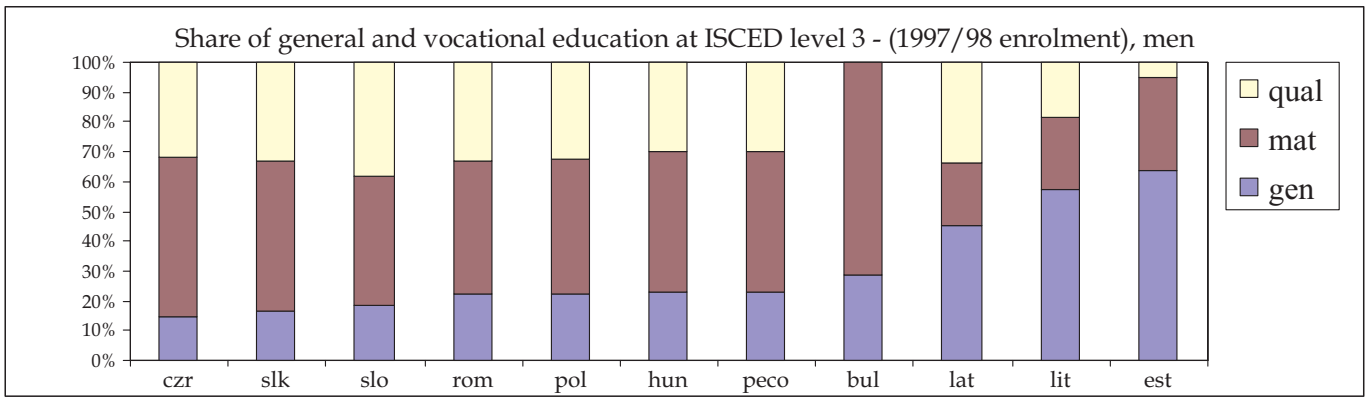
Graph 2.8 Share of general and vocational education at ISCED level 3 (1997/98 enrolment)

Total



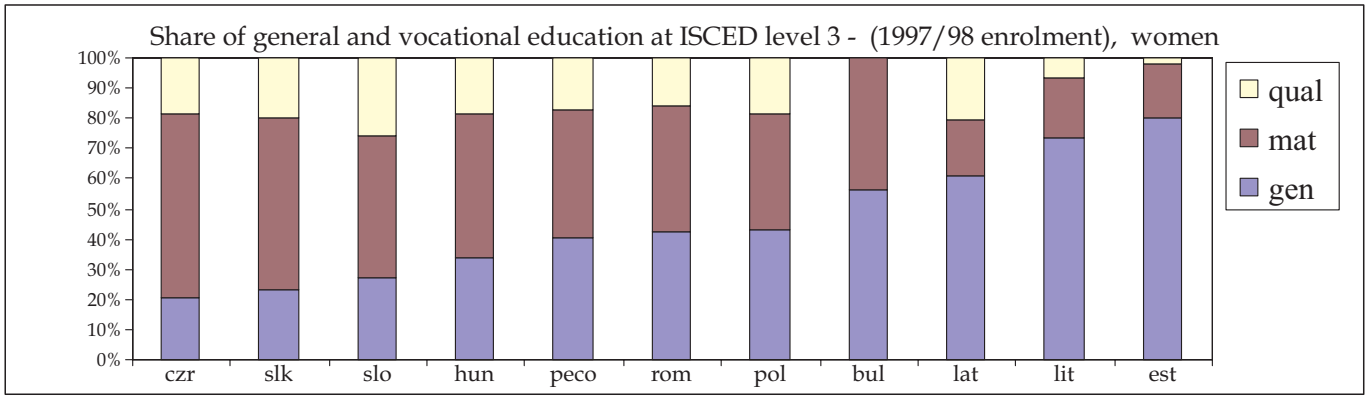
total	czr	slk	slo	hun	peco	pol	rom	bul	lat	lit	est
gen	18%	20%	23%	28%	32%	32%	32%	42%	54%	66%	73%
mat	57%	54%	45%	47%	45%	42%	43%	58%	20%	22%	24%
qual	25%	26%	32%	24%	23%	26%	24%		27%	12%	3%

Males



males	czr	slk	slo	rom	pol	hun	peco	bul	lat	lit	est
gen	15%	17%	18%	22%	22%	23%	23%	29%	45%	57%	64%
mat	53%	51%	43%	45%	45%	47%	47%	71%	21%	24%	31%
qual	32%	33%	38%	33%	33%	30%	30%		34%	18%	5%

Females



females	czr	slk	slo	hun	peco	rom	pol	bul	lat	lit	est
gen	21%	23%	27%	34%	41%	42%	43%	56%	61%	74%	80%
mat	61%	57%	47%	48%	43%	42%	38%	44%	18%	20%	18%
qual	18%	20%	26%	19%	17%	16%	19%		21%	7%	2%

2.4 Participation in post-secondary education

Graph 2.9

Post secondary education comprises:

- non-tertiary vocational education and training programmes which provide a higher qualification than the secondary vocational programmes but lower than university or equivalent (according to the new ISCED (97) levels are classified under level 4). In fact these programmes bridge the gap between secondary and higher education. They normally last 1-2 years and are usually provided within the framework of the secondary level system;
- tertiary education programmes (ISCED levels 5 and 6) which include:
  - university education programmes; and
  - higher level (equivalent to university) vocational education.

Over the last few years all countries have made an effort to reform their post-secondary education so as to adapt it to the new needs of the economy. Diversification of the programmes was one of the objectives intended to attract more young people and respond to higher-level skill needs.

Participation in non-tertiary post-secondary vocational education and training

It is difficult to express a view on the participation in non-tertiary post-secondary vocational education and training (i.e. in programmes at ISCED level 4) using cross-country comparable data. This is due to fact that discussion on the allocation of vocational programmes at this level is still on going between international organisations (e.g. Eurostat, OECD and Unesco) and the countries. Up to now these programmes were set at ISCED level 3 or (more rarely) at ISCED level 5. Accordingly, the remarks below should be interpreted with caution.

Participation of 18 and 19 year olds in non-tertiary post-secondary vocational education programmes remains low with respect to participation in tertiary education programmes. Estonia shows the highest participation rates in this type of education followed by Poland, Romania, Lithuania and the Slovak Republic. The Czech Republic participated significantly in this type of programme although participation is gradually diminishing as a result of the reforms in post-secondary education which lead to the abolition of post-maturity studies and the upgrading of higher professional schools to tertiary education. Hungary and Slovenia are in the process of establishing these types of programme so enrolment is still low, although Slovenia has reported that demand is exceeding the supply of available posts. In Bulgaria participation is unstable while Latvia could not provide data on participation in post-secondary education as they include it within secondary vocational education.

Participation rates of 18 and 19 year olds in post-secondary vocational education, 1997 (%)

	18 year olds						19 year olds					
	1995		1996		1997		1995		1996		1997	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Bulgaria	0	16	2	12	0	15	0	23	3	20	1	24
Czech Rep.	5	7	4	7	0	14	19	13	6	13	1	19
Estonia	16	16	17	18	15	21	15	19	15	20	15	23
Hungary	0	8	0	9	0	9	0	14	0	18	0	16
Latvia*	na	20	na	17	na	19	na	22	na	22	na	25
Lithuania	6	27	5	26	2	29	2	28	3	30	3	33
Poland	0	0	0	0	0	0	7	15	7	17	7	20
Romania	1	7	1	9	1	9	3	11	3	12	4	13
Slovak Rep.	1	16	1	17	1	18	2	20	2	21	1	22
Slovenia	0	5	0	5	0	5	0	23	0	28	0	34
EU average												

Source: European Training Foundation
Key Indicators database
(1) non-tertiary post-secondary vocational education
(2) tertiary (university and equivalent) education
Note : * Latvia includes non-tertiary post-secondary vocational education participation within secondary vocational education.

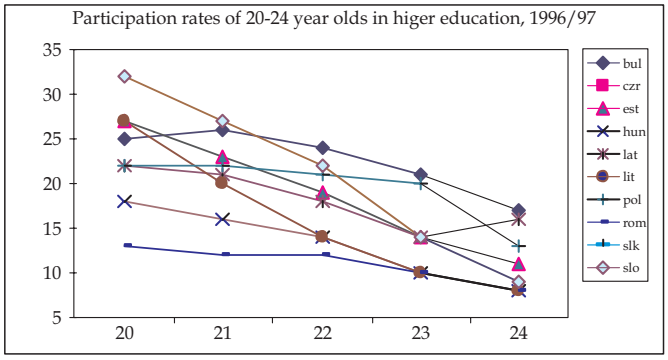
Participation in tertiary education

A number of countries (Bulgaria, Latvia, Romania and Slovenia) have reported a significant increase in the demand for participation in tertiary education over the last few years. This demand is absorbed by state and private universities (Bulgaria and Romania) or by enrolment in foreign universities (Latvia). This demand is reflected in the increasing participation rates of 19 year-olds in higher education in all countries. Nevertheless, it should be noted that it remains lower than the EU average.

In 1996, gross transition rates[9] from upper secondary to tertiary education ranged between 21% in Hungary and 55% in Bulgaria. After Bulgaria, the countries with the highest percentage of graduates from upper-secondary education who continued on to higher education are Estonia, Latvia and Lithuania.

Participation rates of 20-24 year olds in the academic year 1996/97 show that Romania and Hungary are the countries with the lowest participation in higher education. Estonia and Lithuania show high participation rates for 20-21 year olds, which are later reduced. This is explained by high participation in higher level vocational programmes (allocated at ISCED level 5).

Graph 2.9 Participation rates of 20-24 year olds in higher education 1996/97



age	20	21	22	23	24
bul	25	26	24	21	17
est	27	23	19	14	11
hun	18	16	14	10	8
lat	22	21	18	14	16
lit	27	20	14	10	8
pol	22	22	21	20	13
rom	13	12	12	10	8
slo	32	27	22	14	9

Gross transition rates from upper-secondary to tertiary education 1996/97 (%)

Bulgaria	Czech Republic	Estonia (1995/96)	Hungary	Latvia	Lithuania	Poland	Romania	Slovak Republic	Slovenia
55	n/a	34	21	38	33	26	23	n/a	27

Source: Education Statistics and Indicators in the countries of the Phare region: 1996/97 Phare multi-country programme on higher education European Training Foundation-Eurostat

Definition of gross transition rates

The participation rate in higher education as a percentage of the participation rate in lower levels (to illustrate the percentage of people continuing to higher education) based on net participation rates (i.e. students in a given level of education and in the theoretical age group for that level of education expressed as a percentage of the population in the theoretical age group for that level)

Participation in higher education (extracts from National Observatory reports 1998)

Bulgaria: Higher education in Bulgaria shows substantial growth

Czech Republic: The number wishing to enter higher education is steadily growing, and although universities are also expanding their capacity, this does not keep pace with the number of applicants.

Latvia: Students in Latvia traditionally have a great interest in higher education. The number of graduates in higher education is increasing and interest in studies abroad is rising.

Romania: Education participation rates for 19-23 year olds, the traditional cohort for tertiary education, increased from 15.1% in 1992/93 to 24% in 1996/97. The increase was much higher for girls.

Slovenia: In the academic year 1997/98 the number of students enrolled in higher education institutions increased by 7.7% with respect to the previous year.

9 Gross transition rates show the percentage of those with a final secondary examination (either from general or vocational education) who continue their studies to tertiary education.