

Education at a Glance 2007

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OECD Briefing Note For Spain

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 Spain** 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

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.

Key results for Spain

In Spain, the proportion of people attaining tertiary education has increased substantially and is above OECD average for younger age groups.

- In Spain, the proportion of people aged 25-34 years that have attained tertiary education is more than double the proportion for people aged 55-64 years (40% compared to 14%). The proportion of people aged 25-34 years and 35-44 years who have attained tertiary education is now above the OECD average (Table A1.3a).
- The growth in tertiary attainment has occurred for both tertiary-type A and tertiary-type B education. The proportion of people aged 25-34 years that have attained tertiary-type A education (27%) is more than double the proportion for people aged 55-64 years (11%). This growth has been even larger in tertiary-type B education. The proportion of people aged 25-34 years that have attained tertiary-type B education (13%) is more than four times the proportion for people aged 55-64 years (3%) (Table A1.3a).
- However, in Spain the proportion of people with an education attainment of at least upper secondary education is below the OECD average for all age groups. Overall, 49% of people aged 25-64 years have attained at least upper secondary education in Spain compared to the OECD average of 68%. But even for the younger cohort aged 25-34 years, the proportion of people with an education attainment of at least upper secondary education is below the OECD average (64% compared to 77%) (Table A1.2a).
- Survival rates measure the number of graduates from tertiary programmes compared to the number of entrants. The survival rates in Spain are higher than the OECD average for both tertiary-type A (survival rate rate of 74% compared to the OECD average of 71%) and tertiary-type B education programmes (survival rate of 79% compared

<ul style="list-style-type: none"> On average across OECD countries, the graduation rate for shorter, vocationally oriented programmes represents 9%, and 1.3% for programmes leading to advanced research qualifications. 	<p>to the OECD average of 67%) (Table A3.6).</p>
<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 with a tertiary science degree per 100,000 employed persons ranges from below 700 in Hungary to above 2200 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>The proportion of science graduates is growing in Spain but is still below the OECD average.</i></p> <ul style="list-style-type: none"> In Spain there are 1 375 tertiary science graduates per 100,000 people employed (aged 25-34 years) compared with an OECD average of 1 675. This gap is larger when only comparing the number of tertiary-type A science graduates (874 against 1 295 on average). However, in Spain there are more tertiary-type B science graduates per 100,000 people employed than the OECD average (501 against 384 on average) (Table A3.4). There has been considerable growth in science graduates in Spain. The ratio of younger to older age groups with science as a field of study is 8.8 which is the second highest in the OECD (Table A1.5).
<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 at least 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 only with 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 	<p><i>There are considerable private benefits to further education in Spain and the private benefits are greater for females than males.</i></p> <ul style="list-style-type: none"> On a number of measures, individuals in Spain benefit from undertaking further education. In Spain, the earnings advantage for tertiary graduates aged 30-to-44 years over persons with an upper secondary qualification is 30%. In addition, individuals aged 30-44 years with an education level below upper secondary have an earnings disadvantage as they earn only 84% of the earnings of persons with an upper secondary qualification (Table A9.1a). Individuals in Spain with further education are more likely to be employed and less likely to be unemployed than those with lower levels of education but this is mainly true for females rather than males. Therefore, the private employment benefit for further education is greater for females in Spain than males. The unemployment rate for females in Spain is considerably higher than for males. The rate for females (all levels of education combined) is 10.6% compared to the male unemployment rate of 5.8%. The unemployment rate remains higher for females at each level of education attainment. However, in regard to the likelihood of being unemployed the benefits of further education are higher for females than males. There is a 14.3% unemployment rate for females that have attained a lower secondary education but the unemployment rate drops by just over half for females than have attained a tertiary-type A education (6.9%). For males, the unemployment rates for these education levels are similar (6% for males with a lower secondary education and

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.

- 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).
- 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 lower-

5.4% for males with a tertiary-type A education) (Table 8.2a). A similar pattern emerges with employment rates (Table A8.1a).

- The earnings gap between males and females in Spain is closing for younger cohorts. For females aged 55-64 years across all levels of education, average earnings are 65% of males in the same age group. However, in the younger cohort of those aged 30-44 years, females earn 75% of males in the same age group. The income gap narrows with further education. Females with low levels of education earn substantially less than males in Spain. For example, females aged 30-44 years with below upper secondary qualifications earn only 64% of earnings for males in the same age group (Table A9.1b).

<p>educated groups share in the benefit of more tertiary education 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.</p>	
<p><i>The internationalisation of tertiary education is proceeding rapidly.</i></p> <ul style="list-style-type: none"> • 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. • Student mobility – <i>i.e.</i> 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. 	<p><i>Spain attracts relatively few international and foreign students but attracts a greater proportion in advanced research programmes than most other OECD countries.</i></p> <ul style="list-style-type: none"> • In tertiary education in Spain there are relatively few international and foreign students. As a percentage of all tertiary enrolment, international students (defined on the basis of their country of residence) comprise 1% of enrolment compared to the OECD average of 6.7%. Moreover, foreign students (defined on the basis of their citizenship) comprise 2.5% of all tertiary enrollment compared to the OECD average of 7.6% (Table C3.1). • Growth between 2000 and 2005 in the number of foreign students also remains low in Spain. The number of foreign students in tertiary education in Spain grew by 12% compared to the OECD average of 93% growth (Table C3.1). • However, the percentage of foreign and international students enrolled in advanced research programmes is considerably higher. One-third of international students in Spain are enrolled in these programmes (Table C3.4). They account for 7.6% of total enrolment in advanced research programmes, although this is still lower than the OECD average of 16.5%. Foreign students comprise a further 18.9% which is above the OECD average of 17.5% (Table C3.1). • Spain attracts a large percentage of international students from South American nations. Spain attracts 41.9% of its international students from these countries which is more than any other OECD country. In regard to OECD countries as countries of origin, international students in Spain have mainly arrived from Portugal (9.3%) and Mexico (9%). A smaller proportion of students have arrived from France (4.6%), Germany (4.3%) and Italy (3.9%) (Table C3.2). • The difference in country and region of origin may be related to the language of instruction. Spain offers few education programmes in English whereas countries with a high proportion of international and foreign students offer these programmes in English. However, this may also be the reason why such a high proportion of South American students enroll in education programmes in Spain.

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 schools 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 many 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 A8.1)

Key results for Spain

A comparatively large proportion of adults in Spain have not attained at least upper secondary education. While the proportion is shrinking, it is still comparatively large even amongst the younger cohorts.

- In Spain, just over half the population aged between 25-64 years has not attained an upper secondary education. Only 49% of people in this age group have attained at least upper secondary education which is the fourth lowest percentage across OECD countries. For the younger cohort, aged 25-34 years, this percentage increases to 64% but this is still comparatively low and is the 5th lowest amongst OECD countries (Table A1.2a).
- Individuals with these low levels of education receive lower earnings and are more likely to become unemployed or out of the labour market in Spain. This disadvantage is particularly acute for females in Spain. Females with a post secondary education have an employment rates above 70% whereas females with a lower secondary education have employment rate of 48%. Employment rates drop further for females with only a primary education. Less than a third of females in Spain with only a primary education attainment are in employment (Table A8.1a).
- While the employment rate for men in Spain with only a primary education is lower than the overall rate (70% compared to 82%), the employment disadvantage with lower levels of education attainments is small when compared to the disadvantage incurred by females with low levels of education. In fact, the employment rate for men in Spain with only a lower secondary education is higher than the employment rate for females with an education level of tertiary-type A and advanced research programmes (Table A8.1a).

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. OECD 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.

- No data available for Spain.

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

In Spain, access to higher education is one of the most equitable across OECD countries.

<ul style="list-style-type: none"> • 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 show by data collected in 2000 by OECD PISA. 	<ul style="list-style-type: none"> • In regard to equity, the extent that family socio-economic characteristics impact upon students' education is of prime importance. Spain provides highly equitable access to higher education compared to other OECD countries and has one of the most equal between-school differences in PISA 2000. • Forty per cent of students in higher education (defined as ISCED levels 5B, 5A and 6) in Spain come from families where the father has a blue-collar occupation (Chart A7.1). In other countries such as Austria, France, Germany and Portugal the proportion is much lower. This is an indication that in regard to higher education in Spain, there is considerable inter-generational mobility. • Results from PISA 2000 show that there is a relatively high degree of equity in performance across schools. Spain is below the OECD average in the proportion of total variation explained by between-school differences (17.2% compared to the OECD average of 33.6%). This means that differences in student performance are explained less by which school a student attends than is the situation across the OECD average.
<p><i>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.</i></p> <ul style="list-style-type: none"> • 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 27%, the corresponding participation rate in the United Kingdom is also still well above the OECD average of 18%. 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 of the rate among those with upper secondary education and less than a quarter of the rate seen among those with tertiary education. In the United Kingdom these 	<p><i>In Spain, the hours of non-formal job-related training is substantially lower than in most OECD countries.</i></p> <ul style="list-style-type: none"> • In Spain, for workers between the ages of 25 and 64 years the total expected number of hours in non-formal job-related training per worker is 237, considerably below the OECD average of 389 hours (Table C5.1a). This low level of training exists for both male and female workers. • Substantial differences exist in the training provided for workers with different levels of education. For workers in Spain with a tertiary education, the total expected number of hours in non-formal job-related training per worker is 503. While this is below the OECD average of 669, it is nearly five times more hours than that expected for workers in Spain with only lower secondary education. For these workers, the total expected number of hours in non-formal job-related training per worker is only 102 which is less than half the OECD average of 210 (Table C5.1a). The difference in the training received by workers with different levels of education in Spain would act to re-enforce initial

<p>differences are significantly larger than in most OECD countries.</p>	<p>inequities in education attainment.</p>
<p><i>In some countries, student’s expectations for their own educational future are also closely related to their social background.</i></p> <ul style="list-style-type: none"> • 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. 	<p><i>The proportion of students in Spain who expect to go to university is close to the OECD average but there are substantial gender differences in these expectations.</i></p> <ul style="list-style-type: none"> • The percentage of 15-year olds in Spain who expect to go to a university-level programme (defined as ISCED levels 5A or 6) is 48% which is slightly higher than the OECD average of 45% (Table A4.1a). Fifty-six per cent of female students expect to complete this level of education which is well above the OECD average of 48%. However, only 41% of male students expect to complete this level of education. This level is equal to the OECD average (Table A4.3a). • The higher expectations of female students may be related to the different employment prospects associated with further education for males and females in Spain. These employment prospects improve substantially for females (who have very low employment rates for those with low levels of education) who complete further education but employment rates for males remain relatively constant across different levels of education attainment (Table A8.1a).

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	Key results for Spain
<p>OECD countries spend 6.2% of their collective GDP on educational institutions, but the increase 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.</p> <ul style="list-style-type: none"> • 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 increased in the 24 countries with comparable data for the period. The increase was, on average, 42% in OECD countries. The increase is usually larger for tertiary education than for primary to post-secondary non-tertiary levels of education combined. • At the tertiary level of education, the increase of expenditure over the period 1995-2004 was more pronounced from 2000 onward 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 	<p>Spain has increased its education expenditure but is still below the average.</p> <ul style="list-style-type: none"> • Spain spends less on education institutions than the OECD average and also has lower expenditure per student than the OECD average. This applies in terms of expenditure in Euros and also as a proportion of GDP. • Expenditure on education institutions in Spain was 4.7% of GDP in 2004 which is lower than the OECD average of 5.8%. This is close to the percentage that Spain spent in 2000 (4.8%) but less than in 1995 when expenditure on education institutions as a percentage of GDP was 5.3% (Table B2.1). • The gap in expenditure on education institutions exists mainly because public expenditure as a percentage of GDP is below the OECD average for each level of education except for pre-primary education. Private expenditure on education institutions as a percentage of GDP is close to the OECD average (Table B2.4). • However, expenditure on education institutions in tertiary education has risen by 62% in Spain between 1995 and 2004 (Table B2.3). Spain also has an expenditure on pre-primary education institutions that, as a percentage of GDP is slightly above the OECD average (0.6% of GDP compared to 0.5% of GDP) (Table B2.2). <p>Expenditure per student on education institutions has risen in line with the OECD average and above the OECD average for tertiary education institutions.</p> <ul style="list-style-type: none"> • Expenditure per student on tertiary education institutions has risen by 67% between 1995 and 2004. This is well above the OECD average of a 9% increase between 1995 and 2004 (Table B1.5).

<p>at the tertiary level than at the primary level.</p> <ul style="list-style-type: none"> • 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. • Expenditure per student at primary, secondary and post-secondary non-tertiary levels increased 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). 	<ul style="list-style-type: none"> • Expenditure per student on primary, secondary and post-secondary non-tertiary education institutions has risen by 36% between 1995 and 2004 which is close to the OECD average of 38%. However, as shown above, this increase in expenditure per student is largely due to a decline in the number of students in these education institutions. This decline has meant that a 7% increase in overall expenditure has led to a 36% increase in expenditure per student (Table B1.5). • The decline in the number of students is a result of demographic trends and not in enrolment rates. The proportion of the population aged 15-19 years enrolled in education institutions is 81% which is close to the OECD average of 82%. Moreover, this enrolment rate has risen from 73% in 1995 (Table C2.2).
<p><i>Instruction time, teachers' salaries, and student-teacher ratios vary widely among countries.</i></p> <ul style="list-style-type: none"> • 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 	<p><i>The proportion of current expenditure devoted to compensation of teachers and other staff is comparatively high.</i></p> <ul style="list-style-type: none"> • The proportion of expenditure on teacher compensation relative to total education expenditure on education institutions is high in Spain relative to other OECD

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 had had 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 increases by an average of nearly three students between primary and lower secondary education, but ratios of students to teaching staff tend to decrease with increasing levels of education due to more annual instruction time, though this pattern is not uniform among countries.
- In primary and secondary education, OECD

countries. Education expenditure is divided into current and capital expenditure. For primary, secondary and post-secondary non-tertiary education institutions, the proportion of expenditure on current expenditure in Spain is 92% which is just above the OECD average of 91%. Of the current expenditure, the percentage devoted to the compensation of teachers is 71% which is well above the OECD average of 64%. However, the percentage of current expenditure devoted to other staff is below the OECD average so that the proportion of current expenditure devoted to the compensation of all staff (82%) is only just above the OECD average (80%) (Table B6.2).

- This trend exists but is larger with expenditure on education institutions in tertiary education. The percentage of current expenditure devoted to the compensation of teachers is 59% which is substantially above the OECD average of 43%. While the compensation paid to other staff is below the OECD average, the compensation paid to all staff is 79% of current expenditure which is still well above the OECD average of 66% (Table B6.2).

Slightly higher teacher salaries may partly explain the larger percentage of current expenditure devoted to teacher compensation but the ratio of students to teachers may account for more of the difference.

- A part of the reason for the larger expenditure devoted to the compensation of teachers may be explained by teacher salaries being above the OECD average. But the statutory salaries of most teachers are only just above the OECD average. Teacher salaries after 15 years of experience (with minimum training) in lower secondary education and teachers salaries at the top of the salary scale in both lower and upper secondary education are slightly above the OECD average. For example, the annual statutory salary for lower secondary education teachers in Spain at the top of the salary scale is USD 51 904 which is above the OECD average of USD 48 983 (Table D3.1).
- The annual statutory starting salaries of teachers in Spain are above the OECD average in primary and secondary education. For example, the annual statutory starting salaries of lower secondary education teachers in Spain is USD 35 840. This is 20% higher than the OECD average of USD 29 772 (Table D3.1).

<p>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>	<ul style="list-style-type: none"> • The ratio of students to teaching staff in Spain is lower than the OECD average at each level of education. In primary education, the ratio of students to teaching staff is nearly 2.5 students per teacher lower than the OECD average (14.3 in Spain compared to the OECD average of 16.7). This gap narrows in lower secondary education but in upper secondary education the student-teacher ratio in Spain is 8.1 which is substantially lower than the OECD average of 13 students per teacher. A similar gap exists in tertiary education with a student-teacher ratio in Spain of 10.6 students compared to the OECD average of 15.8 (Table D2.2). This can substantially increase the overall costs paid to teaching staff particularly on a per student basis. • Student-teacher ratios are substantially larger in private education institutions than public institutions. For example, in secondary education the ratio in private institutions is 14.7 students per teacher while in public institutions it is only 9.5 (Table D2.3).
<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 increased 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 decreased slightly between 1995 and 2000, as well as every year between 2001 and 2004. However, in general the increase of private investment has not displaced 	<p><i>The share of private and public expenditure on education institutions in Spain is close to the OECD average even though public expenditure has increased between 1995 and 2004.</i></p> <ul style="list-style-type: none"> • The proportion of expenditure on education institutions in Spain made by public sources was 87% in 2004 which is the same as the OECD average. The 13% of private expenditure on education institutions derives almost entirely of household expenditure (Table B3.1). • Compared to 1995, the proportion of expenditure from public sources has risen from 84% to 87% in 2004. This is because public expenditure has increased by 29% over the period while private expenditure has increased by only 2% (Table B3.1). • However, growth in expenditure on tertiary education institutions has come from both public and private sources. Between 1995 and 2004 expenditure from private sources on tertiary education institutions has grown by 53%. Over the same period, growth in public expenditures on tertiary education institutions has grown by 65% (Table B3.2b).

<p>public financing, but rather complemented it.</p> <ul style="list-style-type: none"> • In tertiary education, households cover the majority of all 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>OECD countries where students are required to pay tuition fees can nevertheless have also large access to tertiary education.</i></p> <ul style="list-style-type: none"> • 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 increased by 4 percentage points between 2000 and 2005. 	<p><i>Spain has low tuition fees for undertaking tertiary-type A education and has a low proportion of students that benefit from public loans or scholarships/grants.</i></p> <ul style="list-style-type: none"> • Ninety-one per cent of tertiary students in Spain are enrolled in public institutions. These students pay low tuition fees compared to some OECD countries. It is estimated that average annual tuition fees charged by tertiary institutions in Spain are USD 795 which is considerably lower than some OECD countries such as Australia (USD 3 855) and Canada (USD 3 464) (Table B5.1a).

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.
- “Non-formal education” is defined as any 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.
- “Pre-primary education” is defined as the initial stage of organised instruction, designed primarily to introduce very young children to a school-type environment, that is, to provide a bridge between home and a school-based atmosphere. They are centre or school-based, designed to meet the educational and developmental needs of children at least three years of age, and have staff qualified to provide an educational programme for children.
- “Primary education” usually begins at ages five, six or seven and generally lasts six years in OECD countries. Programmes at the primary level generally require no previous formal education, although it is becoming increasingly common for children to have attended a pre-primary programme before entering primary education. The boundary between pre-primary and primary education is typically the beginning of systematic studies characteristic of primary education, i.e. reading, writing and mathematics. It is common, however, for children to begin learning basic literacy and numeracy skills at the pre-primary level.
- “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.
- “Post-secondary non-tertiary education” is defined as programmes straddling the boundary between upper secondary and post-secondary education from an international point of view, even though they might clearly be considered upper secondary or post-secondary programmes in a national context. Although their content may not be significantly more advanced than upper secondary programmes, they serve to broaden the knowledge of participants who have already gained an upper secondary qualification. The students tend to be older than those enrolled at the upper secondary level.
- “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.
- “Statutory salaries” refers to teachers’ salaries according to official pay scales. The salaries reported are defined as gross salaries (total sum of money that is paid by the employer for the labour supplied) minus the employer’s contribution to social security and pension (according to existing salary scales). Salaries are “before tax”, i.e. before deductions for income taxes.