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GETTING EDUCATION RIGHT FOR LONG-TERM GROWTH IN THE CZECH REPUBLIC

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GETTING EDUCATION RIGHT FOR LONG-TERM GROWTH IN THE CZECH REPUBLIC

By
Alessandro Goglio¹

1. The Czech education system is performing reasonably well. Secondary-school participation and completion rates have traditionally been high, and continue to be so. PISA results are above average, with Czech students performing among the best in the OECD in problem-solving abilities, particularly for mathematics and science. Though tertiary attainment is low in the population as a whole, the enrolment rate is increasing rapidly. At just a little below 5% of GDP, total education spending is low compared with other OECD countries.

2. Many reforms have been introduced to improve the Czech education system since the end of the 1980s. These reforms have often endeavoured to meet the educational needs of a changing labour market and the broader work aspirations of young generations. Nevertheless, there is agreement that further improvements are required, particularly in tertiary-education. Furthermore, secondary education and adult education have considerably more potential than is being realised at present. Improving the education system is a high priority of the government's *Economic Growth Strategy*.

3. Starting with an examination of the organisational structure and performance of Czech education this paper looks at the main problems with the system and draws recommendations for further reform. The policy recommendations are summarised in Box 1.

1. This paper was originally prepared for the OECD's 2006 *Economic Survey of the Czech Republic*. Alessandro Goglio is an economist in the OECD's Economics Department. The author is grateful to the experts from the Czech Republic government and non-government bodies who provided information and comments and particularly to Jan Koucký, Director of the Education Policy Centre at Charles University (Prague) and Adviser to the Minister of Education, Youth and Sports. He is also grateful to OECD colleagues for their suggestions, in particular Val Koromzay, Andrew Dean, Andreas Wörgötter, Philip Hemmings, Gregory Wurzburg, Thomas Weko and Lubomir Chaloupka (now at the Czech Ministry of Finance). Thanks are also due to Margaret Morgan for technical assistance and to Susan Gascard and Sheila McNally for assistance in preparing the document.

Box 1. Policy recommendations for education reform

Providing better signals for tertiary students and providers

The rapid expansion of tertiary education requires more resources and better incentives for both students and higher education institutions.

- The introduction of tuition fees for students in public universities that at least partially reflect the cost of tertiary courses would make for better decision making by students and faster reaction of universities to changing demands. This diversification of funding for tertiary education would also help universities cope with further rises in student numbers.
- If tuition fees are introduced they should be accompanied by publicly supported student loans in which repayments are conditional on graduate income. This would help reduce the risk that up-front payments limit access to university education.
- Any increase in funding has to be linked to output quality monitoring and evaluation. In addition, it should be complemented by strengthened co-operation between universities and enterprises. This would encourage providers to introduce programmes that are more in tune with the labour market.

Increasing the effectiveness and relevance of secondary education

Secondary schools enjoy a good reputation and benefit from a well established institutional tradition. However, further changes in focus and flexibility in the system are required to better cope with changing skill requirements in the labour market.

- In further developing the new school leaving exams (*maturitní zkouška*), closer consultation with universities should be considered. This would help university faculties to increase their reliance on *maturitní zkouška* results for admissions. In addition, the experience so far with the *maturitní zkouška* reform suggests that a high degree of co-ordination with curriculum reform is needed because of the close interdependence between curricula and final exams.
- Access to the general courses in secondary schools that provide options for entering tertiary education should be widened. This could be achieved by making these courses more widely available in the secondary technical schools and by equalising the quality standards with those of the four-year gymnasia. More generally, choices could be broadened if upper secondary school curricula were differentiated among broad subject-based streams and if students were allowed to transfer both between and within schools more easily.
- The streaming of a minority of students into elite publicly funded schools from age eleven should be phased out, as already outlined in strategic documents by the Ministry of Education, Youth and Sports. This should be complemented by actions that raise the quality of the basic schools and make the transfer of students and teachers between schools easier.
- Decentralisation of responsibility for secondary schooling has raised the importance of output measurement and benchmarking. A recently introduced assessment system has merits but its effectiveness needs to be strengthened, in particular by allowing the publication of assessment results and by giving the *School Inspectorate* more scope in information gathering. The assessment and evaluation system should be expanded to cover schools, types of schools, regions and the entire school system. This should in particular assess how graduates are prepared for employment and further education.
- The currently low motivation of teachers would be increased by encouraging greater use of financial rewards for good performance. There should also be more in-service training to ensure that teachers adapt to change in secondary school system, particularly if access to general education is widened. By increasing job satisfaction, these measures could be important in making the teaching profession more attractive to qualified teachers.

Aspects of improving lifelong learning

The Czech education system is too rigidly geared towards a set of standard pathways through the education system.

- Access to the education system for adults who want to take either secondary or tertiary level courses needs

to be increased and a greater range of programmes is needed.

- There is also a need for establishing a more systematic approach to funding mechanisms, quality assurance, information and guidance.

Management of EU funding in a period of rapid demographic transition

The EU funding system presents considerable opportunities for financing education policy but it also presents challenges, in particular finding room in education budgets for co-financing the much larger allocations of the 2007-13 EU budget.

- One way for ensuring that EU-funds are spent without negative effects on other important non-mandatory expenditures would be to put priority on using the savings from demographic changes to reduce the potential drain of co-financing. It is important, however, to elaborate carefully priorities and mechanisms for their realisation.
- Regular assessments of resource allocation are needed to ensure that upcoming demographic changes are coped with efficiently. On this front, the central authorities should request more detailed projections about future school needs from regions and municipalities.
- Ensuring good co-ordination within the government will be important for making the best use of EU funds, particularly where there is a natural overlap in policymaking, as in R&D and tertiary education.

The difficult task of modernising the education system

4. The broad structure of the Czech education system is similar to many other OECD countries, namely it involves various layers of governance. While the central administration of the state plays a steering role – *i.e.* it finances key education activities and sets out strategic priorities –, many administrative and organisational responsibilities are delegated to sub-national bodies and institutions. The government's basic goal on education is to increase the productivity of human resources – so as to enable more valuable output of work, and thus allow higher wages and profits in the economy as a whole. This objective is closely linked with a number of non-economic goals, such as the promotion of culture, equity and social cohesion. Given these priorities, policymakers in the Czech Republic face exactly the same broad challenge in implementing education policies as elsewhere: it is difficult to find the optimal mix of economic and social goals.

Transition has brought important changes

5. Following the reforms brought by transition, the education system differs from that in place at the beginning of the 1990s (Box 2). In terms of upper secondary teaching programmes, reforms have been geared to provide more work-oriented skills and to reinforce the general education component of the system. Helped by the falling populations of young cohorts, this has led the proportion of students attending general secondary courses to increase over the past few years. Tertiary enrolments have also started to grow, a trend driven principally by the effect of high and rising private benefits from university education, both in terms of higher income and lower rates of unemployment.² In addition, the expansion of three-year bachelor degrees has brought a welcome widening of options for secondary-school leavers (Table 1).³ These changes have been accompanied by more sharing of educational tasks and responsibilities between layers of government with the result that the system is less centralised than at the beginning the 1990s.

2. The tertiary education enrolment rate has more than doubled between 1995 and 2004, from 7% to 15%. In addition, the chances of being admitted among applicants has increased from less than 50% to 60%.

3. The Czech Republic is certainly not unique in this respect, the opportunities for university graduates have widened substantially in virtually all central European and Baltic countries. The challenges that these countries face in the matter of tertiary education are surveyed in a recent World Bank study (World Bank, 2005).

Box 2. **Past and recent reforms in education**

- 1990:** Democratisation of education system launched, including:
- First reform of the governance and organisation of Czech education, assigning responsibilities for the central management of education to the Ministry of Education, Youth and Sports and transfer of responsibilities for pre-primary and primary education to municipalities.
 - Introduction of private schools.
 - Introduction of 6- and 8-year general secondary schools, so called multi-year gymnázia.
 - Academic freedom of higher education institutions restored.
 - Bachelor degree programmes introduced.
- 1992:** First education programmes involving the support of the European Commission launched.
- Introduction of per-capita funding (normative financing).
- 1994:** Strategy on Vocational Education and Training adopted. It sets out the basis for curriculum reform and new requirements for teacher training.
- Compulsory schooling brought to 9 years.
- 1995:** Introduction of tertiary professional schools as independent entities.
- School autonomy reinforced.
- 1996:** Length of basic school programmes expanded by one year to match the duration of compulsory schooling.
- 1997:** Constitutional Act on the creation of the higher territorial autonomous units. The Act (in force since 2000) establishes the creation of the regions.
- 1998:** New Higher Education Act introduced.
- Breaking of state monopoly on higher education institutions.
 - The public universities acquire status of public legal entities.
 - Greater involvement of higher education institution in lifelong learning.
- 1999:** Establishment of a new education body responsible for reforming the secondary school leaving exam.
- “Strategy for the development of higher education 2000-2005”.
- 2000:** Measures enacted to simplify admission requirements to upper secondary education.
- Responsibility for upper secondary education transferred to the regional authorities.
- 2001:** National Programme for the Development of Education in the Czech Republic (White Paper) approved involving six strategic guidelines, among which adaptation of programmes to the needs of the knowledge society, more effective monitoring of the quality of education, enhanced participation of social partners and civic society in decision-making.
- Public higher education institutions allowed to collect “incentive fees” and tuition fees for lifelong learning courses.
- 2002:** Further changes in distribution of responsibilities between the central government, the regions and the municipalities approved, in connection with state administration reform (effective from 2003).
- “Strategy for the development of pre-primary, basic secondary and tertiary technical education” (An updated version of this document was published in 2005).
- 2004:** New Education Act approved (No.561/2004). The most important feature of the Act is the curriculum reform. Conditional upon meeting the broader guidelines of the national framework of education, schools are given wider scope for adjusting courses to local needs and conditions. The Act also involves reinforcing the effectiveness of the evaluation system.
- Reform of the school leaving exam started (maturitní zkouška).
 - Act on Educational Staff approved (No. 536/2004, effective from 2005). It defines the basic qualification standards of teachers and sets out guidelines for their continuing training.
 - Uniform exam at the end of the 5th and 9th year of compulsory education approved (effective from 2007).
- 2005:** “Strategy for the Development of Higher Education 2006 – 2010” which takes into accounts the main messages of the Economic Growth Strategy.
- 2006:** Act on Verification and Recognition of Continuing Education Results approved. It opens opportunities for obtaining qualifications and recognises non-formal and informal learning,

Table 1. **Developments in the tertiary education system**

	2000/1995	2005/2000
Growth rate in the overall number of tertiary students (per cent)	50.8	43.1
	1995	2005
Distribution of tertiary education students (per cent)		
Tertiary professional schools	4.2	8.7
Universities	95.8	91.3
Distribution of university students by programmes (per cent)		
Bachelor	23.7	52.3
Master	70.6	39.8
Doctoral	5.7	7.9

Source: Ministry of Education, Youth and Sports.

Nevertheless the system does not deliver equity and tertiary education achievements are low

6. Similar to many other OECD countries, school attendance is compulsory between ages of 6 and 15, with secondary upper education being divided into several categories, some of which are general, while others have an explicit vocational and job-oriented character. There are three different tracks of secondary education schools. The *gymnázium* has a general character, whereas the secondary vocational schools (*střední odborná učiliště*) are geared towards providing skills for “blue collar” professions. The third track comprises the secondary technical schools (*střední odborné školy*) which have a more balanced split between general and vocational education programmes. The secondary technical schools aim to prepare students for “white collar” professions. While the *gymnázium* and the secondary technical schools are completed by a school leaving examination (*maturitní zkouška*), only a minority of vocational schools provide programmes that lead to such an examination. Possessing a school leaving certificate is among the two requirements to access tertiary education, the other being the successful fulfilment of the specific admission requirements of the tertiary institution.

7. However, secondary education is structured in a way that the above mentioned general outcomes are difficult to deliver, particularly on equity. The most striking feature regards the general education track, which comprises, besides a four-year programme, an extended six- or eight-year *gymnázium* that runs parallel to the basic school. Such a parallel long-term *gymnázium* competes with the basic school for bright pupils, thus implying early streaming (when children are 11-years old).⁴

8. Tertiary education is organised according to a two-track model, an approach similar to that seen in other countries. First there is a university system which comprises the more academically-oriented higher education institutions (*vysoké školy*) which provide PhD as well as bachelor and masters programmes.⁵ The second track comprises the tertiary professional schools (*vyšší odborné školy*), in which

4. The Czech commonly used expression is “multi-year *gymnasium*” when referring to the six and eight-year *gymnázia*. Nearly 10% of pupils move from the basic school to the eight-year *gymnázia* when they reach the age of 11-years. There are also six-year *gymnázia* but these are much less common. See Koucký *at al.* (2004).

5. Formally, the Higher Education Institutions also include a number of so called non-university Higher Education Institutions primarily focussed on bachelor programmes. Being relatively new, however, only a

the programmes typically include work experience (Box 3). The diplomas provided by these schools are usually inferior, in terms of academic value, to a bachelor degree. However, the university and tertiary-professional-school courses have converged somewhat overtime, a trend consistent with the Bologna process. Annex 4.A1 sketches out the basic organisational structure of the Czech education system.

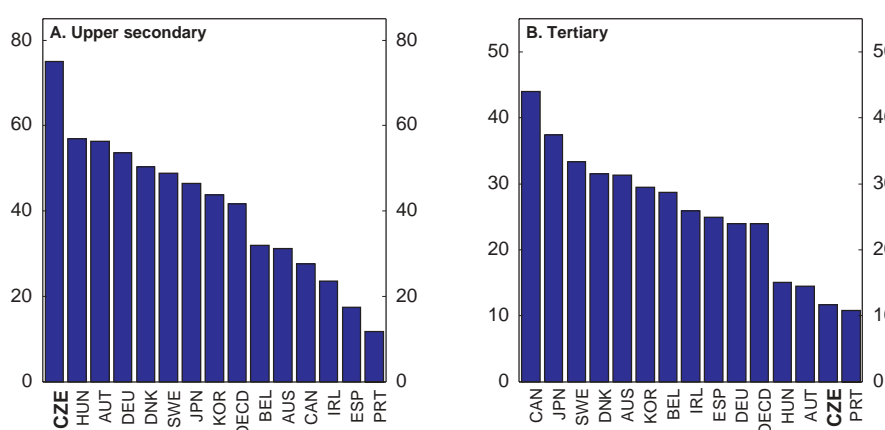
Box 3. The role of tertiary professional schools

Although the tertiary professional schools still enrol a limited number of students, their importance has grown over time. When they were introduced in 1995, the tertiary professional schools basically provided further education to students from secondary technical schools. As a result, they were widely seen as a second-best option for those who had failed to access the standard university system. The scope and level of courses has widened since then, reflecting responses to labour market needs. Currently a little under 10% of students in tertiary education are in the professional schools, more than twice the share in 1995. There are some 170 of these schools, of which about a third are private or quasi-private. This is far higher than the overall number of public universities, of which there are 25 in the Czech Republic, the oldest and most important located in Prague and Brno (8 and 5 universities, respectively).

The tertiary professional schools focus on providing courses in areas such as business and accounting, healthcare-related services and nursery, engineering, agriculture, forestry and environmental protection. They have some advantages over universities in terms of flexibility; for example, they are subject to relatively simple entry procedures. Another advantage is the emphasis on vocational skills. Finally, the tertiary professional schools are often located in relatively small cities and urban areas and in this sense complement the standard university system. Even so, it is difficult to gauge their future. The attractiveness to students of the tertiary professional schools is likely to fall the closer the university system will get to offering a full range of vocational bachelor programmes.

9. As noted above, the level of secondary educational attainment of the population is high by international standards. The Czech Republic ranks among the best OECD performers based on the duration of school attendance. This reflects considerable attention to ensuring the successful completion of compulsory education.⁶ As a result, the share of adult population whose highest attainment is upper-secondary education degree is 75%, 33 percentage points above the OECD average (Figure 1). In stark contrast, however, tertiary educational attainments are very low by international comparison, although increasing enrolment rates imply the situation is gradually improving.

Figure 1. **Educational outcomes in the Czech Republic, 2003**
% of the 25-to-64-year-old population, by highest level of education attained



Source: OECD, *Education at a Glance*.

small number of students attend these institutions. For simplicity, throughout this Paper the terms “Higher Education Institution” and “university” are used interchangeably.

6. See Koucký (2004).

Absorbing EU funds and demographic changes are new sources of pressure

10. European Union (EU) funds will significantly challenge both the nature of public expenditure and the capacity to finance it in the coming years.⁷ The Ministry of Education, Youth and Sports (henceforth the MEYS) will be running two of the 15 operational programmes: *Education and Competitiveness* and *Research and Development for Innovation*. These programmes will absorb EUR 3365 million, corresponding to about 13% (7% and 6%, respectively) of the total amount available in the 2007-2013 EU budget allocation. As in other areas of policy, the annual allocation will be many times bigger than at present, thus implying that the scope for developing new programmes will be significantly widened by the upcoming EU funds. While the *Education and Competitiveness* programme will likely target primary and secondary education, there are also plans to increase the resources allocated to adult education. At the same time, however, there are constraints because of the statutory co-payment requirement (15-25%, depending on the type of funding). Making room for co-financing may require major reductions or even cancellations of activities that cannot be backed by EU funds and dealing with this issue is a central concern of policy discussions at the current time.

11. The most room for increasing educational attainment in the Czech Republic is at the tertiary level and in adult education. Indeed, catch up with other OECD countries in school expectancy -- conventionally defined as the number of years a 5-year old can be expected to spend at school -- represents an important challenge.⁸ The government expects that the tertiary education population will increase by some 55 000 students even though the population age-group typically doing tertiary courses (19-25 year olds) will be broadly stable or even declining.⁹ While this population is projected to peak by 2010, strong demand is in sight at least until 2013, after which year some easing should begin (reflecting the countering effects of demographic developments). However, the current scenario does not take into account the full picture. By focussing on purely age-specific developments, it omits the potentially important pressure stemming from a backlog of demand for tertiary degrees from older cohorts.¹⁰ The debate about how to ensure that the tertiary education system copes well with the ongoing rising trend in demand from both students in tertiary education age and adult population is very topical in the Czech Republic at present.

12. In contrast the demand for secondary education is set to fall quite rapidly, reflecting demographic decline. While this outflow represents a substantial opportunity to restructure secondary educational services by closing down many secondary schools, overcoming opposition to service reduction will not be easy.¹¹ Population ageing also implies that considerable attention will have to be given to improving the framework and the opportunities for lifelong learning.

7. See also OECD (2006), particularly Chapter 1.

8. The education expectancy indicator refers to both full-time and part-time education over the individual's lifetime. For the Czech Republic the indicator has increased markedly over the past decade, from about 14 to 16½ years at present. Even so, there is still a little more progress required to close the gap with the OECD average (17.3 years).

9. Projections are from Ministry of Education, Youth and Sports (2005), p. 5. It is thought that the university population could rise by more than 55 000 because revised figures show the number of enrolled students for the Academic year 2005-2006 was considerably higher than assumed in the projection.

10. The main reason for the backlog of demand for tertiary education is historic. Prior to the transition the proportion of the working-age population that had attained tertiary education was very modest. At the beginning of the transition, post-secondary education was concentrated on vocational education provided by institutions without tertiary status (OECD, 2004a).

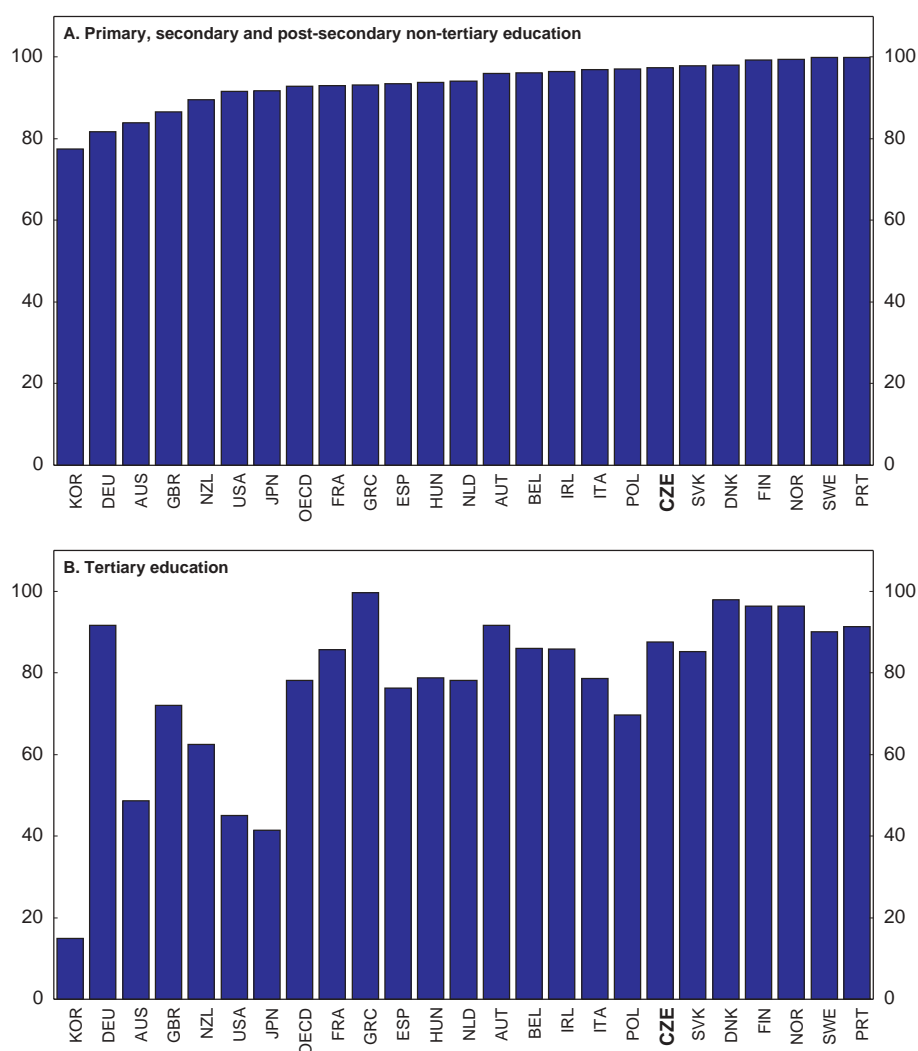
11. It is estimated that about one third of the current number of secondary schools will have to be closed in the coming years.

Key features of the centrally-steered system

The public sector provides the majority of services

13. Education in the Czech Republic continues to be dominated by the public sector, though private providers have been in operation for several years now (Figure 2). Most notably, because access to public tertiary education is normally free of charge (Box 4), the share of public expenditure is almost as high in tertiary education as it is in the lower levels of the system. In many other OECD countries, regulatory measures have been introduced over the years to finance public tertiary education through tuition fees paid by the students and their families. These changes have led the private financing component to increase.¹² There are however no limitations for Czech private schools and universities to charge fees.

Figure 2. **Public expenditure on educational institutions, 2002**
Per cent of total expenditure (public and private) on educational institutions



Source: OECD, *Education at a Glance*.

12. See OECD (2005a) for a wider discussion.

Box 4. Who pays tuition fees in tertiary education and to which institutions?

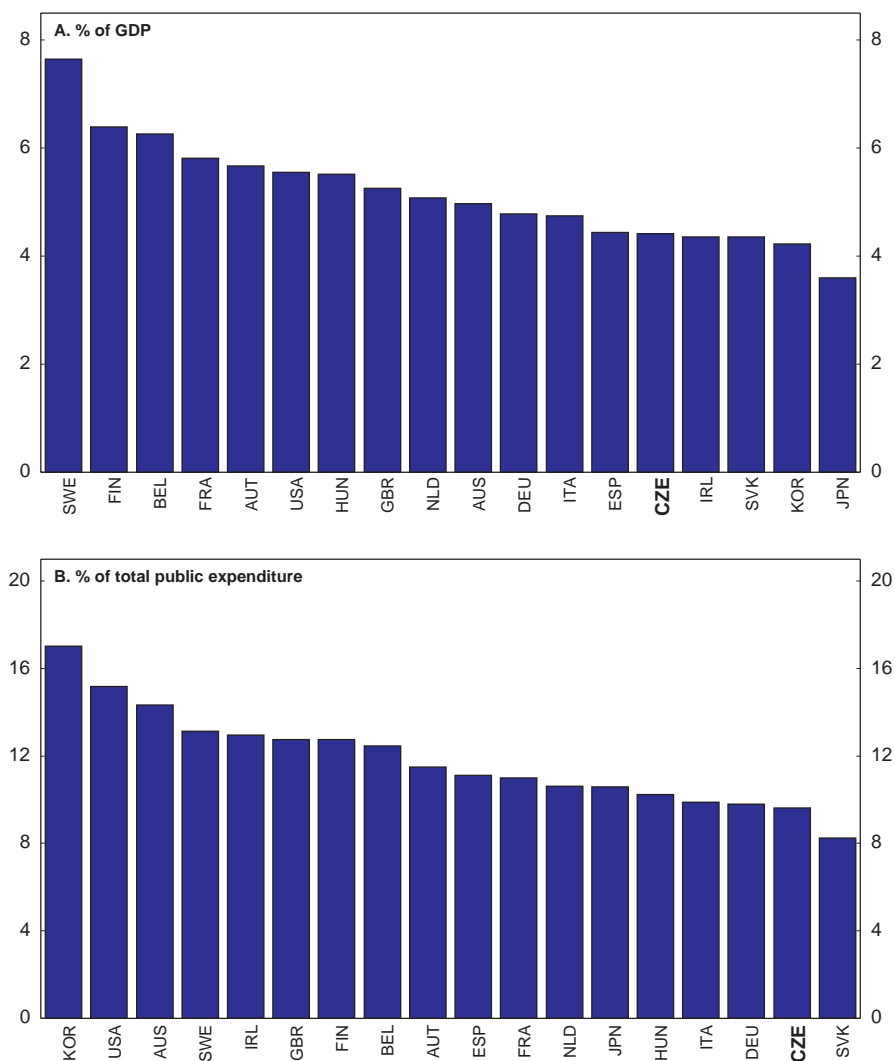
The use of tuition fees by the university sector is limited. Enrolment in public universities is conditional to the payment of a fee when the student exceeds the standard length of study by more than one year, or attends more than one programme at the same time. Universities also collect fees for programmes taught in a foreign language (this is not common though). Apart from these particular instances, there is no use of tuition fees as a signalling tool to students or providers. Students however have to pay for accommodation services and some administrative fees.

However, fees are charged by the tertiary professional schools. The fees vary depending on the course taken but also depend on whether the school is run by regional governments, religious organisation or a private provider. The fees currently range between 100 and 1000 euros per year (roughly between 1 and 10% of the level of per capita income). However, in the public tertiary professional schools they generally do not exceed 200 euros per year.

14. Nevertheless, the actual amount of public funding to education is relatively low. Across OECD countries, the Czech Republic ranks among the lowest in terms of the amount of public resources devoted to education, just below 5% of GDP and less than 10% of total public spending (Figure 3). In fact, it appears that even the countries with very small overall public sector budgets are more strongly committed to support education than the Czech Republic.¹³ However some caution is required in drawing a conclusion that this implies that a big increase in public spending is needed. Even though a stable base level of funding is required in order for the education sector to be able to satisfy long-term educational commitments, the scope for service quality improvements remains significant.

13. For instance, the share of public spending that goes to education in Mexico, Korea and New Zealand is among the highest in the OECD countries; yet total public spending accounts for a significantly lower proportion of GDP in these countries than in the Czech Republic. See OECD (2005a).

Figure 3. Public expenditure on education, 2002



Source: OECD, *Education at a Glance*.

Budgetary arrangements move towards more output oriented financing

15. The budget of the MEYS plays a central role in the financing of education. The budget covers most of the costs of public schools (including staff salaries) and provides substantial subsidies to private schools. It also covers most of the public component of research and development costs incurred by the universities.¹⁴ Support for education also comes through other channels via subsidies and tax deductions on a wide range of education-related goods and services (*e.g.* school meals). Furthermore, the state supports the living costs of students *via* the system of minimum living allowances and the recently introduced social scholarships run by the Ministry for Labour and Social Affairs.

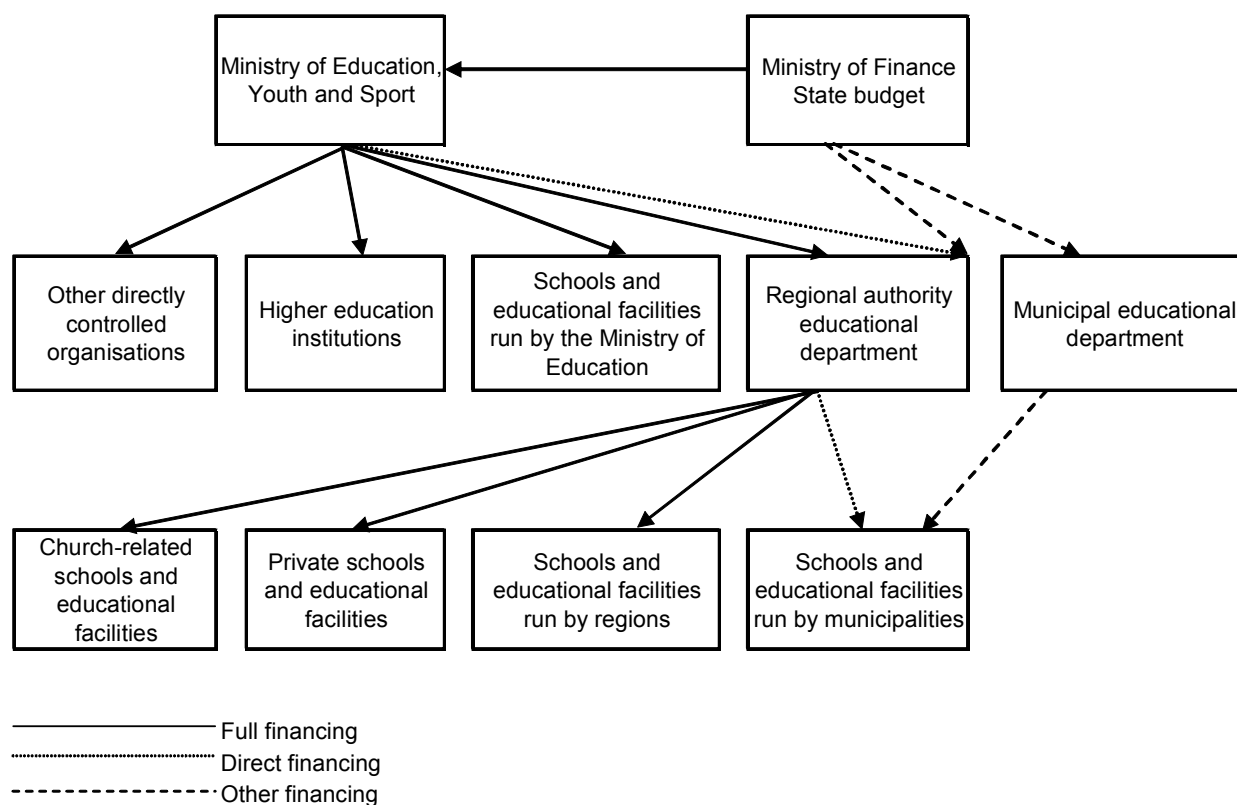
16. Grants to the regions and municipalities for basic and secondary education from the MEYS budget are strongly earmarked (Box 5). This is seen as facilitating cost containment because any extra-expenses have to be fully financed by region or municipal own revenues. The funding of tertiary education has been changed recently to take into account not just the number of students but also the number of graduates. This has introduced an element of output orientation in funding. In addition, public funding of universities combines traditional formula financing with a new element of grant-based financing (Box 5). The hope is that this will encourage the public universities to become more specialised into either research or teaching.

17. Maintenance costs, infrastructure investment and the purchase of teaching materials – computers and multimedia resources for training, for example – are funded directly by the owning institutions, supported by central government grants on a case-by-case base. Accordingly, the MEYS covers most capital expenses of the public universities, as well as the institutions and establishments that it uses for in-service training of educational staff. The regions have been responsible for secondary-school buildings since 2000 and the infrastructure for basic schools and the kindergartens fall under the competence of the municipalities. The costs of these schools are financed from the general tax allocation to regions and the municipalities and grants for capital investment are available from central government. Figure 4 summarises the financial flows characterising the Czech Republic's education system.

18. The MEYS performs a number of policy co-ordination and regulation roles on top of budget formulation. Specifically, it designs the underlying evaluation schemes used to maintain educational standards. Implementation of these schemes is binding upon the regions and the municipalities and is overseen by the Czech School Inspectorate (*Česká školní inspekce*).

14. Research and development expenses are financed also by other Ministries, including from the budgets of the Ministry of Trade and Industry, the Ministry of Agriculture and the Ministry of Health Care. See OECD (2006, Chapter 5) for a wider discussion of research and innovation policies.

Figure 4. Financial flows of the education system

**Legend:**

Full financing - Financing from the state budget of schools and educational facilities run directly by the Ministry of Education, Youth and Sports, as well as of the higher education institutions and other directly controlled organisations. Full financing encompasses three sources of costs: current (mainly salaries of teachers and other staffs), operational (for example, water and heating) and capital investment costs, including infrastructure. In addition, this aggregate includes the subsidies paid from the state budget to private and church schools for salaries, compulsory employer contributions and some operational expenditure.

Direct financing - Direct financing from the state budget of current expenditures of regional and municipal schools, *i.e.* the salaries of teachers and other school staffs, as well as learning materials (for example, books). These resources are allocated to the schools through the regional budgets on the basis of the number of pupils enrolled.

Other financing - Financing of most operational costs and capital investment costs that are met by the regional or municipal bodies that run the schools. This spending is financed from the general tax allocation to the regions and the municipalities with some grants for infrastructure from central government.

Source: OECD and Ministry of Education, Youth and Sports (2001), *National Programme for the Development of Education in the Czech Republic-White Paper*, Institute for Information on Education, Prague.

Box 5. How is education financed in the Czech Republic?

Public funding of education expenditure is predominantly based on institutional financing. Grants are generally determined following a formula-based approach, although mechanisms differ within the system. Note that the Czech authorities use the term *normative financing* for grants that are based on a per-pupil (per-student) formula and the term *normative* for the actual level of per-capita payment.

The framework for lower levels of education

Funding of lower levels of education (primary and secondary) comprises of four *normatives*. One covers pre-primary education (applicable between ages of 3 and 6); the other three cover compulsory (6 to 15 years), upper secondary (15 to 19 years) and finally tertiary professional education (19 to 21 years). Per student amounts are set each year by the MEYS on the basis of the funding of the previous year and apply an index to reflect special circumstances. For example, there is a higher allowance for pupils with disabilities and a small "local condition" correction that includes account for population density. The MEYS sets the *normatives* each year following interaction with the regional authorities.

The system was set up fourteen years ago and has been modified several times. In particular since 2003 there has been reduction in exemptions from rules on the minimum numbers of children for a municipal to run a school. The general consensus is that the system now behaves more fairly and transparently than in the past, albeit somewhat more rigidly. In practice, with the stricter capping now in place, each of the 14 regional authorities determines its own allocation criterion, with exceptions being assessed following discussions with the municipalities. The municipalities continue to support small schools strongly but as any extra expenditures have to be met using their own tax-based revenue, pressures for school closures has strengthened considerably.

In 2005 the administration of some grants for basic schools (run by municipalities) was changed. Instead of passing from central-government to the regions, then the municipalities and then the schools, some grants (for teachers' salaries, for example) now pass directly from the regions to the schools. This has altered the revenue and spending of municipalities but has not changed municipalities' powers as regards basic education.

The framework for higher education

In higher education, about 80% of total universities' revenues are from the public sector – the reminder 20% being from the universities' own sources (including leasing of their building properties and tuition fees, see Box 4). Public funding of universities is earmarked separately for teaching and R&D activities. Teaching financing comprises, *normative financing* and so-called *grant-based financing*. Although *normative financing* still accounts for about three quarters of total public allocations to public university teaching, the importance of *grant-based financing* is set to increase.

- *Normative financing.* *Normatives* are mainly based on the number of students per programme and the respective cost of study. However, in an attempt to promote more performance oriented financing of teaching activities, new *normatives* were introduced in 2005 that also factor in the number of graduates. There are seven categories of *normatives* each grouping several cost compatible programmes – for example, chemistry and medicine belong to the same group roughly reflecting similar costs of study. The *normatives* are revised annually. In addition to this, system grants are provided for several areas, including scholarships for students in doctoral programmes.
- *Grant-based financing.* Since 2005 the universities have been requested to submit long-term education plans to the MEYS, after which grant entitlements are evaluated on a case by case basis. The key qualifying criterion is adherence of a particular plan with the broad long-term teaching guidelines defined by the Ministry. The importance of grant-based financing is set to expand under current plans.
- *Other recent regulatory changes.* Regulatory changes in force from 2006 enable the public higher education institutions to carry over part of the financing from public support to the following year. They also eliminate the distinction in financing allocations between current and capital spending.

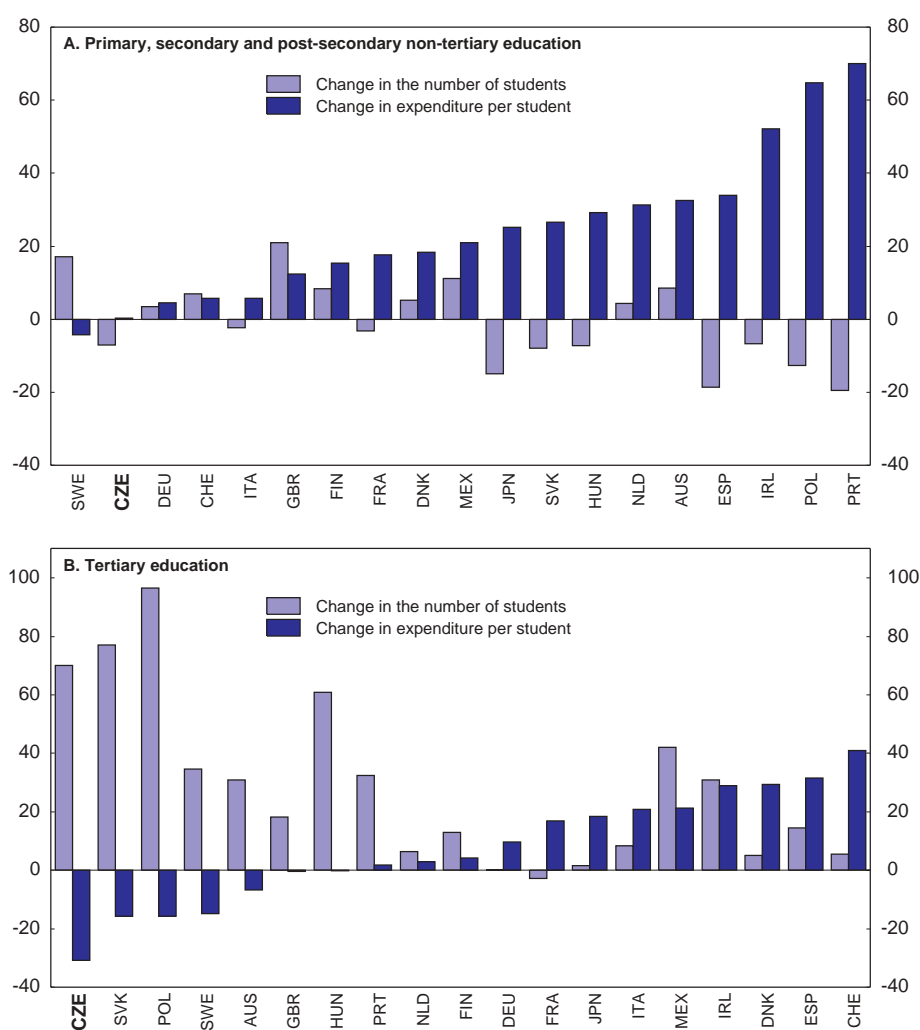
University allocations are defined following negotiations with the Representative Commission, a formal body consisting of various representatives, including from the Czech Rectors Conference and the Higher Education Council.

More regulatory progress is needed to keep pace with demography and catch-up pressures

Tertiary education is where problems are most urgent

19. Even though measures have been taken recently to improve public subsidy mechanisms (Box 5), the centrally-funded system may be too weak to ensure the long-term financial sustainability of public tertiary education. The public universities have experienced a sharp decline in the level of funding per student over the past years because growth in student numbers has outstripped growth in public funding by a large margin (Figure 5). Declines in per-student funding are also seen in other countries in the region, the Slovak Republic and Poland, for instance, but are less marked. In these countries per-student funding fell by about 15% between 1995 and 2002, compared with a fall of 30% in the Czech Republic.¹⁵

Figure 5. **Per student expenditure in education, 1995-2002**¹
Total change, per cent



1. At constant prices, 2002 base year.

Source: OECD, *Education at a Glance*.

15. Prior to 1995, however, funding per-student was higher in the Czech Republic than in other countries. The relatively low degree of adaptability of the Czech tertiary education system is also revealed by the comparison across levels of education. Specifically, for primary, secondary and post-secondary non-tertiary education changes in enrolment have been a main driving factor behind changes in overall funding. As a result, the level of funding per student in these schools has been remarkably stable overtime (Figure 4.5).

20. The funding of public higher education institutions was boosted significantly in 2005 and further increase is planned for 2006.¹⁶ However, these increases are not enough to offset the long-term trend decrease in the level of public support per student and a recent report to the OECD by the MEYS recognises this as a problem.¹⁷ The report mentions that the more liberal rules on carrying over spending between budget years through the use of reserve funds provide useful leeway in financing higher education. However this advantage has to be weighed against the problems these rules are creating for fiscal policy. In addition, there is only limited room for additional government funding for tertiary education because of fiscal constraints and so additional reforms are required to put the tertiary education system on a more stable financial track.¹⁸

21. Problems of inadequate educational services are often reported – itself a situation closely linked to the lack of financial flexibility and the resulting weakened attention of providers to programme quality and the returns to education for the students.¹⁹ For example, signals from the labour market on which skills are in greater demand are not all that strongly taken into account in programme development, even though administrative autonomy means that the universities have the freedom to adjust curricula and expand the courses they offer.²⁰ In addition, co-operation between universities and enterprises on curricula remains limited.

22. Too many students withdraw from university education without completing a degree. An inadequate supply of shorter and more practically oriented programmes is partly to blame – this limits choices and increases the likelihood of dissatisfaction, particularly among first year students. The problem of university drop-outs also reflects – yet again – the lack of properly designed signalling mechanisms, which reduces students' attention to the investment they make. Finally, the problem is increased by limited scope for switching from one programme to another.

23. Problems in tertiary education are amplified by weak progress in widening the student-support system, even though there has been work done on this front recently. In particular, new support measures have been introduced targeting students with a family income lower than 110% of the level of the subsistence minimum. Support is going to be granted over a 10-month period, corresponding to the standard length of the academic year, with some 14% of the total tertiary student population being expected to qualify. The government also has plans to remove income from scholarships from the

16. Total public funding has increased since 2002, particularly in 2005 when the increase equalled 18.5% in nominal terms, compared with an increase of 8% in the total number of students. Given the very low level of inflation this means large real increase in funding.

17. See MEYS (2006), pp. 64-65 which states that “[The long term under-financing of the Higher Education Institutions (HEIs)] is caused by a decrease in the real public support per student and the low flow of private funds into the HEIs in general.” The Czech Republic currently participates to the *OECD Thematic Review of Tertiary Education* and MEYS (2006) is the background report that was prepared in that context.

18. See also Matějů and Simonová (2003) who conclude that reforms by the universities themselves have been very limited relative to the scope opened up by regulatory changes since the beginning of the 1990s, particularly those aimed at increasing the administrative autonomy of universities.

19. See for instance Ministry of Education, Youth and Sports (2005) which states that “the structure of study opportunities falls short of employers' needs”, p. 34.

20. Even though roughly three quarters of programmes are in the three years bachelor regime at present, there still remain wide variations in the way programmes and universities have responded to the introduction of shorter programmes. For example, philosophy and a number of natural science areas still operate under the old longer programme regime. Indeed, in some universities the longer programmes continue to predominate. On the side of students, there is evidence indicating that many students still prefer to continue their education after a bachelor degree until they acquire a master degree.

calculation of the subsistence minimum to further improve access to tertiary education by students from low-income families.

24. Taken together, the lack of financing flexibility and the short supply of educational services, plus the impact of various system-wide regulatory rigidities, mean that public universities are severely limited in the number of places they can offer. Universities have their own admission rules, including entrance exams.²¹ However, such procedures are costly to administer and lack of transparency in their application is often reported.²² Furthermore, as the influence of social class on access to university is very strong in the Czech Republic, tough competition to get into the universities reinforces the bias against the students from disadvantaged families. The problem is exacerbated even further because the alternative options for tertiary education, the tertiary professional schools, are fee-paying (Box 4).²³ All in all, these factors keep the modernisation of the public university system on hold.

An accessible and accountable secondary education system has yet to develop

25. Despite the good attainment rate in secondary education, there are nevertheless policy challenges. In particular, the percentage of secondary school students enrolling in technical and vocational programmes is relatively high in the Czech Republic (Table 2). The supply of general secondary programmes is insufficient to satisfy the demand for general education. Indeed, the number of new students who each year can access the general secondary track has to be fixed.²⁴ As a result, a large number of students have to unwillingly enrol in vocational courses.²⁵ Unemployment among vocational-school graduates is especially high and possession of a vocational qualification often acts as a handicap – compared with general secondary education – for university admission. This supply-demand mismatch, among other effects, clearly makes for inefficient development of human capital by wasting talent. Indeed, recent empirical analysis shows that many students in vocational programmes would qualify for a more demanding secondary education programme (Table 3).²⁶ Moreover, the Czech secondary education system suffers from wide geographical gaps in the supply capacity of *gymnázia*. Notably in Prague and Brno there are proportionally more *gymnázia* although this is not enough to satisfy demand.

21. Ministry of Education figures for 2002 show that about 44% of applicants who took part in entrance tests were not admitted.

22. Cases of abuse in admission practices have been reported in Czech newspapers.

23. See Matějů, Řeháková and Simonová (2003) for a framework discussion of inequality problems in access to tertiary education in the Czech Republic. See also OECD (2005b).

24. From the administrative viewpoint, access to the general secondary track is fixed in two ways, directly by the owners of the schools (*e.g.* the regions) and indirectly by the MEYS *via* the annual budget that it prepares. In addition, the MEYS decides on the opening of a new school, as well as its supply capacity and programme orientation.

25. The limited entry to the *gymnázia* has cascade effects: pupils entering the technical schools because they did not get into the *gymnázia* push pupils who would prefer to go to technical schools into the vocational schools.

26. See Munich (2006), forthcoming.

Table 2. **Distribution of upper secondary students by type of schools**
ISCED level 3, as of 2004

	Percentage distribution	Percentage distribution according to curricular content			
		General	Vocational	Optional	Total
Secondary schools leading to a vocational certificate only¹					
Secondary vocational schools	32	31	65	4	100
Secondary schools providing access to tertiary education¹					
Secondary Vocational Schools	7	44	51	5	100
Secondary Technical Schools	38	51	39	10	100
<i>Lycea</i>	3	66	18	16	100
<i>Gymnázia</i>	20	75	0	25	100
Total	100				

1. The secondary vocational schools (*střední odborná učiliště*) and secondary technical schools (*střední odborné školy*) offer two-, three- and four-year courses. Only the students who have successfully completed the four-year course have the possibility to apply for tertiary education. While virtually all students in the secondary technical schools attend the longer courses, most students in the secondary vocational schools attend the 3-year courses which only give a worker qualification.

Source: Education Policy Centre, Faculty of Education, Charles University, Prague.

Table 3. **Comparisons of 15-year old students' performances in upper-secondary education**

	Municipality size	Share of 15-year old students enrolled in the secondary vocational schools whose skills are higher than the bottom 25% students in the secondary technical schools	Share of 15-year old students enrolled in the secondary technical schools whose skills are higher than the bottom 25% students in <i>gymnázia</i>
Boys	Small	32	33
	Large	41	40
Girls	Small	15	20
	Large	15	24

Source: Munich (2006).

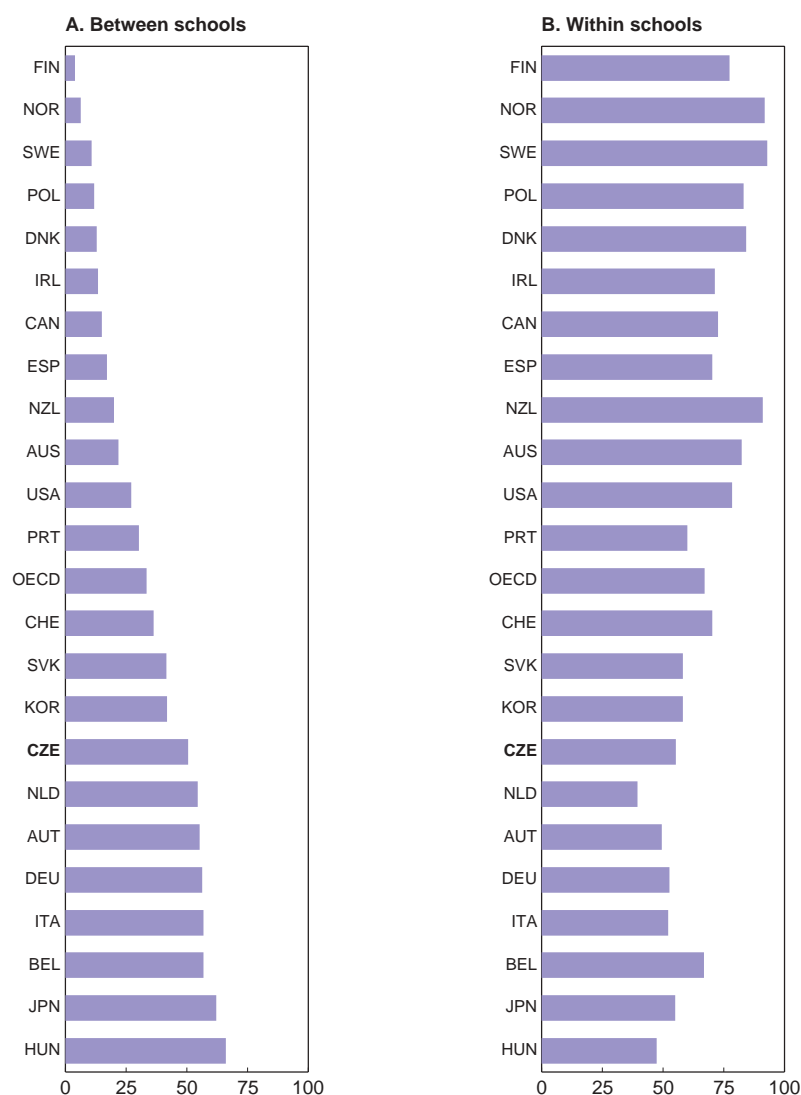
26. Problems in secondary education are magnified by strong social selectivity. There is substantial variation in student performance between schools and less variation between students within schools, compared with other countries (Figure 6).²⁷ Recent analysis shows that the system of long-term *gymnázium* schools plays an important role in this.²⁸ Furthermore, it challenges the idea that long-term *gymnázia* have the potential to significantly stimulate students' learning capabilities, suggesting that performance is strongly influenced by the family background, rather than being acquired at school. Indeed, many experts see these schools as a privileged vehicle to university education.²⁹

27. Such variations regard, more specifically, the mathematic scale. See for wider discussions of these issues OECD (2004b), (2004c) and (2005a).

28. See Matějů and Straková (2005). The authors also discuss the history of multi-year *gymnázia*, which were introduced after 1989, following up on a tradition that dates back to the pre-war education system. Interestingly, however, the authors remark that even back then some education experts were sceptical about the advantages of the multi-year *gymnázia* and concerned about the implications for social segregation.

29. See also Koucký at al. (2004). Based on the PISA 2003 results (OECD, 2004c), the authors show that the family background matters more than academic abilities in explaining access to the multi-year *gymnázia*.

Figure 6. **Variance in student performance between schools and within schools, 2003**
Per cent of average variance in student performance across OECD countries



Source: OECD, *Learning for Tomorrow's World: First Results from PISA 2003*.

27. The secondary education system also suffers from low motivation among teachers. Part of the problem lies with teachers' salaries, which are not high relative to the average at comparable qualifications. The widely accepted view, one that government's officials and trade union's representatives share, is that wage increases should focus primarily on quality improvements and work complexity, rather than the years of service, as at present. In principle, schools directors are free to grant bonuses, up to 12% of the amount of the base-salary applicable to a particular seniority class. However, this often gets used to compensate additional work or is distributed as a uniform bonus and so it is not used as a means to reward individual teaching quality.

28. In addition, other factors explain the low motivation of the teachers. Teachers have the view that their opinions are not often solicited and used as input to reform. Obsolete and rigid teaching methods with stress on rote learning are not only a source of problems for the skill development of students, but also

make teaching unattractive.³⁰ This problem should be eased by the ongoing curricula reform which aims to steer away from rote learning towards more problem-solving approaches (e.g., communication, search and processing of information, simulation of practical case studies and teamwork). In this regard, the further development of language and computing skills, as well as e-learning are highly relevant in developing general workplace skills and represent a priority in education policy.³¹ Some measures were approved in 2005 to improve language skills that should cover the whole population.

29. While there are advantages to the Czech system of decentralised responsibility in secondary education, it has risks of wide regional disparities in service quality. Ongoing reform of the school leaving examination system could, in principle, bring more standardised nation-wide final assessments (*maturitní zkouška*) and increase opportunities for benchmarking. Notably, the new exam includes a standardised section, in addition to the questions set by schools. However, because implementation of the new system is left to the discretion of the schools, use of the standardised school leaving exam is still very limited – essentially restricted to few pilot projects. This situation weakens the scope for using the *maturitní zkouška* as a benchmarking tool; for example, there is strong reluctance to make the results of output measurement public.

30. In dealing with the integration of disadvantaged students, problems regarding the education of the Roma children are important to consider. A recently taken decision to move disadvantage students out of the special schools and to integrate them in the ordinary schools is a welcome development towards meeting the recommendations of the 2004 *Economic Survey*.³² However, the concentration of Roma children in remedial special schools is still very high.

Lifelong learning could be boosted by higher possibilities to transfer qualifications

31. As mentioned above, there is significant potential for a stronger lifelong learning approach to education in the Czech Republic in light of the relatively low attainment rates in tertiary education among middle and older age groups and expected demographic developments. Participation in continuing education is indeed low; the share of the working age population in these programmes is only about 5% (Figure 7) and has even declined recently. In part, this is because providers have been slow to adapt to economic changes and business sector needs. Another problem is the limited possibility to transfer individual qualifications and knowledge between levels and types of institutions, even though recent regulatory changes should help.³³

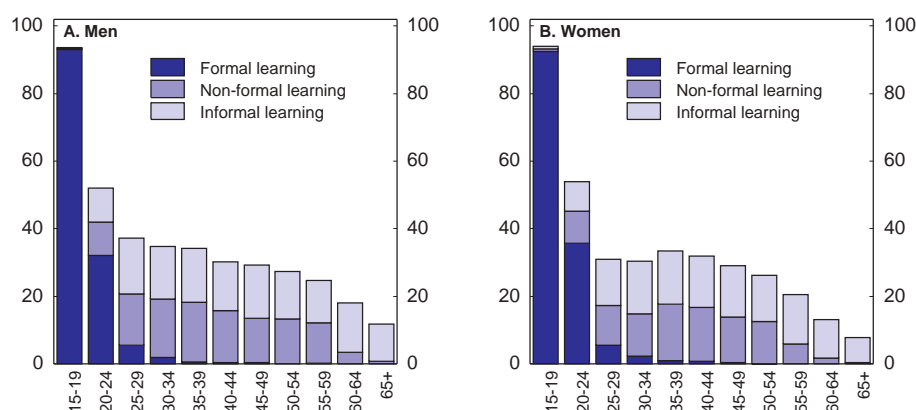
30. Many OECD countries face major difficulties in recruiting enough qualified teachers. See OECD (2005c) for a comparative discussion.

31. See OECD (2004d) for a wider discussion of the potential role of information and communication technologies in education. For a discussion of the role of e-learning see OECD (2005e).

32. See OECD (2004a) for a wider discussion of the issue of integrating Roma children in the Czech education system.

33. Specifically, a 2004 law allows some secondary and higher professional qualifications to be awarded solely on the basis of demonstrated abilities, rather than as a result of attending a relevant school. For a cross-country comparative discussion of lifelong learning experiences see OECD (2005d).

Figure 7. **Structure of lifelong learning, 2003¹**
% of age-group population



1. Non-formal learning is organised and structured learning outside the formal education system, for example enterprise or community based. Informal learning is learning from other non-organised, unsystematic individual learning.

Source: Czech Statistical Office, *Labour Force Survey*, Ad hoc module 2003.

Policies to increase the efficiency of the education system

32. The previous sections have discussed the main strengths and weaknesses of the Czech education system, focusing on secondary and tertiary education, together with lifelong learning. Though the education system is performing reasonably well on some fronts, further reforms are needed to cater to the rapidly expanding demand for tertiary-level education. Secondary-school attainment has traditionally been high, but in the working-population as a whole the Czech Republic has one of the lowest shares of degree-level attainment in the OECD. However, change is underway due to a rapid rise in the tertiary enrolment rate among school leavers. This is only partially offset by population decline in young cohorts and overall demand for tertiary education courses is expected to continue growing for some time.

33. In broad terms policy needs to work on three fronts. Better signalling in tertiary education for students and providers is needed to further help diversification, particularly towards shorter and more vocationally oriented courses. Secondary education needs to become more efficient and relevant to the labour market through enhancement of general education, amalgamation of different types of schools and greater transferability between schools for students. Finally, lifelong learning needs support through better access and a wider range of courses.

Providing better signals for tertiary students and providers should get high priority

34. The rapid expansion of tertiary education requires more resources and better incentives for both students and higher education institutions. The introduction of tuition fees for students in public universities that at least partially reflect the cost of tertiary courses would make for better decision making by students and faster reaction of universities to changing demands. This diversification of funding for tertiary education would also help universities cope with further rises in student numbers. In effect, it would be unfair to raise large amounts of extra funding for Czech universities *via* general taxation considering the significant private gains from tertiary education (Table .4). Indeed, those with a university degree earn, on average, about 65% more than those with secondary education. One practical solution would be to adopt a system in which students in public universities pay an annual tuition fee. If followed,

this option would increase students' awareness of the importance of service quality, leading them to demand stricter and more transparent teaching evaluation practices. One model for reform is the UK's recently implemented system in which about 40% of all students are in practice exempt and about 15% pay only part of the fee.³⁴ The tuition fees could or could not vary across subjects and/or universities; there is no established best practice in this regard. The United Kingdom has so far preferred to apply a common level of fees across subjects and universities, an approach recently followed also by Austria where a very low common fee is applied.³⁵ However, most other tuition fee systems allow some variation.

Table 4. **The earning premium of education**¹

	Males	Females
Australia	121	117
Belgium	115	124
Canada	117	115
Czech Republic	166	145
Finland	130	127
France	127	131
Germany	124	115
Hungary	202	164
Ireland	117	132
Korea	103	138
New Zealand	106	112
Norway	142	149
Spain	99	86
Sweden	114	119
Switzerland	121	140
United Kingdom	124	141
United States	120	129

1. Earnings of the employed population, 25-to-64-year-olds, with tertiary education relative to the same population with secondary education. Figures refer to the most recent year available, which for the Czech Republic is 2004. It generally is 2003 or 2002 in the case of the other countries.

Source: Czech Ministry of Education, Youth and Sports; OECD, *Education at a Glance*.

35. If tuition fees are introduced they should be accompanied by publicly supported student loans in which repayments are conditional on graduate income. This would help reduce the risk that up-front payments limit access to university education. Many OECD countries have some form of public loans for financing tuition fees and/or living costs. Their experience suggests that, when combined with a student loan system, letting students contribute to the costs of tertiary education does not have adverse equity effects or result in decreasing levels of access.³⁶

36. The public cost of a student loan scheme depends on various aspects of the repayment conditions, one of which is the interest rate charged. Experience in some countries suggests that a zero real interest rate can be costly (*e.g.* New Zealand and the UK). Moreover, there is little consensus as to whether a general

34. See OECD (2004e). The main argument used by Czech government officials against the introduction of fees is that this would add to the already high living costs for students implying an extra burden on family incomes. However, this argument misses the point that the expected returns of education are very high, something that the public opinion already recognises and takes into account in its own evaluation of the problem. In fact, the results of recent public opinion pools suggest that a majority of the Czech population, including students themselves, agree that a system of tuition fees (combined with loans) would enable more young people to obtain a university education (Matějů, 2004).

35. See OECD (2005f).

36. See Blöndal *et al.* (2004) for a wider discussion.

interest-rate subsidy is the most effective way of helping the most disadvantaged students. Indeed, a number of countries (*e.g.* the Netherlands and Sweden) apply a quasi market interest rate and combine this with targeted pro-access policies.

37. Any increase in funding has to be linked to output quality monitoring and evaluation. In addition, it should be complemented by strengthened co-operation between universities and enterprises. This would encourage providers to introduce programmes that are more in tune with the labour market. Arguably, more co-operation with business would also allow providers to more easily cope with the consequences on demand of implementing a tuition fee scheme – particularly, the expected greater attention of students to course content and quality.

Increasing the efficiency and relevance of secondary education

38. Secondary schools enjoy a good reputation and benefit from a well established institutional tradition. However, further changes in focus and flexibility in the system are required to better cope with changing skill requirements in the labour market. As mentioned above, recent policy initiatives have included the voluntary introduction of a new secondary school leaving examination (*maturitní zkouška*). In further developing the new school leaving exams, closer consultation with universities should be considered. This would help university faculties to increase their reliance on *maturitní zkouška* results for admissions. For example, the results concerning the common, standardised part of the *maturitní zkouška* could substitute for all or part of the access examinations that currently university faculties organise on their own. This should not only reduce the workload for university admissions but also help limit social segregation *via* the university entrance exams. In addition, the experience so far with the *maturitní zkouška* reform suggests that a high degree of co-ordination with curriculum reform is needed because of the close interdependence between curricula and final exams.

39. Four-year secondary general education is important because it caters for entry to tertiary education. Various factors lie behind the relatively low share of upper-secondary school students receiving this general education. The most important perhaps is the notion – quite widespread in a number of influential circles – that in order to maintain quality the *gymnázium* should be restricted to a narrow elite. This argument misses the fundamental point that intellectual abilities are not limited to a small proportion of pupils. Thus access to the general courses in secondary schools that provide options for entering tertiary education should be widened. This could be achieved by making these courses more widely available in the secondary technical schools and by equalising the quality standards with those of the 4-year *gymnázia*. More generally, choices could be broadened if upper secondary school curricula were differentiated among broad subject-based streams and if students were allowed to transfer both between and within schools more easily. Each stream would have to lead to final examinations comprising both a specific part and a standardised common part. For instance, many countries run secondary general schools with three streams, “scientific”, “humanities” and “socio-economic”.

40. The multi-year *gymnázium* (*i.e.* 6- and 8-year courses) has potentially far reaching effects on equity, as well as the quality and effectiveness of the system as whole. Indeed, there is a strong case that reform should go deeper than simply widening access to general education and that a different structure of secondary education is needed in order to enable bright children to develop according to their potential and without discriminating against low-achievers. Structural reform to the school system has been proposed in strategic documents by the MEYS. For example, the 2001 *National Programme for the Development of Education in the Czech Republic* states that: “A decisive change in the basic schools will be the significant strengthening of their lower secondary level as a result of the gradual elimination of multi-year general secondary schools (*gymnázia*). Starting from 2002, no new students should be admitted to the first year of

these types of general secondary schools.”³⁷ The streaming of a minority of students into elite publicly funded schools from age eleven should indeed be phased out. This should be complemented by actions that raise the quality of the basic schools and make the transfer of students and teachers between schools easier.³⁸

41. Decentralisation of responsibility for secondary schooling has raised the importance of output measurement and benchmarking. A recently introduced assessment system has merits but its effectiveness needs to be strengthened, in particular by allowing the publication of assessment results and by giving the School Inspectorate more scope in information gathering.³⁹ In many OECD countries output measurement and benchmarking play a crucial role in the secondary education system, particularly where responsibilities are decentralised. Publicly accessible school-by-school information helps establish “quality maps” of the school system and this encourages school directors, teachers and local interested parties (*e.g.* students, parents and the business sector) to take remedial action when schools under-perform. The assessment and evaluation system should be expanded to cover schools, types of schools, regions and the entire school system. This should in particular assess how graduates are prepared for employment and further education.

42. The currently low motivation of teachers would be increased by encouraging greater use of financial rewards for good performances, although giving school directors more opportunities to reward individual efforts may not be easy to implement. However, more flexible compensation will not be sufficient and there should also be more in-service training to ensure that teachers adapt to change in secondary school system, particularly if access to general education is widened. By increasing job satisfaction, these measures could be important in making the teaching profession more attractive to qualified teachers.

Some aspects of improving the framework for lifelong learning

43. Recent OECD work shows that there are strong links between the regulatory framework for qualifications and the opportunities for continued education by adults.⁴⁰ Specifically, where learning is more systematically organised and inter-connected, the chances of maintaining inclusion are improved, which is essential to motivate the least successful to learn. This is an important issue for the Czech Republic because the strong segmentation of the education system makes it difficult for adults to add to their qualifications. The Czech education system is too rigidly geared towards a set of standard pathways through the education system; access to the education system for adults who want to take either secondary or tertiary level courses needs to be increased and a greater range of programmes is required. A new act was approved in early 2006 that should in principle widen the opportunities for obtaining adult qualifications. In implementing the new measures and considering further follow up measures targeting adult learning, the government should ensure that the admission system becomes more user-friendly. Indeed, there has been little policy progress along the lines of the *Bologna process*, which calls for more recognition of education acquired outside the formal education system, as well as acceptance of a wider range of secondary-schools qualifications in university entrance. There is also a need for establishing a more systematic approach to funding mechanisms and quality assurance. Moreover there is scope for encouraging demand for continued education, for example thorough information and guidance

37. See Ministry of Education Youth and Sports (2001), p.30.

38. The 1996 OECD Review of the Czech Republic National Policies for Education observed that “multi-year *gymnázium* is to a large extent a return to the pre-1948 period”. See OECD (1996, p.182).

39. Quality assurance and improving the coherence of the evaluation system is among the objectives of the 2004 Education Act (Box 4.2).

40. See Behringer and Coles (2003) for further discussion of the ways in which the qualification framework can influence the quality of learning experiences.

programmes. Resources freed up from demographic decline in secondary education suggest that the function and clientele of secondary schools could be widened to adult education. However, the costs of such a development should be benchmarked against alternatives, such as tendered private-sector provision, to check that this is an efficient way of providing adult education.

Management of EU funding in a period of rapid demographic transition

44. As discussed above, a key policy concern is how to make the best use of opportunities for EU-funding given competing priorities and constraints in co-financing capacities. For example, co-financing needs could considerably shrink the amount of funds available to expand performance-related pay for teachers. Demographic developments will to some extent ease this problem because decline in the size of secondary school cohorts in the coming years ought to generate savings in secondary education budgets. In this context, one way of ensuring that EU-funds are spent without negative effects on other important non-mandatory expenditures would be to put priority on using the savings from demographic change to reduce the potential drain of co-financing. It is important, however, to elaborate carefully priorities and implementation mechanisms.

45. Ensuring that the potential savings from demographic change are realised is a challenge in itself, and the opportunity cost of sluggish adjustment to reduced student numbers may be high. Even though the structure of public subsidies to the secondary schools has worked effectively so far, regular assessments of resource allocation are needed to ensure that new circumstances are coped with efficiently. On this front, the central authorities should request more detailed projections about future school needs from regions and municipalities. Such information, once assembled and evaluated by the MEYS, would enhance the effectiveness of spending prioritisation and resource allocation.

46. Ensuring good co-ordination within the government will be important for making the best use of EU funds, particularly where there is a natural overlap in policymaking, as in R&D and tertiary education. Although the MEYS will play a central role in education-related aspects of EU funding, there is some overlap with other ministries. The Ministry of Labour in particular will continue to play a role in the policies to strengthen the links between education and employment, while the Ministry of Industry and Trade will remain active in research policies, including at the university level. While the benefits of a well co-ordinated education policy are potentially large, some observers believe that these may not be forthcoming unless oversight by the Ministry of Finance is enhanced.

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Annex

Roadmap from basic to tertiary education

Basic education

Basic education is in two parts, primary education, which lasts 5 years, and lower secondary education (4 years). The second part can be taken apart from the basic school education track, through attending the long-term *gymnázium*, which students can access when they are 11- or 13-years old (so called multi-year *gymnázium*).

Upper-secondary Education

General upper-secondary education can be acquired at the *gymnázia*, which normally lasts 4 years, but can last 8 or 6 years. Another type of upper-secondary institution is the technical school (*střední odborné školy*), which has a slightly general orientation (51% of total courses are general, other courses are vocational). Both *gymnázium* and secondary technical studies are completed by a leaving examination (*maturita*). In addition, there are the secondary vocational schools (*střední odborná učiliště*), which can last 2, 3 or 4 years, with each programme leading to a specific level of occupational qualification. Most secondary vocational schools provide 3-year programmes. Admittance to any secondary schools is conditional upon successfully completing the basic education programmes and meeting the school specific admittance requirements (usually an examination).

Tertiary education

Tertiary technical/professional schools

The tertiary professional schools (*vyšší odborné školy*) form one of the two-tracks of tertiary education and have a vocational focus. Access to these schools is conditional upon successfully passing the secondary school leaving examination and meeting specific entry requirements. The tertiary technical schools lead to a diploma which generally is not recognised as a bachelor degree. Students pay tuition fees.

Higher education institutions

Czech tertiary education also comprises public and private higher education institutions (*vysoké školy*) which together form the second track of tertiary education. Bachelor and master programmes are open to applicants who have passed a *maturita* and meet the university specific entry requirements (typically an examination). The bachelor programme (3-4 years) is the first cycle of higher education. Because the introduction of bachelor programmes is still incomplete, long-term university programmes continue to play a role. In particular, not all long-term master programmes follow a bachelor programme; a number of them can be taken parallel to it (the situation varies across universities and types of programmes). Such parallel master programmes last between 4 and 6 years. Master programmes last between 1 and 3 years when they follow after a bachelor degree. The doctoral programme (3 years) is the highest level of higher education and follows after a master programme.

GLOSSARY

GDP	Gross domestic product
MEYS	Ministry of Education, Youth and Sports
MLSA	Ministry of Labour and Social Affairs
PISA	Programme for International Student Assessment
R&D	Research and development

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