

Education at a Glance 2007

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OECD Briefing Note for Hungary

Governments are paying increasing attention to international comparisons as they search for effective policies that enhance individuals' social and economic prospects, provide incentives for greater efficiency in schooling, and help to mobilise resources to meet rising demands.

In response to this need, the OECD Directorate for Education devotes a major effort to the development and analysis of quantitative, internationally comparable indicators, which are published annually in *Education at a Glance*. These indicators enable educational policy makers and practitioners alike to see their education systems in the light of other countries' performances and, together with OECD's country policy reviews, are designed to support and review the efforts that governments are making towards policy reform.

This note contrasts **key findings for Hungary** with **global trends among OECD countries**, under the headings: quantity and quality challenges, equity challenges, and resource and efficiency challenges.

Education at a Glance 2007, as well as its executive summary, all data and web-only tables, can be downloaded free of charge at www.oecd.org/edu/eag2007.

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QUANTITY AND QUALITY CHALLENGES

*Previous editions of **Education at a Glance** have shown how demands for more and better education have driven a massive quantitative expansion of education systems in OECD countries, particularly at the tertiary level of education. What has been the impact of this on labour market returns? Has the increasing supply of well-educated labour been matched by the creation of an equivalent number of high-paying jobs? Or one day will everyone have a university degree and work for the minimum wage?*

It is certainly conceivable that at least some new graduates will end up doing jobs that do not require graduate skills and that they will obtain these jobs at the expense of less highly qualified workers. Such a crowding-out effect may be associated with a relative rise in unemployment among people with low qualifications (as higher-qualified workers take their jobs), but also potentially with a reduction in the pay premium associated with tertiary qualifications (as a rise in graduate supply outstrips any rise in demand for graduate skills).

***Education at a Glance 2007** examines this question and the results suggest that the expansion has had a positive impact for individuals and economies and that there are, as yet, no signs of an “inflation” of the labour-market value of qualifications.*

Global trends

Key results for Hungary

Education systems continue to expand at a rapid pace.

- In most OECD countries, among adults aged 55 to 64 (who entered the workforce in the 1960s and early 1970s) between 7 and 27% have completed higher education, except in Canada and the United States where more than 30% have done so. Among younger adults aged 25 to 34, at least 30% have obtained tertiary qualifications in 19 countries and over 40% have in 6 countries (Indicator A1). On average, the proportion of the population with tertiary qualifications has risen from 19 to 32% of the population between these two groups.
- Although most countries have seen at least some growth in tertiary enrolments (Indicator C2) and in tertiary attainment, the rate of expansion has varied widely from one country to another and from one time period to another. Much of the growth has come from periods of rapid, policy-driven expansion in certain countries. Korea, Ireland and Spain, for example, more than doubled the proportion of tertiary graduates entering the workforce between the late 1970s and the late 1990s from initially low levels. In the United States and Germany, however, the proportion remained largely unchanged, with relatively high levels in the United States and comparatively low levels in Germany (Indicator A1).
- Current rates of graduation from traditional universities range from around 20% or less in Austria, Germany and Turkey to more than 40% in Australia, Denmark, Finland, Iceland, Italy, the Netherlands, New Zealand, Norway and Poland. These graduation rates tend to be higher in countries where the programmes provided are of shorter duration.
- On average across OECD countries, the graduation rate for shorter, vocationally oriented programmes represents 9% of the typical cohort, and 1.3% for programmes leading to advanced research qualifications.

The level of tertiary attainment in Hungary has increased but it is well below the OECD average.

- The level of tertiary attainment in Hungary is well below the OECD average. The proportion of the 25-64 year old population in Hungary who has obtained tertiary qualifications is 17%, compared with the OECD average of 26% (Table A1.3a).
- Moreover, although tertiary attainment has increased through the generations, this has been at a slower pace than in most other OECD countries. The proportion of the younger (25-34 year old) population in Hungary who has obtained tertiary qualifications is 20%, whereas the equivalent figure of the older (55-64 year-old) population is 15% (Table A1.3a).
- Current trends in tertiary enrolment might, however, suggest that Hungary will make faster progress in the coming years, with student enrolment in tertiary education having more than doubled between 1995 and 2004 (Table B1.5). This in turn has translated into a sharp increase in tertiary graduation rates, with university level graduation rates increasing from 29% to 36% between 2004 and 2005, now matching the OECD average rate (Table A3.2).
- The more vocationally-orientated tertiary-type B qualifications form a relatively small part of tertiary provision in Hungary but graduations rates for these have also increased in the latest figures to 4% of the typical age cohort (Table A3.2).

<p><i>In most countries, the number of science graduates has increased faster than the overall number of graduates.</i></p> <ul style="list-style-type: none"> • The number of persons completing a tertiary science degree in a given year per 100 000 employed persons ranges from below 700 in Hungary to above 2 200 in Australia, Finland, France, Ireland, Korea, New Zealand and the United Kingdom (Table A3.4). • The ratio of younger to older age groups with science as a field of study is 3.0, compared with a ratio for all fields of study of 2.3. In Austria and Canada, the ratio is larger than 4.0, in Hungary and Ireland larger than 6.0, and in Portugal and Spain larger than 8.0 (Table A1.5). 	<p><i>Hungary produces fewer science graduates relative to its population than any other OECD country.</i></p> <ul style="list-style-type: none"> • Relative to population, Hungary produces the lowest number of science graduates (695 per 100,000 of the employed population aged 25-34 years) than any other OECD country and less than half the rate for the OECD on average (Table A3.4). • Even so, the current rate of production of science graduates would seem to represent an improvement compared with past generations. There are more than 6 times as many science graduates among the younger age groups than there are among the older age groups in the population (Table A1.5). • Social sciences, business, law and services are the most common subjects of graduates, with these subjects representing more than 50% of the annual university level graduate output (Table A3.3).
<p><i>The effects of tertiary expansion: a high calibre workforce or the overqualified crowding out the lesser qualified?</i></p> <ul style="list-style-type: none"> • The labour-market and financial incentives for attaining tertiary qualifications continue to remain high for both men and women, despite the rapid growth in the number of those obtaining qualifications. This can be seen when contrasting the advantages of tertiary education for individuals in terms of higher average earnings, lower risks of unemployment and the public subsidies they receive during their studies, with the costs that individuals incur when studying, such as tuition fees, lost earnings during studies and higher tax rates later in life. In all countries with comparable data, the private rate of return for those who acquire tertiary degrees immediately following school is higher than real interest rates, and often significantly so, at a minimum of 9.8% in all eleven countries for which data are available – except for Denmark, New Zealand and Sweden (Table A9.6). • The average unemployment rate among those with only lower secondary education is 5 percentage points higher than those whose highest level is upper secondary and 7 points higher than those with tertiary education (Indicator A8). The data show that while unemployment is substantially higher than the average among those with low qualifications, this situation has not worsened in those countries that have expanded tertiary education. However, in those countries that did not expand tertiary education, there has been a rise in the relative risk. Indeed, in these countries a failure to complete upper secondary education is now associated with an 80% greater probability of being unemployed, compared to less than 50% in those countries that have increased tertiary education the most. 	<p><i>And the earnings advantage for university-level graduates is higher in Hungary than in any other OECD country.</i></p> <ul style="list-style-type: none"> • In Hungary, the earnings advantage for university-level graduates aged 30-44 years compared with persons holding upper secondary qualifications is 125%, the highest comparative advantage of all OECD countries (Table A9.1a). • The earnings advantage is similarly strong when the comparison is extended to all tertiary qualifications and trend data shows that the earnings advantage has strengthened almost continuously since 1997, though there was a slight fall in the latest figures (Table A9.2a). • Tertiary graduates in Hungary also have a much greater chance of finding a job, with 83% of tertiary graduates aged 25-64 in employment compared with only 70% of those qualified to upper secondary level (Table A8.3a). • As in the majority of countries with data, tertiary education in Hungary enhances earnings relative to upper secondary education more for men than it does for women. In fact, in Hungary the gain for men (153%) outstrips the gain for women (88%) by a greater margin than in any other country in the comparison (Table A9.1a). • Although both males and females gain earnings advantages from higher educational attainment, earnings differentials between males and females who have the same educational attainment remain substantial in most countries. For Hungary, when all levels of qualification are considered together and focusing on those aged 30-44, the earnings of females are 83% of males, which in fact is the second closest to parity among the countries compared. In contrast, for those people aged 30-44 with university-level qualifications, females' earnings represent only 63% of similarly qualified males' earnings (Table A9.1b).

- Countries expanding tertiary education attainment more in the late 1990s tended to have a greater fall (or smaller rise) in unemployment between 1995 and 2004 than countries with less tertiary expansion. For example, France, Ireland and Korea had the fastest growth in tertiary attainment and close to zero or negative growth in unemployment; Germany, the Czech Republic and the Slovak Republic had low or no growth in tertiary attainment but substantial growth in unemployment among the unqualified (Indicator A1, Table A8.4a).
- The indicators provide no evidence that the lesser qualified are crowded out from the labour market and there is much to point to the opposite: that the least educated individuals benefit in terms of better employment opportunities when more people enter higher education. In addition, an analysis of trends in the absolute level of unemployment for upper-secondary educated adults suggests that changes in the level of unemployment during the period 1995 to 2004 are unrelated to changes in tertiary attainment levels. In fact, for both upper and lower secondary unemployment, there is no statistically significant correlation between an expansion in tertiary attainment and movement in unemployment rates after controlling for growth in GDP. There is, however, a significant correlation between increases in tertiary and upper secondary attainments and the fall in relative unemployment for lower-secondary educated adults. All this suggests that employment prospects among the least well-educated are principally tied to growth in the economy and in general to productivity, to which an adequate supply of high-skilled labour can potentially contribute.
- Furthermore, higher qualifications do not create unemployment among those with tertiary qualifications or a slump in their pay. Although this does not imply that tertiary graduates enter jobs in line with their qualifications, it still indicates that the benefits of higher education have not deteriorated as higher education has expanded. And while there have been some small rises in the relative risk of unemployment for graduates, this has been no worse where tertiary attainment has expanded fastest.
- In all OECD countries graduates face much lower levels of unemployment than do other groups. In terms of pay, the data suggest some curbing of an increasing advantage for tertiary graduates where their supply has risen fastest, but not a general fall. This evidence corroborates similar results from cross-sectional studies, suggesting that lesser-educated groups share in the benefit of more tertiary education in general and that the extra skills produced have largely been absorbed by the labour market. In tracking these phenomena over time, it is interesting to note that positive effects seem to be more pronounced in recent years, contradicting the notion that tertiary education, so far, is expanding too rapidly.
- Considering the earnings and employment advantages of tertiary education, particularly for men, alongside the costs that individuals incur when studying, including foregone earnings as well as the direct costs of study, the private rate of return for male tertiary students in Hungary is higher than in any other country with comparable data (Table A9.6).

The internationalisation of tertiary education is proceeding rapidly.

- In 2005, over 2.7 million tertiary students were enrolled outside their country of citizenship. This represented a 5% increase in total foreign student intake reported to the OECD and the UNESCO Institute for Statistics from the previous year.
- The percentage of international students – *i.e.* international students who travelled to a country different from their own for the purpose of tertiary study – ranges from below 1 to almost 18% of tertiary enrolments. International students are most numerous in tertiary enrolments in Australia, Austria, France, New Zealand, Switzerland and the United Kingdom.
- France, Germany, the United Kingdom and the United States receive more than 50% of all foreign students worldwide. In absolute numbers, international students from France, Germany, Japan and Korea represent the largest numbers from OECD countries. Students from China and India comprise the largest numbers of international students from partner economies.
- In Spain, Switzerland and the United States, and the partner economy Brazil, more than 15% of international students are enrolled in advanced research programmes.
- 30% or more of international students are enrolled in sciences, agriculture or engineering in Finland, Germany, Hungary, Sweden, Switzerland, the United Kingdom and the United States.
- International graduates contribute to 20% or more of the graduate output for tertiary-type A programmes in Australia and the United Kingdom. The same holds for foreigners graduating in Belgium. The contribution of international and foreign graduates to the tertiary graduate output is especially high for advanced research programmes in Belgium, Switzerland, the United Kingdom and the United States.

International students are a small but growing feature of tertiary education in Hungary.

- With many more students coming to study in Hungary at the tertiary level (13,601 students) than travel from Hungary to study elsewhere (7,906), Hungary is a net importer of tertiary students (Table C3.8 on the web).
- International students represent some 2.7% of tertiary students studying in Hungary (compared with 6.7% on average among OECD countries), with the numbers of such students in Hungary having increased by 37% between 2000 and 2005 (93% for OECD countries on average) (Table C3.1).
- The majority of international students studying in Hungary come from Romania (3,171 students), the Slovak Republic (2,341) and Ukraine (1,294) (Table C3.8 on the web).
- The most popular subjects for international students to study in Hungary are health and welfare, which are studied by around one quarter of these students (Table C3.5).
- Of the 7,906 Hungarian tertiary students studying elsewhere, the most popular destinations are Germany (36%), Austria (14%) and the United States (12%) (Table C3.8 on the web).

EQUITY CHALLENGES

While individuals with high level qualifications continue to see strong labour-market returns, those without strong baseline qualifications, defined by the OECD as those who have not attained a qualification at the upper secondary level, have seen rapidly deteriorating labour-market prospects in most countries. It is therefore increasingly important for education and training systems to ensure that young adults leave school with strong baseline qualifications or attain these subsequently.

Education at a Glance 2007 completes the data on the graduate output at the upper secondary level and the incidence and intensity of job-related non-formal education with new data on the relationship between social background and both learning outcomes at schools and participation in university-level education. The strength of the relationship between the socio-economic background of individuals and their educational outcomes provides one way of examining to what extent countries are using their potential in generating future human capital and allows for assessment of equity in the distribution of learning opportunities.

Global trends

In most OECD countries, upper secondary education is becoming universal, but in some countries a sizeable minority is left behind.

- The proportion of individuals in the population who have successfully completed upper secondary education (see notes on definition at the end) has been rising in almost all OECD countries, and rapidly in some. In more than half of all OECD countries, the proportion of 25-to-34-year-olds with upper secondary qualifications now exceeds 80%, and in Canada, the Czech Republic, Korea, the Slovak Republic and Sweden it exceeds 90% (Table A1.2a).
- Those who have attained at least upper secondary education enjoy substantial earnings advantages (Chart A9.4). For some countries, the earnings disadvantage of those without upper secondary qualifications has significantly worsened (Table A9.2a).
- Gender differences in employment and unemployment rates are largest among those without upper secondary education (Chart A8.2)

Key results for Hungary

The proportion of the Hungarian adult population that has attained at least upper secondary education is above the OECD average.

- The attainment of upper secondary education in Hungary has increased rapidly through the generations – the proportion of 55-64 year olds who have attained at least upper secondary qualifications is 61% compared with 85% among those aged 25-34 years. This rate of progress mirrors that of OECD countries on average, so that Hungary has remained in 12th position among OECD countries on this measure (Table A1.2a).
- This expansion of upper secondary education is also evident in trends in enrolment rates of those aged 15-19 years which have increased from 64% in 1995 (below the OECD average of 74%) to 87% (above the OECD average of 82%) (Table C2.2).
- Nevertheless, the penalties for not attaining at least upper secondary qualifications are strong and more punishing in Hungary than in other countries. Of those aged 25-64 who have not attained an upper secondary qualification, only 38% are in employment, the second lowest employment rate for this group among OECD countries. This compares with employment rates of 70% for those that do have upper secondary qualifications and 83% for those that have tertiary qualifications (Table A8.3a). Notably, many of the lower qualified who are not in employment are in fact not unemployed but are instead out of the labour force.
- The earnings disadvantage for those with low levels of education is also high in Hungary compared with other OECD countries. In Hungary, the earnings of those aged 25-64 who have not attained an upper secondary qualification are only 73% of those who have attained that level (Table A9.1a).

Schools and societies face major challenges in integrating immigrants.

- International migration has become a key issue in most OECD countries, sparking intense debate on how immigrants can be successfully integrated into societies and labour markets. The OECD Programme for International Student Assessment (PISA) adds an important new perspective to the discussion by assessing the educational success of 15-year-old students from immigrant families. It is clear that serious challenges lie ahead for education systems, particularly in Europe. Indicators show that:
 - Among the 14 OECD countries with significant immigrant populations, first-generation students lag 48 score points behind their native counterparts on the PISA mathematics scale, equivalent to more than a school year's progress, on average. The performance disadvantage of second-generation students also remains significant, at 40 score points. The disadvantage of students with an immigrant background varies widely across countries, from insignificant amounts in Australia, Canada, New Zealand and Macao-China to more than 90 score points in Belgium and Germany, even for second-generation children.
 - Second-generation students (who were born in the country of the assessment) tend to perform better than their first-generation counterparts (who were born in another country), as one might expect since they did not need to make transitions across systemic, cultural and linguistic borders. However, the gains vary widely across countries. In Canada, Luxembourg, Sweden and Switzerland, and the partner economy Hong Kong-China, second-generation students perform significantly better than first-generation students, with the performance gap reduced by 31 score points in Switzerland and 58 score points in Sweden, while in Germany and New Zealand second-generation students born in these countries perform worse than first-generation students.
 - The mathematics achievement of the highest performers among students with an immigrant background varies much less across countries than the achievement of the lowest-performing students with an immigrant background.
 - Despite performing less well on the whole than native students and generally coming from less advantaged families, students who have experienced immigration first-hand tend to report, throughout the OECD area, higher levels of interest and motivation in mathematics.

For Hungary, the challenge of better integrating the Roma population is significant.

- No data for Hungary for indicator A6. However, analysis from OECD Programme for International Student Assessment (PISA) has previously illustrated the significant inequities that exist in the Hungarian schooling system- the wide variation in student performance between schools and the extent to which student performance is linked to their social background. More specifically, the OECD Equity in Education Thematic Review has noted the need to better integrate the Roma population in Hungarian society.

Countries vary greatly in how well they succeed in enabling students from blue-collar backgrounds to participate in higher education.

- Based on a comparison of ten countries, Ireland and Spain stand out as providing the most equitable access to higher education, whereas in Austria, France, Germany and Portugal, students from a blue-collar background are about one-half as likely to be in higher education as compared with what their proportion in the population would suggest (Indicator A7).
- When measuring the socio-economic status of students in higher education by their fathers' educational background, large differences between countries emerge. In many countries, students are substantially more likely to be in higher education if their fathers completed higher education. Students from such a background are more than twice as likely to be in higher education in Austria, France, Germany, Portugal and the United Kingdom than are students whose fathers did not complete higher education. In Ireland and Spain this ratio drops to 1.1 and 1.5, respectively.
- Among the countries providing information on the socio-economic status of students in higher education it appears that inequalities in previous schooling are reflected in the intake of students from less advantaged backgrounds. Countries providing more equitable access to higher education – such as Finland, Ireland and Spain – were also the countries with the most equal between-school performances, as shown by data collected in 2000 by OECD PISA.

- No data for Hungary as it did not take part in the Eurostudent survey, the source of data for indicator A7.

Initial education alone can no longer satisfy the rising and changing demand for skills, but job-related education and training is still least common among those who need it most.

- In many countries, non-formal continuing education and training now also plays a significant role in raising the stock of knowledge and skills. In Denmark, Finland, Sweden and the United States, more than 35% of employees take part in non-formal job-related education and training each year. At the other end of the scale, Greece, Hungary, Italy, the Netherlands, Poland, Portugal and Spain provide such training to fewer than 10% of employees (Table C5.1a).
- In OECD countries, on average, the participation rate in non-formal continuing education and training among employees who have not completed upper secondary education is less than half the rate among those with upper secondary education and less than a quarter of the rate seen among those with tertiary education.

In Hungary, participation in job-related education and training is low compared with other OECD countries and particularly so for the less well educated.

- In Hungary only 4% of the population aged 25-64 years participates in non-formal job-related education and training during the year. Along with Greece and Italy this is the lowest rate among OECD countries (Table C5.1a).
- In terms of the number hours of such education and training an individual can expect to receive between the ages of 25 and 64 years, Hungary performs a little better (253 hours compared with the OECD average of 389 hours), indicating that those who do participate, do so reasonably intensively (Table C5.1a).
- In Hungary, individuals who have achieved only lower secondary qualifications are seven times less likely to participate in non-formal continuing education and training than those who have attained tertiary levels of education (Table C5.1a).

In some countries, student's expectations for their own educational future are also closely related to their social background.

- Some 57% of 15-year-olds in OECD countries expect to go to university, but this rate varies from as high as 95% of students in Korea to as low as 21% in Germany. Indicators show that expectations vary within countries according to individual performance levels, gender, socio-economic background and immigrant status. Data collected in 2003 through OECD PISA show that 15-year-olds' expectations for completing a university-level programme are closely linked with their performance in mathematics and reading. Regardless of their relative academic abilities, 15-year-olds from lower socio-economic backgrounds are less likely to expect to complete tertiary education than those from higher socio-economic backgrounds. In most countries, 15-year-old students from immigrant backgrounds are more likely to expect to complete a university-level programme than their native counterparts. The relative expectations of these students are even higher when compared with native students of similar aptitudes and socio-economic backgrounds.

In Hungary, the expectation to go on to achieve a tertiary level qualification is higher than the average for OECD countries but very strongly related to socio-economic background.

- The percentage of 15-year olds in Hungary who expect to achieve a tertiary qualification is 63% compared with the OECD average figure of 57% (Table A4.1a). This is broadly in line with the relative picture on actual entry rates (Table C2.4).
- When looking at the expectations according to students' PISA 2003 mathematics performance, Hungarian students show the widest range of expectations of all OECD countries. Some 93% of the best performing 15-year-olds expect to achieve a tertiary qualification whereas only 16% of the poorest performing students do so (Table A4.2a).
- Among OECD countries, the relationship between students' socio-economic background and their expectations to complete tertiary education is strongest in Hungary. Even after allowing for differences in academic ability, Hungarian students from higher socio-economic backgrounds are 2.7 times more likely to have high educational expectations than those from lower socio-economic backgrounds (Table A4.4).

RESOURCE AND EFFICIENCY CHALLENGES

*The expansion of education has been accompanied by massive financial investments. **Education at a Glance 2007** shows that between 1995 and 2004, and for all levels of education combined, expenditure on educational institutions increased by an average of 42% in OECD countries. The sustainability of the continued expansion will, however, depend on re-thinking how education is financed and how to ensure that it is more efficient. In some countries, spending per student has already begun to decline – most notably in the Czech Republic, Hungary, the United Kingdom and Poland – as enrolments rose faster than spending on tertiary education.*

While significant additional investments in education will be important, it is equally clear that more money alone will not be enough. Investments in education will also need to become more efficient. The education sector has not yet re-invented itself in ways that other professions have done to improve outcomes and raise productivity. Indeed, the evidence suggests the reverse, namely that productivity in education has generally declined because the quality of schooling has broadly remained constant, while the price of the inputs has markedly increased. As the place and mode of educational provision have largely remained unchanged, the labour-intensiveness of education and the predominance of teachers' salaries in overall costs (with payscales based on qualifications and automatic increases) have made personnel costs rise over time.

Global trends

OECD countries spend 6.2% of their collective GDP on educational institutions, but the rise in spending on education between 1995 and 2004 fell behind growth in national income. There is further scope for enhancing the efficiency of educational spending.

- More people are completing upper secondary and tertiary education than ever before, and in many countries the expansion has been accompanied by massive financial investments. Between 1995 and 2004 and for all levels of education combined, expenditure on educational institutions stepped up in the 24 countries with comparable data for the period. The increase reached, on average, 42% in OECD countries and was usually larger for tertiary education than for primary to post-secondary non-tertiary levels of education combined.
- At the tertiary level of education, the rise in expenditure over the period 1995-2004 was more pronounced from 2000 onwards than before 2000 in nearly one-half of OECD countries. Between 2000 and 2004, expenditure increased by more than 30 percentage points in the Czech Republic, Greece, Mexico, Poland, the Slovak Republic and Switzerland and the partner economy Chile.
- It is important to relate overall spending on education to the investment made per student. OECD countries as a whole spend USD 7 572 per student annually between primary and tertiary education, that is USD 5 331 per primary student, USD 7 163 per secondary student and USD 14 027 per tertiary student, but these averages mask a broad range of expenditure across countries. As represented by the simple average across all OECD countries, countries spend twice as much per student at the tertiary level than at the primary level.

Key results for Hungary

With significant growth in expenditure in the past ten years, education expenditure as a percentage of GDP is now only slightly below the OECD average.

- In a number of countries, the growth in expenditure between 1995 and 2004 did not keep pace with growth in GDP. However, in Hungary's case an increase of 50% in education expenditure since 1995 (compared with an OECD average increase of 42%) did out-pace growth in GDP such that education expenditure as a percentage of GDP increased from 5.3% in 1995 to 5.6% in 2004 (Table B2.1 and B2.3).
- With this growth in expenditure, overall expenditure on education relative to GDP in Hungary is now only slightly below the OECD average of 5.8%.
- The profile by education level of the increase in expenditure that has been evident for Hungary since 1995 has been fairly similar to the average picture among OECD countries. In Hungary, tertiary expenditure growth (59%) exceeding growth in expenditure for primary and secondary levels (42%), while for OECD countries on average, the increases were 55% and 39% respectively (Table B2.3).

However, when considering these expenditures in relation to student numbers, expenditure levels in Hungary are well below OECD averages.

- To assess their potential impact on the quality of educational services, the resources invested in education need to be seen in relation to the number of students enrolled. On that measure, spending per student across all levels of education (excluding pre-primary education) is, at USD 4 326 (equivalent), well below the OECD average of USD 7 061 (Table B1.1a).
- This pattern is the same for each level of education, though pre-primary expenditures are closer to the OECD average. At the primary level, expenditure per student in

- Lower unit expenditure does not necessarily lead to lower achievement and it would be misleading to equate lower unit expenditure generally with lower quality of educational services. For example, the cumulative expenditure of Korea and the Netherlands is below the OECD average and yet both are among the best-performing countries in the OECD PISA 2003 survey.
- Countries with low levels of expenditure per student can nevertheless show distributions of investment relative to GDP per capita similar to those countries with high levels of spending per student. For example, Hungary, Korea, Poland and Portugal, and the partner economy Estonia – countries with expenditure per student and GDP per capita below the OECD average at primary, secondary and post-secondary non-tertiary level of education – spend a higher proportion of money per student relative to GDP per capita than the OECD average for at least some education levels.
- Expenditure per student at primary, secondary and post-secondary non-tertiary levels progressed by 50% or more between 1995 and 2004 in Greece, Hungary, Ireland, Poland, Portugal, the Slovak Republic and Turkey, and the partner economy Chile. On the other hand, spending per student at the tertiary level has in some cases fallen, as expenditure does not keep up with expanding student numbers
- Expenditure on education tends to rise over time in real terms, as teachers' pay (the main component of costs) rises in line with general earnings. On the one hand, rising unit costs that are not paralleled by increasing outcomes raise the spectre of falling productivity levels in education. Across OECD countries, there is potential for increasing learning outcomes by 22% while maintaining current levels of resources (output efficiency). The scope for reducing the resources devoted to education while maintaining the current levels of outcomes is slightly larger, at 30% (input efficiency). Differences in estimates of efficiency for different types of school (*e.g.* public and private) tend to be modest, when looking at the OECD as whole, though efficiency savings are greater for smaller schools than for larger schools (Indicator B7).

Hungary is USD 3 841 (OECD average, USD 5 832), at the secondary level USD 3 692 (OECD average, USD 7 276) and at the tertiary level USD 7 095 (OECD average, USD 11 100). Expenditure per student at the pre-primary level in Hungary is USD 4 231, only slightly below the OECD average of USD 4 741 (Table B1.1a).

- However, Hungary's comparative position improves somewhat when countries' relative wealth is taken into account. On this measure - expenditure per student, relative to GDP per capita – expenditure levels in Hungary in fact exceed the OECD average at the pre-primary, primary and tertiary levels and are only just below the OECD average at the secondary level (Table B1.4).
- In addition, at the primary, secondary and post-secondary non-tertiary levels of education, expenditures have risen much faster than student numbers over the period 1995 to 2004 so that expenditure per student has risen by 57% over that period (Table B1.5). In fact student numbers have fallen over the period by 10% due to demographic trends and despite sizeable increases in participation rates in secondary education (Table C2.2).
- In contrast, for tertiary education, despite a sizeable increase in expenditure (59%) over this period, a more than doubling (218%) of student numbers in tertiary education has led to a 27% reduction in levels of expenditure per student (Table B1.5).

Instruction time, teachers' salaries, and student-teacher ratios vary widely among countries.

- The choices countries make about how many hours and years students spend in the classroom and the subjects they study reflect national priorities and preferences. Budgetary considerations also help shape education: teachers' salaries represent the largest single cost in providing school education and, as such, are a critical consideration for policy-makers striving to both maintain the quality of education and to contain spending. While class size has become a hot topic in many OECD countries, evidence on its impact on student performance is mixed. Among the findings on these nuts-and-bolts educational policy issues:
- Students in OECD countries are expected to receive, on average, 6 898 hours of instruction between the ages of 7 and 14, of which: 1 586 hours are between ages 7 and 8; 2 518 hours between ages 9 and 11; and 2 794 hours between ages 12 and 14. The large majority of intended hours of instruction are compulsory.
- In OECD countries, students between the ages of 7 and 8 receive an average of 769 hours per year of compulsory instruction time and 793 hours per year of intended instruction time in the classroom. Students between the ages of 9 and 11 receive about 45 hours more per year, and those aged between 12 and 14 receive just over 90 hours more per year than those aged between 9 and 11.
- Salaries for teachers with at least 15 years' experience in lower secondary education are over twice the level of GDP per capita in Korea and Mexico; in Iceland, Norway and the partner economy Israel, salaries are 75% or less than GDP per capita. Those salaries range from less than USD 16 000 in Hungary to USD 51 000 or more in Germany, Korea and Switzerland, and more than USD 88 000 in Luxembourg.
- The average class size in primary education is 22 students per class, but varies between countries from 33 in Korea to less than half that number in Luxembourg and the partner economy the Russian Federation. From 2000 to 2005, the average class size did not vary significantly, but the differences in class size between OECD countries seem to have diminished. Class size tends to have decreased in countries that used to have relatively large class sizes (for example, in Japan, Korea and Turkey) whereas class size tends to have increased in countries with relatively small class sizes (for example, Iceland) (see 2000 data in Table D2.4 on the web only).
- The number of students per class rises by an average

Student instruction time is relatively short in Hungary

- Many factors have an influence on expenditure per student and partly explain the low expenditure per student in Hungary. Among them instruction time, teaching time and teachers salaries show significant differences relative to the OECD average.
- Students in Hungary can expect to receive 6 139 hours of instruction during their school careers between the ages of 7 and 14 years. This compares with the OECD average of 6 898 hours. Most of the difference with the OECD average arises from low instruction hours for 7 and 8 year olds who in Hungary receive 611 hours per year compared with 793 across the OECD on average (Table D1.1).

The teaching load for teachers in Hungary, particularly at the lower secondary level, is amongst the lowest of OECD countries.

- In Hungary, the expected annual teaching hours are: 777 hours per year for primary teachers (OECD average, 803 hours per year), 555 hours per years for both lower and upper secondary teachers (OECD averages of 707 and 664 hours per year respectively) (Table D4.1).

Teachers' salaries are very low in Hungary compared to other OECD countries, but have risen faster than in any other OECD country.

- Teacher salary levels are a major influence on expenditure levels and in Hungary these are low even in relation to GDP per capita (Table D3.1).
- Primary and lower secondary teachers in Hungary with minimum training and 15 years of experience earn USD 15 622, by far the lowest rates of all OECD countries and well below the OECD averages of USD 37 603 and USD 40 322 respectively. Upper secondary teachers are paid USD 19 541, again well below the OECD average of USD 43 239 (Table D3.1).
- However, teachers' salaries in Hungary have more than doubled between 1996 and 2005, the fastest rise amongst OECD countries with data (Table D3.2).

Average class sizes are below the OECD average and ratios of students to teaching staff reflect demographic as well as structural trends in the Hungarian system.

- Average class sizes in Hungary are below the OECD average with 20.0 students per class in primary education (OECD average, 21.5 students per class) and 21.4 students per class in lower secondary education (OECD average, 24.1 students per class) (Table D2.1).
- At the primary and lower secondary level, the ratios of students to teaching staff in Hungary, both at around 10.5 students per teacher are, however, more notably below

<p>of nearly three students between primary and lower secondary education, but ratios of students to teaching staff tend to diminish with increasing levels of education due to more annual instruction time, though this pattern is not uniform among countries.</p> <ul style="list-style-type: none"> • In primary and secondary education, OECD countries spend 91% on current expenditure of which 63.5% is for the compensation of teachers, 15.5% for the compensation of other staff, and 19.9% for other current expenditure. At the tertiary level of education, 89.3% is devoted to current expenditure, of which 42.7% is for the compensation of teachers, 23.6% for the compensation of other staff, and 33.8% for other current expenditure (Table B6.2). 	<p>the OECD averages (16.7 students per teacher for primary and 13.7 students per teacher for lower secondary). This probably reflects a lag in the adjustment of teacher numbers to the demographic downturn in student numbers that has occurred and also at least in part explains the low teaching hours that teachers in Hungary have (Table D2.2).</p> <ul style="list-style-type: none"> • At the upper secondary level, where student participation has been expanded, the ratio of students to teachers in Hungary, at 12.2 students per teacher, is much closer to the OECD average of 13.0 students per teacher (Table D2.2).
<p><i>Private sources of funding for education are becoming increasingly important.</i></p> <ul style="list-style-type: none"> • On average, over 90% of primary and secondary education in OECD countries, and nowhere less than 80% (except in Korea and in the partner economy Chile), is paid for publicly. However, in tertiary education the proportion funded privately varies widely, from less than 5% in Denmark, Finland and Greece, to more than 50% in Australia, Japan and the United States and in partner economy Israel, and to above 75% in Korea and in the partner economy Chile. • In all countries for which comparable data are available, for all levels of education combined, public funding increased between 1995 and 2004. However, private spending grew even more in nearly three-quarters of these countries. Nevertheless, in 2004, on average 87% of expenditure, for all levels of education combined, was still from public sources. • The share of tertiary spending from private sources rose substantially in some countries between 1995 and 2004, but this was not the case at other levels of education. • On average among the 18 OECD countries for which trend data are available, the share of public funding in tertiary institutions declined slightly between 1995 and 2000, as well as every year between 2001 and 2004. However, in general the increase in private investment has not displaced public financing, but rather complemented it. • In tertiary education, households cover the majority of private expenditure in all countries with available data, except Greece, Hungary and Sweden. Private expenditure from other entities than households is still significant, representing 10% or more in Australia, Hungary, Italy, Korea, the Netherlands, Sweden, the United Kingdom and the United States, and the partner economy Israel. 	<p><i>In Hungary, the share of private funding has fallen in primary and secondary education but increased in tertiary education.</i></p> <ul style="list-style-type: none"> • At 94.7%, the rate of public funding of primary and secondary education in Hungary is above the OECD average rate of 91.8%. This is also true of tertiary education where public funding accounts for 79.0% in Hungary compared with 75.7% across the OECD on average (Tables B3.2a and b). • The significant increases in funding of primary and secondary education that have occurred in Hungary over the period 1995 to 2004 have been entirely publicly funded. As a result, the public funding share of primary and secondary education has increased during this period by 3 percentage points (Table B3.2a). • The pattern for tertiary education has, however, been quite different, where the significant increases in funding over the same ten year period have been funded slightly more from private sources (increase in funding of 69%) than public sources (increase in funding of 57%). This has resulted in a slight increase in the private share of tertiary funding (Table B3.2b). • In Hungary the private funding of tertiary education originates more from ‘other private entities’ (i.e. businesses, charities, non-profit organizations) than from households, which is unusual among OECD countries (Table B3.2b). Moreover, households receive sizeable public subsidies for tertiary education study, with some 16% of public funding of tertiary education being devoted to expenditure on scholarships and grants to households. This is much higher than the OECD average of 10% (Table B5.2). • State guaranteed loans are available to students in tertiary education, though the amount available (USD 1 717) is relatively low and the interest rate charged (11.95%) high compared with other countries for which data are available (Table B5.1c)

OECD countries where students are required to pay tuition fees can nevertheless have large access to tertiary education.

- OECD countries where students are required to pay tuition fees and can benefit from particularly large public subsidies do not show lower levels of access to full-length, theory-based bachelor and masters degree university-level programmes, compared to the OECD average. For example, Australia (82%) and New Zealand (79%) have one of the highest entry rates to tertiary-type A education and the Netherlands (59%) and the United States (64%) are above the OECD average. The United Kingdom (51%) is just below the OECD average (54%), although entry to tertiary-type A education rose by 4 percentage points between 2000 and 2005.

- No data available for Hungary on tuition fees.

NOTES

- “Educational attainment” is defined as the highest grade completed within the most advanced level attended in the educational system of the country where the education was received. Some countries may also find it useful to present data on educational attainment in terms of the highest grade attended.
- “Lower secondary education” is defined as schooling between the ages of 11 and 13. It generally continues the basic programmes of the primary level, although teaching is typically more subject-focused. Lower secondary education may either be “terminal” (*i.e.* preparing students for entry directly into working life) and/or “preparatory” (*i.e.* preparing students for upper secondary education). This level usually consists of three years of schooling in OECD countries.
- “Upper secondary” education corresponds to the final stage of secondary education in most OECD countries. Instruction is often more organised along subject-matter lines. The entrance age to this level is typically 15 or 16 years.
- “Tertiary-level education” is defined as higher education (HE). Indicators in *Education at a Glance 2007* cover both the current performance of the HE system and the proportion of the adult population (25-to-64-year-olds) who have attained HE qualifications. Tertiary programmes are generally divided by type of course: “tertiary-type A” (largely theory-based and designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as medicine, dentistry or architecture) and “tertiary-type B” (typically shorter and focused on practical, technical or occupational skills for direct entry into the labour market). “Graduation rate” is defined as the ratio of tertiary graduates to the population at typical age of graduation.
- “Non-formal education” is defined as organised and sustained educational activities that are not typically provided in the system of schools, colleges, universities and other formal institutions that constitutes a continuous ladder of full-time education for children and young people. Non-formal education may take place both within and outside educational institutions, and cater to persons of all ages. For detailed definitions, see Indicator C5 in *Education at a Glance 2007*.