OECD Reviews of School Resources

Czech Republic

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Foreword

This report for the Czech Republic forms part of the OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools (also referred to as the School Resources Review, see Annex A for further details). The purpose of the review is to explore how school resources can be governed, distributed, utilised and managed to improve the quality, equity and efficiency of school education. School resources are understood in a broad way, including financial resources (e.g. expenditures on education, school budget), physical resources (e.g. school infrastructure, computers), human resources (e.g. teachers, school leaders) and other resources (e.g. learning time).

The Czech Republic was one of the countries which opted to participate in the country review strand and host a visit by an external review team. Members of the OECD review team were Claire Shewbridge (OECD Secretariat), co-ordinator of the review; Jan Herczyński (consultant on funding mechanisms), Thomas Radinger (OECD Secretariat) and Julie Sonnemann (consultant on teaching workforce development). The biographies of the members of the review team are provided in Annex B. This publication is the report from the review team. It provides, from an international perspective, an independent analysis of major issues facing the use of school resources in the Czech Republic, current policy initiatives, and possible future approaches. The report serves three purposes: i) to provide insights and advice to Czech education authorities; ii) to help other countries understand the Czech approach to the use of school resources; and iii) to provide input for the final comparative report of the OECD School Resources Review.

The scope for the analysis in this report includes early childhood education and school education. At the request of Czech authorities, the focus areas of the Review of School Resources in the Czech Republic are: i) the organisation of the school network; ii) the funding of school education; and iii) the teaching profession and school leadership (including improving their attractiveness). The analysis presented in the report refers to the situation faced by the education system in May 2015, when the review team visited the Czech Republic.

The Czech Republic's involvement in the OECD review was co-ordinated by Michael Vlach, Strategies and Interdepartmental Affairs Unit, Department of Strategy and European Affairs, Ministry of Education, Youth and Sports of the Czech Republic. An important part of the Czech Republic's involvement was the preparation of a comprehensive and informative Country Background Report (CBR) on school resource use authored by Petr Mazouch and Kristýna Vltavská, Researchers at the University of Economics. The OECD review team is very grateful to the main authors of the CBR and to all those who assisted them in providing a useful basis for questioning during the review. The CBR is an important output from the OECD Project in its own right as well as an important source for the review team. Unless indicated otherwise, the data for this report are taken from the Czech Country Background Report. The CBR follows guidelines prepared by the OECD secretariat and provides extensive information, analysis and discussion in regard to the national context, the organisation of the education system, the use of school resources and the views of key stakeholders. In this sense, the CBR and this report complement each other and, for a more comprehensive view of the effectiveness of school resource use in the Czech Republic, should be read in conjunction.

The OECD and the European Commission (EC) have established a partnership for the Project, whereby participation costs of countries which are part of the European Union's Erasmus+ programme are partly covered. The review of the Czech Republic was organised with the support of the EC in the context of this partnership. The EC was part of the planning process of the review of the Czech Republic (providing comments on the Czech Republic's CBR, participating in the preparatory visit and providing feedback on the planning of the review visit) and offered comments on drafts of this report. This contribution was co-ordinated by Christèle Duvieusart, Country Desk Officer for the Czech Republic as regards education and training, working within the "Country Analysis" Unit of the Directorate for "Modernisation of Education I: Europe 2020, country analysis, Erasmus+ co-ordination", which is part of the Directorate General for Education and Culture (DG EAC) of the European Commission. The review team is grateful to Christèle Duvieusart for her contribution to the planning of the review and also for the helpful comments she provided on drafts of this report.*

The review visit to the Czech Republic took place in May 2015. The itinerary is provided in Annex C. The visit was designed by the OECD (with input from the EC) in collaboration with the Czech authorities. It also involved a preparatory visit by the OECD secretariat in November 2014, with the participation of Christèle Duvieusart, from the EC. The review team held discussions with a wide range of groups at all levels of government (central, regional and municipal).

The OECD review team wishes to record its gratitude to the many people who gave time from their busy schedules to inform the review team of their views, experiences and knowledge. The meetings were open and provided a wealth of insights. Special words of appreciation are due to the National Co-ordinator, Michael Vlach, for his organisation of the review visit and the Czech Republic's participation in the broader OECD review. The review team wishes to thank him for his efficient and friendly practical support. The courtesy and hospitality extended to us throughout our stay in the Slovak Republic made our task as a review team as pleasant and enjoyable as it was stimulating and challenging.

The OECD review team is also grateful to colleagues at the OECD. Eléonore Morena provided key administrative, editorial and layout support. Paulo Santiago and Yuri Belfali provided guidance and support.

This report is organised in five chapters. Chapter 1 provides the national context, with information on the Czech school system, main trends and concerns as well as recent developments. Chapter 2 analyses the governance of schooling and the organisation of the school network. Chapter 3 reviews approaches to school funding. Chapter 4 looks at the management of the teaching workforce while Chapter 5 examines school leadership policies. Each chapter presents strengths, challenges and policy recommendations.

The policy recommendations attempt to build on and strengthen reforms that are already underway in the Czech Republic, and the strong commitment to further improvement that was evident among those the OECD review team met. The suggestions should take into account the difficulties that face any visiting group, no matter how well briefed, in grasping the complexity of the Czech Republic and fully understanding all the issues. Of course, this report is the responsibility of the OECD review team. While the team benefited from the Czech CBR and other documents, as well as the many discussions with a wide range of Czech personnel, any errors or misinterpretations in this report are its responsibility.

* *This document has been produced with the financial assistance of the European Union. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.*

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Acronyms and abbreviations

CBR	Country Background Report
CERMAT	*Centrum pro zjišťování výsledků vzdělávání* – Centre for the Evaluation of Educational Achievement
ČŠI	*Česká školní inspekce* – Czech School Inspectorate
CSR	EU Country Specific Recommendations
EC	European Commission
ESCS	Economic, Social and Cultural Status
EU	European Union
FEP	Framework Education Programme
FTE	Full Time Equivalent
GDP	Gross Domestic Product
ICT	Information and Communication Technologies
ISCED	International Standard Classification of Education
KZÚV	*Krajská zařízení ústavní výchovy* – Regional Institutional Care Facilities
MŠMT	*Ministerstvo školství, mládeže a tělovýchovy* – Ministry of Education, Youth and Sports
NIDV	*Národní institut pro další vzdělávání* – National Institute for Further Education
NUTS	Nomenclature of Territorial Units for Statistics
NÚV	*Národní ústav pro vzdělávání* – National Institute of Education
OECD	Organisation for Economic Co-operation and Development
ONIV	Other Non-Investment Expenditures
PISA	OECD Programme for International Student Assessment
PPP	Purchasing Power Parities
SEN	Special Educational Needs
School Registry	School Registry of Schools and School Facilities
SDP	School Strategic Development Plan
SEP	School Educational Programme
SOŠ	*Střední odborné školy* – Secondary Technical Schools
SoU	*Střední odborné učiliště* – Secondary Vocational Schools
Strategy 2020	Strategy for Education Policy of the Czech Republic until 2020
TALIS	OECD Teaching and Learning International Survey
UNDP	United Nations Development Programme
VET	Vocational Education and Training

The names of the fourteen Czech regions are presented in English in this report, as follows:

NUTS 2 grouping	Czech region (English)	Czech region (Czech)
Prague	Prague	*Hlavni Mesto Praha*
Central Bohemia	Central Bohemian region	*Stredoceský kraj*
Southwest	South Bohemian region	*Jihocecký kraj*
	Pilsen region	*Plzenský kraj*
Northwest	Karlovy Vary region	*Karlovarský kraj*
	Usti region	*Ústecký kraj*
Northeast	Liberec region	*Liberecký kraj*
	Hradec Kralove region	*Královéhradecký kraj*
	Pardubice region	*Pardubický kraj*
Southeast	Vysocina region	*Kray Vysocina*
	South Moravian region	*Jihomoravský kraj*
Central Moravia	Olomouc region	*Olomoucký kraj*
	Zlín region	*Zlinský kraj*
Moravia-Silesia	Moravian-Silesian region	*Moravskoslezský kraj*

Executive summary

There are entrenched inequities in the Czech school system. In international comparison, the average socio-economic background of students at a school is very strongly associated with the school's average performance and educational mobility rates are the lowest in the OECD. Notably, there is significant economic variation among the fourteen Czech regions, with varying challenges in terms of internal migration and unemployment. However, the national funding mechanism to allocate funding for "direct costs" (including staff salaries) does not include weightings to address such inequities; simply, it allocates funding on a per student basis with a different set amount for five different age bands (the national "normatives"). The Czech regions are then responsible for allocating this funding to pre-schools and basic schools (managed by municipal authorities) and to the schools they manage directly (mainly providing upper secondary education). Czech regions prepare regional development plans, however, regional funding mechanisms are rigid and overly complicated and impair the matching of funding to strategic priorities. At the same time, the majority of Czech regions have faced efficiency challenges in their school networks, with a large decline in the school-aged population. There is evidence of reorganisation and consolidation in the school networks, which has been supported by, among other factors, the per student funding allocation mechanism. However, the need to further consolidate remains a strategic challenge in several regions and notably for schools offering lower and upper secondary education.

The Ministry of Education, Youth and Sports (the ministry) Strategy for Education Policy of the Czech Republic until 2020 ("Strategy 2020") puts new focus on addressing inequities in the Czech school system – a clear priority. The proposed extension of the early childhood and care offer and introduction of a compulsory year of pre-primary education is expected to better mitigate socio-economic influences on early childhood learning development. As of 1 September 2016, students with special educational needs have the legal right to support measures in mainstream education, which is expected to underpin a drive to lower the proportion of children educated in segregated provision. Notably, a clear priority in Strategy 2020 is to secure more resources for teacher salaries, which remain very low in international comparison and compared to other tertiary graduates in the Czech Republic. The ministry has also led work to develop a new career structure for the teaching profession, although a challenge is to secure additional funding to implement this fully. Compared to the OECD average, the amount of expenditure per student aged 6 to 15 in the Czech Republic is very low. Finally, Strategy 2020 recognises the need for stability and more strategic oversight. Political instability has impacted on the capacity for general management at the ministry and its subordinated organisations and there are considerable capacity challenges with a highly fragmented local government administration.

The following policy priorities were identified to improve the effectiveness of resource use in the Czech school system.

Strengthen strategic oversight by school founders and develop guiding principles for school network planning

Regions should take the lead in developing models for reporting progress against the stated objectives in the regional development plan, for example, reports could include a set of clear goals – in some cases, where feasible, including targets to be achieved – and subsequent reports would present a report of progress against each of these goals. A more proactive role and regular reporting of results, including of the student final examinations, by the Czech regions would build trust in the broader community. Obvious areas that are current strategic challenges for many Czech regions include the need to consolidate the provision of both lower and upper secondary education. The ministry could lead a collaborative exercise to establish a set of authoritative guiding principles, rules and even target quotas for capacity at different key stages of schooling. The focus on educational stage as opposed to school type is important. For example, lower secondary education is offered by basic schools and is seen as part of a basic service to be provided as close as possible to where the children live, that is, even in small villages. This structural feature of the system makes it difficult to create school units of appropriate "size efficiency" and some areas with severe demographic pressures may face significant cost-efficiency and organisational problems in a system of per capita funding. With active collaboration and strong political will, there is a solid basis to plan a more efficient organisation of the regional education systems, including: good channels for policy discussion among the central, regional and municipal levels, as well as representative bodies for private and church schools and employers; objective demographic data and statistical forecasts with regional breakdowns; plus a strong administrative tool (the school registry) comprising a comprehensive listing of different educational fields and capacities.

Introduce more flexibility into the funding allocation system to better support strategic priorities

The national allocation system, based on the pure numbers of students in five different age bands, is very rigid and does not reflect the complexity and the variation of the Czech education system. It needs to be more flexible by, for example, increasing the number of parameters, to reflect different factors which have impact on class sizes and on per student costs of providing education. Such factors must be objective and informed by research and analysis. A more flexible national allocation system could better support the national policy priority to address educational inequities. Different allocation scenarios can then be discussed and reviewed by key stakeholders to ensure that their impact is consistent with national education policies. At the same time, it is recommended to shift the object of the regional budgeting process from an educational programme to the school itself as an institution. Currently, the regions are legally obliged to define and implement a very large number of normatives for secondary schools according to a very detailed methodology of different educational programmes. This supports historical inefficiencies, but regions must have more flexibility to plan for the introduction of new education programmes, to phase out others and to consolidate the offer of lower and upper secondary education in line with demographic pressures. Another complexity is the current requirement for regions to reallocate the national funding for direct costs to municipalities. It would be more efficient to transfer national funding directly to municipal budgets. The ministry needs these direct links, and the necessary policy dialogue they will promote, to better understand the problems of the Czech school system and to better plan its development.

Increase efforts to attract and retain high calibre teachers and to promote collaboration for professional learning

Improving the attractiveness of teaching is a key priority and the Strategy 2020 rightly identifies the need to implement the new teacher career structure and to continue to increase teacher salaries. To raise the public profile of teaching, the ministry should consider highly selective entry pathways at two stages: first, the quality of candidates accepted into initial teacher education, and second the standards that must be demonstrated to graduate from beginning teacher to qualified teacher. At the first stage, the ministry should explore approaches that can help better screen candidates into initial teacher education, such as encouraging providers to use more in-depth procedures that assess whether the individuals wanting to become teachers have the necessary motivation, skills, knowledge and personal qualities (specific assessments). Additionally, flexible programme structures can provide student teachers with school experience early in the course, with opportunities to transfer into other courses if their motivation towards teaching changes as a result. The ministry's plans to establish assessments at the end of the first year of teaching should help to raise teacher selectivity. However, assessments on their own will not be effective in changing teaching practice in a sustained way unless there is also a culture of continuous improvement and deep learning in the school. It is recommended that teacher job descriptions in the new career structure incorporate the use of peer observation, demonstration and feedback. These practices can be embedded within specific programmes such as learning communities and mentoring in the school. While the new career system will expand mentoring, there should be more of a focus on establishing intensive learning communities in schools (which is currently missing). Teachers promoted to the highest career levels in the new career system could promote and lead professional learning communities.

Base school leadership appraisal on a robust assessment of school progress against central quality criteria

The current distribution of responsibilities for oversight of school principals and school monitoring by the school founder provides the conditions for stronger local accountability. Oversight at the local level can foster important relationships between school principals and the local government, which would otherwise be impossible in a situation where direct responsibility lies at a higher level. However, there is room to significantly increase the oversight of educational quality at the local level by making more effective use of existing processes and documents that are underpinned by national legislation, notably: a prominent role for the school strategic development plan (SDP); the monitoring of the school principal's work and progress to achieving SDP goals; adequate follow-up at local level and also by the ČŠI. Importantly, regional, municipal and school leaders will need to proactively work toward shaping these instruments to better suit their needs. An important piece of glue to join these elements should be the new set of evaluation criteria being developed by the ČŠI. This should become an authoritative set of quality criteria to underpin regular school self-evaluation (although leaving room for local criteria to be added for specific development goals), feeding into school development planning. In turn, school councils and school founders can use these instruments to discuss progress and challenge and recognise achievements of school management where necessary.

Assessment and recommendations

Education system context

The economy is growing again and investment in education has been increasing, but remains low in international comparison

There are signs that the Czech economy has returned to growth following the impact of the economic crisis. Notably, unemployment has returned to pre-crisis lows and remains below the OECD average. However, as in other countries, the crisis hit the Czech youth hardest, with youth unemployment peaking at 19% in 2013 and remaining slightly above the OECD average. Compared to both median and average national wages, the minimum wage in the Czech Republic is the lowest in the OECD and for two-parent households on a minimum wage both parents would need to work to ensure that children do not grow up in poverty. Investment in education is comparatively low: cumulative expenditure per student (aged 6 to 15) is among the lowest in the OECD (USD 54 519 compared to USD 83 382 on average). However, contrary to in the OECD on average, since 2000 the Czech Republic has gradually increased public expenditure on education as a percentage of total public expenditure (from 8.0% to 8.9%; compared to a decrease from 11.8% to 11.6% on average). Over the same period, public expenditure has also increased as a percentage of GDP (from 3.2% to 3.7%).

A complex governance structure within the school system with several different school types

Compulsory education or "basic education", starting at age 6 and ending at age 15, comprises two stages: Years 1 to 6 (primary education) and Years 6 to 9 (lower secondary education). Upper secondary education or "secondary education" starts typically at age 15 and can be followed in six different school types offering different qualifications: certificate of apprenticeship in vocational secondary schools; general certificate of secondary education in *gymnasia*, *lyceums*, technical secondary schools or *conservatoires*; and simply "secondary education" in practical schools.

In 2002-03 a public administration reform saw the creation of fourteen self-governing regions, including Prague the capital city. While the Ministry of Education, Youth and Sports (the ministry) establishes the legal framework for the school system, responsibilities for organising and providing education in the public sector at different stages are broadly split as follows: first and second stages of basic education (municipalities); secondary education (regions). However, there are some complexities, including the organisation of some specialised school provision by the ministry and by regions at the second stage of basic education (*gymnasia* programmes starting at age 11 or 13). There are over 6 000 self-governing municipalities in the Czech Republic, of which only 453 are urban municipalities. Among OECD countries, this represents one of the highest levels of administrative fragmentation and poses considerable capacity challenges. The vast majority of Czech

municipalities are "rural", having less than 3 000 inhabitants. Not all Czech municipalities operate a pre-school or basic school. In 1990, legal conditions were set to promote a private sector and in 2012/13, 6.4% of Czech students were enrolled in privately managed schools, although mainly in secondary education. Private schools managed by registered churches and religious societies benefit from 100% of the public funding grant for teaching costs; other private schools benefit from between 50% to 80% of this grant.

Economic incentive to achieve higher education, but entrenched inequities in the school system

The Czech population is comparatively highly educated, with 92% of 25-64 year-olds having attained upper secondary education (compared to 75% on average in the OECD). Historically, levels of attainment in tertiary education have been low in international comparison, although there has been a rapid expansion in recent years and the proportion of young Czechs graduating from university programmes is now just above the OECD average. There is a clear economic incentive to attain higher education: employment rates for those with tertiary education are 43 percentage points higher than for those without upper secondary education. However, the Czech Republic has the lowest educational upward mobility rate of all OECD countries: only 17% of 25-34 year-olds have exceeded their parents' educational attainment (compared to an OECD average of 32%).

There is clear evidence of entrenched inequities in the Czech school system. First, there are considerable economic and educational differences on average among the 14 Czech regions, which provides an important backdrop to the respective school networks. Half of the Czech national GDP is concentrated in the four regions with the largest populations: Prague (25%); the Central Bohemian region (11%), the South Moravian region (10%) and the Moravian-Silesian region (10%). Second, the early age of selection (from age 11) into "prestigious" school types (*gymnasia* and *lyceums*), coupled with the provision of reduced curricula in some provision (practical schools) and the existence of a strong special education sector sets conditions that favour a social selectivity in different school types. Evidence from PISA 2012 shows a very strong association between the school's average socio-economic composition and the average performance of its students – more than double the score point difference found in the OECD on average. There is evidence of integration problems for children from the Roma community, with some research estimating significant proportions being educated in segregated schools.

Demographic changes have challenged the efficiency of the school system

One of the greatest efficiency challenges in recent years to the Czech school system has been the steep decline in the school-age population. While this hit all age groups in compulsory and upper secondary education, lower secondary and upper secondary education were hit the hardest: compared to in 1990, there was almost half the number of 10-14 year-olds in the Czech Republic in 2010; and the number of 15-19 year-olds is predicted to remain over 40% lower than the 1990 numbers until 2020. While birth rates improved between 2000 and 2010, which saw an increase in capacity in primary education (the first stage of basic education), they have started to decline and this is predicted to continue over the coming years and will exert renewed pressure on primary education.

Strengths and challenges

The ministry's five year strategic plan for education targets the major challenges

The ministry's Strategy for Education Policy of the Czech Republic until 2020 ("Strategy 2020") recognises the need for stability and more strategic oversight. The preparation of the Strategy 2020 was initiated in 2011 and four different Ministers of Education from different political parties contributed to its development. This ensured that, at least in part, the Strategy 2020 is perceived as a non-partisan framework for future education policy development. At the same time, the fact that over recent years the average time each minister has served is roughly one year underlines the importance of having an authoritative strategic plan to guide educational policy development. Such political instability has also impacted on the capacity for general management at the ministry and its subordinated organisations. Importantly, the Strategy 2020 puts new focus on addressing inequities in the Czech school system. An earlier OECD review had pointed out that equity or inclusiveness were not among the stated education goals or policy objectives. The proposed extension of the early childhood and care offer and introduction of a compulsory year of pre-primary education is expected to better mitigate socio-economic influences on early childhood learning development.

High level of autonomy at school level, but a need to strengthen regional and municipal strategic management

The fact that Czech schools enjoy a high degree of autonomy to make decisions in core areas can support a more efficient educational provision. Schools can tailor their educational programmes and other activities to the needs of their students and community. Depending on how the school management and staff approach this, such an exercise can help focus staff on the educational offer and what really matters at that school. The development of the School Educational Programme, if linked to the school development plan, can also be linked to core strategic priorities for the students, staff and community. There was also an initial check of the School Educational Programmes by the Czech School Inspectorate (ČŠI), providing a good balance of autonomy and accountability in this area. Similarly, schools are responsible for the professional development and performance of their staff and school inspections check the school's approach to this.

A striking finding that emerged during discussions with several stakeholders at national, regional, municipal and school levels was the overriding perception that the ČŠI bears sole responsibility for the oversight of the quality of educational provision. The requirement for schools to draw up a School Development Plan does not yet appear to be perceived as a useful tool for quality oversight and development by organising bodies and school staff. Analysis of a sample of regional development plans reveals that while they present core objectives, these often are vaguely defined and there appears to be minimal reporting on progress towards achieving these objectives (a lack of clear targets, little – if any – supporting data). At the municipal level, the over fragmentation in the system generally means weaker capacity at local levels and by default a continued strong role for the centre.

Evidence of consolidation in basic education, but challenges remain in certain regions and at the lower secondary level

For the main part, municipalities are responsible for organising pre-primary and primary education (first stage of education in basic schools) and the majority of lower secondary education provision (second stage of education in basic schools), while regions

are responsible for organising upper secondary education. While there are some caveats that complicate the distribution of responsibilities for basic education (i.e. the six- and eight-year *gymnasia* programmes and specialised educational provision), this broadly clear distribution of responsibilities in combination with the central per student funding system (the national normative) and the legal possibility to operate different kinds of schools and facilities under one legal entity appears to have supported an initial adjustment of the school network in basic education. These adjustments, at least at the macro level, appear reasonably well aligned with demographic changes. As the number of students dropped by 9.7% between 2005/06 and 2013/14, the number of schools dropped by 8.5% and the number of teachers decreased by 7.7%. Adjustments in the public sector have limited the impact on the student/teacher ratios in these networks. However, despite initial efforts, the proportion of smaller schools (those with 200 or less students) has increased from 54% to 61% since 2005/06. Demographic challenges persist, notably with a decline in the size of the population aged four years or younger between 2010 and 2014 in the Northwest, Northeast, Moravia-Silesia, Central Moravia and to a lesser extent in the Southwest. Data suggest that in regions with a comparatively low average size of basic schools, there is room to further reduce the number of municipalities with schools. As in other countries, this is an acutely sensitive topic on the political level.

Political will to further integrate students with special educational needs, but several barriers remain

National statistics clearly show a trend toward favouring integration of students with special educational needs in mainstream classes in basic education. Since 2010/11, while the number of students diagnosed as having special educational needs has remained pretty stable, the proportion attending mainstream classes in basic schools has steadily increased. An amendment to the Education Act (to be enforced as of 1 September 2016) guarantees the rights of students with special educational needs to support measures in mainstream education. In preparation, the ministry had initiated work to introduce a set of five broad legal categories of special educational needs, with a detailed catalogue of different educational needs that would fit into each broad category. The exercise of going through these finer classifications will be positive in familiarising educators with the diversity of educational needs. Indeed, developmental work had already brought together diverse partners that had previously not collaborated, including notably the pedagogical advisory centres.

However, the OECD review identified several potential barriers to achieving the policy objective of greater inclusion of students with special educational needs in mainstream education. There is an "attitudinal barrier", in as much as, there is a well-established culture and institutional prejudice of segregated education provision. Also, analysis of aggregate data suggests there may be a tendency for regions to protect enrolment rates in the special education schools they manage, with increased proportion of students diagnosed with special educational needs at the upper secondary level – this in a context of a sharp decline in the 15-19 year-old population. One factor that would support this hypothesis is the fact that the staff at special education schools holds specific pedagogical qualifications, which presents a structural barrier to reallocating staff from special education schools to mainstream schools.

Transparent division of education finance into national and local components, but concerns with regional allocation to municipal schools

Responsibilities for financing of education are clearly divided between different levels of government. The direct costs are financed through grants from the state budget to regional budgets. The operational costs are financed from the school owner's own revenues, that is, from municipalities for basic schools and from regional authorities for secondary schools. This transparent division of education finance into direct and operational costs creates clarity of who is responsible for what function in the sector. In particular, it ensures that the main costs of the school, namely teacher salaries, will be adequately adjusted whenever the State decides to increase them, and it allows municipal and regional authorities to plan the operational component of school budgets in a relatively simple manner. However, there is a systemic conflict of interest in the fact that regions are responsible for the reallocation of funding for direct costs in basic education to municipal schools located on their territory. Regions may have the tendency to provide preferential treatment to supporting secondary and special education. Of special interest in this respect are the eight-year long and six-year long programmes in *gymnasia*, because the initial four years of the first, and the initial two years of the second, provide teaching to the age groups which typically would attend municipal schools offering basic education. Since secondary schools are generally more expensive than basic schools, the regional normative amounts for *gymnasia* are higher than those for basic schools for the 6 to 14 years age group. In this way *gymnasia* take funds away from municipal schools offering basic education, and this effect is stronger whenever long programmes in *gymnasia* are opened. It is important to note that the decision to open these long programmes rests with the region.

While there is a stable system to allocate public funding to schools, regional formulas are excessively complicated

The allocation of central funds for direct costs in education is designed through a system of per student normatives. There is common knowledge of this system and in general Czech education officials at all levels of governance accept the current system as fair and objective. The value of a publicly known and strictly adhered to allocation system in education is significant for the stable functioning of schools. The most important benefit is the stability and predictability of financing, which allows all schools to plan their development in the coming years. In particular, since 2012 there has been greater stability in the principles and technical details of the national normatives, namely the relative amount of the central grant for direct costs allocated to each age group has been held constant.

However, the allocation system is extremely complex at the regional level. For pre-schools and basic schools, the per student regional normative amount is the result of a specific formula applied to the number of students, using some supporting parameters (such as average salaries of teachers and non-teachers). The formulas include quite complicated mathematical functions of the number of students. For staff in education departments, the application of the formula is reduced to entering the additional parameters (salaries). In this mechanical process, there is no place to assess and respond to the differentiated needs of pre-schools and basic schools, or to take into account such crucial factors as the existence of a special class in mainstream basic schools. For secondary education, the complexity arises from the sheer number of educational profiles and corresponding normatives. There are regional normatives for every educational programme provided in the region's schools, ranging between 300 and 400 across the different

regions. Moreover, national regulation provides a strict and unambiguous methodology to calculate them from year to year, leaving regions very little room for manoeuvre in this respect. The main problem with such over complicated formulas is that they prevent discussion and dialogue and do not allow the analysis of specific school needs, to prioritise these needs, to discuss these priorities with all education stakeholders and in this way to formulate and implement a regional education strategy.

National allocation for direct costs does not support equity, but some funding for students with special educational needs

The national allocation system for direct costs is rigid, with an excessively simplified formula (only five different normatives) and it does not take into account regional differentiation of the Czech education system. With one per student normative for basic education (age group 6 to 14 years), for example, relatively more funds are transferred to urbanised regions and Prague than to more rural regions with smaller average class sizes. In this way, the national allocation system does not include the instruments to support the equity of education finance. An initial examination of the extent of regional variation on some basic indicators for basic education, suggests that this underlines the need for a more in-depth review and exposes the weakness of an over-simplified national allocation system. In this context, a strength is the fact that the Czech Republic recognises the need for specific regulation and additional funding for the teaching of students with special educational needs. This is currently provided through the allocation of additional teaching assistance on the basis of recognised and certified needs, and through the provision of specific funds for this assistance, above and beyond the funding for direct education costs. The need for this teaching assistance, in the form of allowed additional teacher positions, is negotiated between the school and the school founder, and then submitted for consideration by the regional education authorities, who take the final decision whether to fund these assistant teacher positions. The funds for additional teaching assistance are assumed to come from the regional reserve of education per student normative funds, legally set to be equal to at least 2.5% of the total sum of normative funds.

Teacher status is low, but there is recognition of the need to improve teacher pay

Czech teachers have a very low perception of their social status in society. With low teacher salaries, poor working conditions and low levels of teacher morale, it is no doubt difficult to attract high calibre candidates to the profession. While efforts have been made to improve the salaries of teachers in recent years, pay is still very low. The ratio of primary and secondary teachers' salaries to earnings for full-time, full-year workers with tertiary education is one of the lowest among OECD countries. Further, the slow rate of salary progression over the course of a teacher's career is found to be one of the least rewarding across OECD countries. A clear priority of the ministry in Strategy 2020 is to secure more resources for teacher salaries. The Czech Republic registered one of the largest increases in teacher salaries across Europe between 2009 and 2014 – with the annual gross salary increasing by 22% in real terms for teachers in primary, lower secondary and upper secondary general education. In addition, there has been a sharp increase in teacher pay by 3.5% in 2015 and the aim is to continue this trend. The OECD review team underlines how necessary these increases in teacher salaries have been as a core factor to ensure a minimum attractiveness for the profession.

There are weak links between teacher performance, pay and recognition, but teaching standards have been developed

While there is currently scope to promote teachers to a higher career level if teachers take on additional responsibilities or demonstrate high performance, in practice, salary is still largely determined by teachers' length of service. Whether or not teachers receive their "personal pay" often depends on factors outside of their performance. Such funding may be re-allocated at the school level at the end of the year to cushion and absorb losses in other areas, such as a drop in school enrolments. The personal pay component to reward outstanding teaching is very low in practice, averaging only 2.9% per annum. The proposed new career system (under consideration) may help to bring teacher performance, appraisal and salary closer together. However, a key consideration is whether the new structures will actually result in greater differentiation of teacher roles given some of this flexibility already exists and is not fully utilised. The barriers to actively promoting and advancing teachers need to be fully understood to ensure the new career system can have positive effects. At the time of the OECD review there was some uncertainty about securing additional funds for the new career structures. Many interviewees expressed the view that additional funding for implementation of the new career system will be critical to its success in enabling greater differentiation among teachers and promoting the best to the top teaching levels. A significant strength is the development of Professional Teaching Standards in 2012 that would underpin (and helped in designing) the new career structures. The standards outline the expectations of teacher qualities and professional capabilities over the course of their career, including the scope of a teacher's work and professional development to be undertaken at each career stage.

Schools and teachers are empowered with high levels of autonomy, but professional learning and collaboration can be improved

In international comparison, school principal reports from PISA 2012 confirm that Czech schools enjoy high levels of autonomy in hiring and dismissing teachers and setting starting salaries. Teachers also enjoy high levels of autonomy in the classroom. The Framework Education Programmes represent a significant shift to give schools and teachers more flexibility in interpreting broad education objectives into local curricula. Teachers also have high levels of autonomy to decide which pedagogical methods and educational materials to use. This provides the conditions for teachers to tailor teaching to students' needs. However, opportunities for professional learning and collaboration appear underdeveloped, with greater emphasis on training by external providers and less on teacher learning that occurs in the school in the daily work of teachers. While subject commissions are one form of collaboration, it is not clear how much they deeply explore issues of learning and teaching versus more routine and administrative subject-related matters. Mentoring in schools occurs at low rates. The autonomy that schools have to upskill their teachers has its merits, but requires monitoring in the event that information asymmetries may exist (i.e. there may be few indicators of course quality to schools and few avenues for providing feedback if teachers and schools are not satisfied). It was the OECD review team's impression that there were limited feedback loops between providers, schools, teachers and regional officials on the quality of training received.

The appointment and contract renewal of school principals have a sound legal basis, but decisions may lack transparency

School founders are responsible for the recruitment of their school principals, but need to follow central requirements that ensure a certain level of transparency, including publicly announcing the vacancy and appointing members of the selection panel to a required composition. The founder can choose two panel members and the regional office can choose one. The inclusion of one representative of the Czech School Inspectorate (ČŠI) and one expert in the field of public administration, organisation and management in education (e.g. a principal from another school) provides additional objectivity and brings in expertise and professionalism. This can be further bolstered if the panel chooses to invite additional external experts. The panel must also include one member of the school's pedagogical staff and one member of the school council which gives local stakeholders the opportunity to represent the interests of the school community. After interviews and possibly examinations, the selection panel votes on the candidates and makes a recommendation to the founder. However, school founders are free to ignore this, which bears the risk for "political" appointments by school founders. When it comes to the re-appointment of a school principal, in theory, both the ČŠI and the school council can intervene to prevent the contract renewal of a school principal in the case of concerns. In practice, however, this mechanism depends on sound school evaluations through the ČŠI and a competent and knowledgeable school council. Considering the review team's impressions that school evaluations are only beginning to focus on the quality of education and that school councils often seem to lack capacity, this mechanism may not be very effective.

Legislation provides some flexibility for school founders to influence school principals' remuneration, particularly through personal allowances and bonuses. In theory, this provides the possibility to provide incentives and to reward principals for high performance within budgetary limits. However, personal allowances and bonuses typically depend on processes that are determined by school founders themselves and that are not always clearly defined or openly communicated. Decisions about individual rewards are typically based on a limited set of criteria, such as budget discipline, instead of an appraisal of how effectively responsibilities are undertaken.

School principals can delegate responsibilities within their school, but legislation does not promote pedagogical leadership

Considering school principals' high level of responsibility as the head of their legal entity in most public schools, it is positive that they can rely on administrative and pedagogical support. Depending on the size of the school, principals can count on the support of one or more deputy principals and their roles and responsibilities are defined by the principal. Many schools also employ clerks and accountants to provide support for school budgeting and accounting. In addition, teachers provide support for curriculum development and teacher management, including in some schools pedagogical councils and co-ordinators to develop School Educational Programmes. However, legislation does not promote school principals' role as pedagogical leaders. There is a large amount of administrative and managerial tasks and central frameworks and legal regulations that schools need to comply with. Almost all Czech principals surveyed in TALIS 2013 (OECD Teaching and Learning International Survey 2013) reported frequently checking for errors in administrative procedures and reports. Coupled with teaching responsibilities, principals in small schools may find it difficult to undertake their responsibilities effectively.

Pedagogical leadership appears limited to occasional classroom visits, with little involvement in developing a collaborative school culture and teacher professional development. There also appears room to make better use of school development planning and in TALIS 2013 Czech principals reported low engagement and time for interaction with students, parents and the community. Importantly, the focus of school founders and the ČŠI is on legal compliance and budget discipline and not on their role as pedagogical leaders.

Policy recommendations

Build support for and ensure effective implementation of the Strategy 2020

The OECD review team's analysis of the international and national evidence on the quality, equity and efficiency of the Czech school system, confirms the pertinence of the three overarching objectives within the Strategy 2020. The major task for the MŠMT (*Ministerstvo školství, mládeže a tělovýchovy* – Ministry of Education, Youth and Sports) is now to raise awareness of these objectives and to engage key stakeholders in concrete steps toward achieving them. A clear challenge in moving toward the Strategy 2020 objectives will be to secure adequate funding for full and continued implementation. The discontinuity of European funding, for example, had reportedly posed challenges at the central and regional levels in how to continue certain initiatives, regardless of how popular or effective they had proven to be. This underlines the need to better align national funding to ensure the sustainability of effective initiatives that have been supported by EU funding. A major step toward the objective to reduce inequities will be to secure funding to build adequate capacity in pre-school – notably in the regions where expansion of this age cohort is steady. Much international evidence on the importance of early intervention would support the extension of early childhood education and care services, in particular to less advantaged children. Also, to the extent that limited capacity in pre-school education was a barrier to children's participation, the provision of high quality services could see a greater participation of Czech women in the labour market (the low participation of highly educated women stands out internationally).

Develop models to strengthen strategic reporting and to focus this better on educational quality

Each region currently draws up and publishes its regional development plan. There is clearly room here for the Czech regions to take the lead in making this regular reporting requirement a useful – and also authoritative and comparable – strategic instrument to engage their broader community, including all other school organising bodies within the region. Regions should take the lead in developing models for reporting progress against the stated regional objectives, for example, reports could include a set of clear goals – in some cases, where feasible, including targets to be achieved – and subsequent reports would present a report of progress against each of these goals. Obvious areas that are current strategic challenges for many Czech regions include the need to consolidate the provision of both lower and upper secondary education. The Association of Czech Regions will also be able to draw on collective experience of how to communicate and report on the results of student final examinations (*maturita*) in their regions. A more proactive role and regular reporting of results by the Czech regions would build trust in the broader community.

The current distribution of responsibilities for oversight of school principals and school monitoring by the school organising body provide the conditions for stronger local accountability. Oversight at the local level can foster important relationships between school

principals and the local government, which would otherwise be impossible in a situation where direct responsibility lies at a higher level. However, there is room to significantly increase the oversight of educational quality at the local level by making more effective use of existing processes and documents that are underpinned by national legislation, notably: a prominent role for the school strategic development plan (SDP); the monitoring of the school principal's work and progress to achieving SDP goals; adequate follow-up at local level and also by the ČŠI. Importantly, regional, municipal and school leaders will need to proactively work toward shaping these instruments to better suit their needs. An important piece of glue to join these elements should be the new set of evaluation criteria being developed by the ČŠI. This should become an authoritative set of quality criteria to underpin regular school self-evaluation (although leaving room for local criteria to be added for specific development goals), feeding into school development planning. In turn, school councils and school organising bodies can use these instruments to discuss progress and challenge and recognise achievements of school management where necessary.

Develop guiding principles for school network planning with a focus on educational stages

With active collaboration and strong political will, there is a solid basis to plan a more efficient organisation of the regional education systems, including: good channels for policy discussion among the central, regional and municipal levels, as well as representative bodies for private and church schools and employers; objective demographic data and statistical forecasts with regional breakdowns; plus a strong administrative tool (the school registry) comprising a comprehensive listing of different educational fields and capacities. The MŠMT could lead a collaborative exercise to establish a set of authoritative guiding principles, rules and even target quotas for capacity at different key stages of schooling. The stages of educational provision facing urgent pressures to further consolidate – and importantly to improve quality – are lower secondary education and upper secondary education. These two major stages implicate the five main founders: the ministry, the regions, the municipalities, private providers and the church. The focus on educational stage as opposed to school type is important. For example, lower secondary education is offered by basic schools and is seen as part of a basic service to be provided as close as possible to where the children live, that is, even in small villages. This structural feature of the system makes it difficult to create school units of appropriate "size efficiency" and some areas with severe demographic pressures may face significant cost-efficiency and organisational problems in a system of per capita funding.

Actual and forecast capacity indicators for lower secondary education and upper secondary education would serve as the basic efficiency comparator for the current legal capacity in the school registry in each region (identified by summing up the capacity of each school offering lower secondary education and so forth). At the upper secondary level, a second indicator would be the current labour market needs (as measured by the proxy of employment and unemployment of recent graduates). The future labour market needs is a more challenging area and would require the active collaboration of employer representatives, chambers of commerce and industry. However, it is recommended that to the greatest extent possible the planning of upper secondary education fields would be linked to forecast labour market needs. Ideally, in the future Czech statistics could collect information from individual graduates on their employment and how well this matches their field of study.

Carefully evaluate the implementation of the new approach to classification of special educational needs

The development of an authoritative classification framework to support the provision of more individualised support measures to children with special educational needs is commendable. However, paying adequate attention to how this is implemented will be of key importance. First, it will be necessary to provide sufficient capacity building and familiarisation with the new categories for all professionals working in pedagogical advisory centres, who will be responsible for assigning support measures for Categories 2 to 5 (Categories 0 and 1 would be managed at the school level). Beyond the implications for the educational welfare of the individual child, there will also be costs assigned to offer support to children in these categories. There will need to be adequate opportunity for professionals across the fourteen centres to collaborate and exchange feedback on their experience with implementing the new categories, with a view to heightening the coherence of professional judgements across different regions. The implementation of the categories will also require adequate professional development at the school level – for school leadership to monitor this and for teachers to diagnose and work with children to address their specific learning needs. Second, the OECD review team underlines the need to conduct an independent evaluation of the funding implications. The official agreement with the Ministry of Finance is that this would be introduced on a no-additional-cost basis. The ČŠI could have a stronger role with a legal basis to challenge a diagnosis by the pedagogical advisory centres and to order an independent re-diagnosis where judged appropriate.

Transfer the grants for financing pre-schools and basic schools directly to municipal budgets (not via regions)

The current system of education finance, in which the regions have allocation responsibilities for pre-schools and basic schools, creates an additional layer of decision making between the state and the municipality, making the proper assessment of the equity and effectiveness of Czech education finance very difficult. It is recommended to introduce direct transfers for education of every level to those local authorities who are directly responsible for managing and financing that education level. For grants intended for both pre-schools and basic schools, this will mean a direct transfer from the national budget to the municipal budgets. The ministry needs these direct links, and the necessary policy dialogue they will promote, to better understand the problems of the Czech school system and to better plan its development.

The main difficulty confronting this approach is the extremely small size of the Czech municipalities and the fact that most of them have one school, if any at all. If it is considered that municipalities are too small to manage and finance basic schools, they should be entrusted only to municipalities with extended powers, as is already the case with a number of locally delivered public services in the Czech Republic. In this way not all municipalities will be the recipients of the grant. Transfers for example to municipalities with extended powers, completely bypassing the regions, will have to use more complex and flexible formulas. Nevertheless, there is no doubt that they can be designed to be far more simple and comprehensible than the current formulas for basic education used by the regions.

Make the national funding allocation system (the normatives) more flexible

The national allocation system, based on the pure numbers of students in five different age bands, is very rigid and does not reflect the complexity and the variation of the Czech

education system. It needs to be more flexible, by for example increasing the number of parameters, to reflect different factors which have impact on class sizes and on per student costs of providing education. Research and analysis will determine which factors should be used, along with two considerations: they must be objective, that is, they cannot be manipulated by local government decisions (e.g. average class or school size depend on institutional decisions, unlike factors such as population density, whether or not students belong to a national minority or attend a specific vocational profile); and they should have real impact on the class size and unit costs of providing education (e.g. econometric analysis can provide some initial suggestions for possible values of the parameters).

However, allocation formulas should always reflect education priorities and policies. At the national level, it will be necessary to engage all interested and relevant stakeholders, including primarily representatives of local governments, trade unions and school principals. Their experience and their expectations should be the mirror in which the ministry views the different allocation scenarios (meaning a proposed formula with a determined set of parameters) and analyses their consequences. For the stakeholders to meaningfully participate in these discussions, it is necessary that for each allocation scenario they are able to review the impact on each region, municipality and if needs be – on each school. In other words, each allocation scenario should come with nation-wide simulations. The most constructive use of national allocation formulas is to subject them to rigorous review, through simulations, and to ensure that their impact is consistent with national education policies.

Give regions more flexibility in the allocation formula

Presently, the regions are legally obliged to define and implement a very large number of normatives for secondary schools according to a very detailed methodology of different educational programmes. The OECD review team recommends that this legal obligation be either altogether removed or significantly weakened, because it leaves very little room for a flexible budgeting process at the regional level. The key recommendation is that the object of the budgeting process should be shifted from an educational programme to the school itself as an institution. At a minimum, this would mean serious reduction in the number of regional normatives (for example, using only one normative for *gymnasia*). Even more importantly, the budget of each school is an easily understood amount, comparable to historical costs of the school or to its staffing levels for all categories of school staff. Thus they can be analysed, discussed, and adjusted on the basis of common understanding of key education officials in the region.

A flexible budgeting process would involve establishing budgets of all secondary and special schools managed by the region, to try to satisfy their different needs within the context of limited available budget funds. In other words, it assumes: i) comparative review of the needs of all schools managed by the region; ii) comparison of characteristics of their students (including students with special educational needs, academically outstanding and academically non-motivated students, students engaged in sport and arts activities, immigrant students); iii) comparison of characteristics of their teachers (including new or experienced teachers, needs for in-service training, need for additional positions of pedagogues or psychologists); together with iv) their current and historical budget allocation; v) plans for future development; vi) historical and forecast demographic trends; as well as vii) changing requirements of the regional labour market. Such a review allows regional authorities to determine how their local school system should develop and what should be

the corresponding recurrent allocation for a number of consecutive budget years. The same review, it is worth adding, is necessary to adequately assess the investment needs of schools.

This may sound like a very complex exercise, but it really concerns important management decisions. To give a simple example, given the changing expectations of students, the region must plan which new education programmes to introduce in its schools, and which education programmes to phase out. At an even more fundamental level, which schools should be closed and which should be maintained. Clearly, these strategic long-term plans should influence decisions on recurrent allocations in no lesser way than the present number of students per full-time equivalent staff. Indeed, the current system only distinguishes two categories of school staff. A more flexible system would recognise the variety of staff employed in Czech schools and their different roles and salaries (e.g. teachers, school leadership, school administration, pedagogical support staff, technical staff, cleaning staff).

Increase efforts to attract and retain high calibre teachers

Improving the attractiveness of teaching is a key priority given the very low social status of teachers in the Czech Republic. While the ministry has taken steps to steadily increase teacher salaries over the past decade, these efforts should be strengthened. The ministry's plan to introduce a new career structure is a step in the right direction and is commended. To raise the public profile of teaching, the ministry should consider highly selective entry pathways at two stages: first, the quality of candidates accepted into initial teacher education, and second the standards that must be demonstrated to graduate from beginning teacher to qualified teacher. At the first stage, the ministry should explore approaches that can help better screen candidates into initial teacher education, such as encouraging providers to use more in-depth procedures that assess whether the individuals wanting to become teachers have the necessary motivation, skills, knowledge and personal qualities (specific assessments). Additionally, flexible programme structures can provide student teachers with school experience early in the course, with opportunities to transfer into other courses if their motivation towards teaching changes as a result. The ministry's plans to establish assessments at the end of the first year of teaching should help to raise teacher selectivity. However, assessments on their own will not be effective in changing teaching practice in a sustained way unless there is also a culture of continuous improvement and deep learning in the school. It is also important that the new assessment also avoids overly cumbersome processes that only lead to compliance and not improvement.

Promote a culture of using feedback, observation, student data and collaboration for professional learning

It is suggested the ministry increase opportunities that tap into the intrinsic motivation of teachers to improve student learning. The working environment of schools could be better organised so teachers have collaborative groups and safe forums to discuss and solve specific, concrete problems that occur in daily practice. This is the most powerful form of professional learning, but currently receives little attention in Czech schools. Research shows the most effective teacher learning involves collecting, evaluating and acting on feedback to modify their own teaching practices. Also, it is particularly important for professional learning to make a specific connection to an individual teacher's practice or to a problem within the school. The most effective learning activities help teachers to examine what they do in the classroom, what works and why. The ministry can encourage

schools and teachers to focus of this by setting clear strategic expectations that teachers continuously assess, review and improve their practices. This can be embedded as a core responsibility of school leaders to help education staff develops in this way. Also, school-level planning processes should be required to focus on this type of teacher learning and development in schools. The use of student assessment data should be central to identifying teacher development needs and goals within this process.

Further, it is recommended that teacher job descriptions in the new career structures incorporate the use of peer observation, demonstration and feedback. These practices can be embedded within specific programmes such as learning communities and mentoring in the school. While the new career system will expand mentoring, there should be more of a focus on establishing intensive learning communities in schools (which is currently missing). Teachers promoted to the highest career levels in the new career system in the Czech Republic could promote and lead professional learning communities. There should also be clear incentives and accountabilities for these professional learning activities as well. Teacher development and accountability do not need to be separate endeavours, but mutually reinforcing.

Promote greater objectivity in decisions on the appointment, appraisal and remuneration of school principals

School founders are the employer of principals and the power to select who leads their schools allows founders to match their human resource strategy with their educational strategy. However, considering the risk of political appointments, greater checks and balances should be in place. The judgement of the selection panel could receive greater weight, for example, by introducing a requirement that the school founder has to choose its final candidate from a shortlist of x number of top candidates presented by the selection panel. The ministry could introduce a clearer and more transparent set of national selection criteria, which could be based on the suggested professional school leadership standards. The recruitment process could benefit from the development of national guidelines for quality in recruitment procedures, training opportunities for regional and municipal authorities and a strengthened role for school councils, e.g. they could define a local competency profile that supplements national selection criteria.

Furthermore, school founders should be encouraged and supported to develop appraisal processes that go beyond legal compliance and budgetary discipline as is currently the case. Appraisal could, then, become a tool to manage the school leadership profession and to communicate that school principals are responsible for the quality of teaching and learning in their school. Ideally, these would be based on a national framework meeting essential criteria of personnel evaluation, such as validity, reliability, accuracy, utility and fairness. Possible measures to promote and develop appraisal-related skills among evaluators include funding for evaluators' training and professional development, the piloting of newly developed appraisal systems before implementation, opportunities for on-site formal training sessions for evaluators and the development of online platforms for ongoing discussion. The implementation of a sound national appraisal framework would also help address concerns about the allocation of personal allowances and bonuses.

Create a vision for and support pedagogical leadership

Research has recently stressed the importance of pedagogical leadership for teaching and learning. However, the content of current legislation and school leadership training

courses continue to focus on the legal and administrative role. The implementation of professional standards for school leaders could clearly communicate the pedagogical role of school leaders and they could be used: by school leaders for self-evaluations; by teachers to understand the role of their manager; by training institutions for developing, evaluating and improving their programmes; by school founders for selection, recruitment, appraisal and development. Strengthening the pedagogical role of school principals requires a reflection on how school principals can be better relieved from administrative and managerial tasks, including a review of how school principals currently distribute their tasks and if they require further guidance on how best to do so. Considering their large workload, there is a strong case to reduce the teaching load of school principals, particularly in small basic schools.

The training and preparation of school leaders should also better promote capacity to be pedagogical leaders and to manage teachers effectively. First, it is recommended to develop a leadership continuum that reflects school leaders' needs at different stages of their career, including opportunities for aspiring and emerging school principals, mandatory training prior to appointment, an induction phase and opportunities for ongoing development. In particular, the ministry could introduce a requirement to undertake training before assuming a leadership role. Guidance on professional development needs from school founders and the school inspectorate could strengthen school principals' learning throughout their career. Second, training should focus more on competencies in areas that contribute to improving teaching and learning, such as strategies for supporting, evaluating and developing teacher quality; goal setting, assessment and accountability; strategic financial and human resource management; and system leadership. Third, considering the role of distributed leadership in Czech schools, stakeholders should pay greater attention to the development of deputy principals, middle leaders and teacher leaders, such as heads of subject commissions (e.g. through the introduction of training requirements or a review of current development opportunities).

Chapter 1

School education in the Czech Republic

This chapter presents an overview of the economic and demographic context in the Czech Republic, including the impact of the international financial crisis and demographic changes on the funding and organisation of schooling. It also provides a brief description of the Czech school system for international readers. Finally, it presents evidence on the quality, equity and efficiency of the Czech school system.

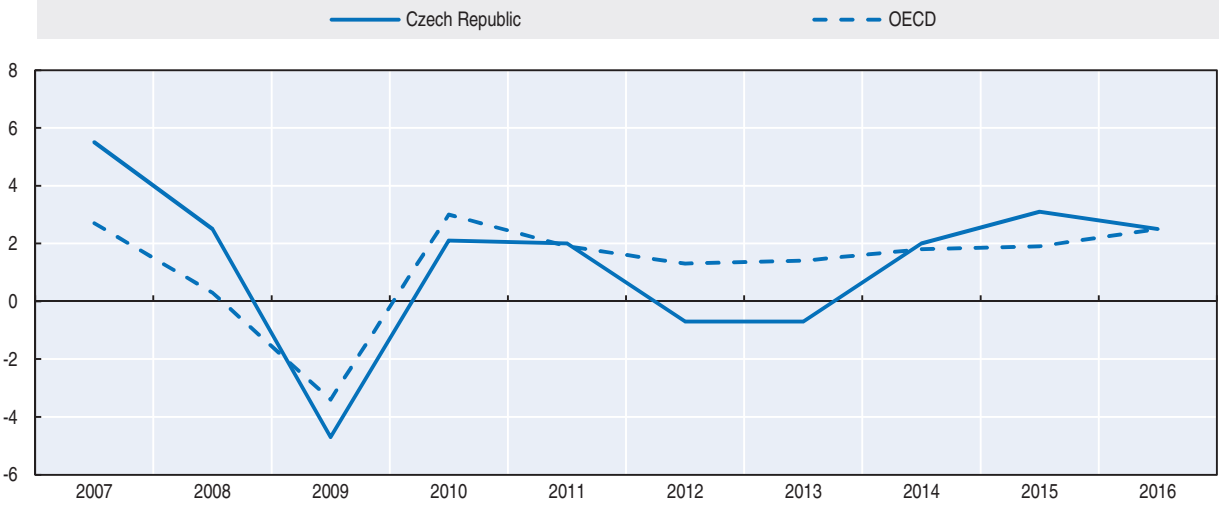
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Economic, governance and demographic context

Economic growth has returned, but the recession impacted the young

Prior to the international financial crisis, the annual growth rate in the Czech economy was above OECD average levels. However, the Czech Republic is one of the OECD countries where the international financial crisis had the greatest impact on economic growth. Between 2007 and 2009 growth in real Growth Domestic Product (GDP) declined by ten percentage points (Figure 1.1). The main factor behind economic contractions was weak domestic demand, but slowing export market growth also played a role (OECD, 2014a). At the start of the economic recovery in mid-2013 GDP had fallen by nearly 4% below its pre-crisis peak (OECD, 2014a). Economic growth picked up strongly in 2015 (OECD, 2016) and is predicted to continue in 2016 (Figure 1.1).

Figure 1.1. **Recent and projected growth in real GDP (%)**



Note: Figure shows projected growth in real GDP in 2015 and 2016.
Source: OECD (2015a), *OECD Employment Outlook 2015*, *http://dx.doi.org/10.1787/empl_outlook-2015-en*.

The unemployment rate is lower than on average in the OECD (Table 1.1). But unemployment rates vary significantly among Czech regions, from 3.3% in Prague to over 11.4% in the Ústi region (Figure 1.A1.3). The international financial crisis impacted the Czech labour market. Relative to the OECD area, employment growth has slowed more in the Czech Republic and was negative in 2009, 2010 and 2011 (OECD, 2015a, Table 1.A1.1). Notably, the youth unemployment rate has increased significantly and is now above the OECD average (Table 1.1). In general, youth were hit hardest by the recession in OECD countries. The Czech youth unemployment rate remains lower than on average in OECD members within the European Union (EU) (22.2% in 2014) (Eurostat, 2015).

Poverty rates are much lower in the Czech Republic compared to in the OECD on average (Table 1.1). While they increased following the crisis (OECD, 2015b, Figure 3.6), they are now just below pre-crisis levels (Table 1.1). Poverty rates for Czech children are relatively high and this is a growing concern in OECD countries generally (Table 1.1).

Table 1.1. **Indicators of social inclusion**

	Czech Republic				OECD average			
	2000[1]	2007	2013	2014	2000[1]	2007	2013	2014
Unemployment rate (age 15-64) (%)	8.8	5.4	7.0	6.2	6.2	5.8	8.1	7.5
Youth unemployment rate (age 15-24) (%)	17.0	10.7	19.0	15.9	11.9	12.0	16.2	15.0
Poverty rate (relative threshold) (%)	5.8	5.5	5.3	-	-	11.0	11.2	-
Poverty rate for children (age 0-17) (%)	10.2	8.8	10.3	-	-	-	13.3	-

Note: The poverty threshold is 50% of median disposable income in each country.
1. Unemployment rate data are for 2000 and poverty rate data are for 2004.
Source: OECD (2015a), *OECD Employment Outlook 2015*, *http://dx.doi.org/10.1787/empl_outlook-2015-en*, Table D; OECD (2015b), *In It Together: Why Less Inequality Benefits All*, *http://dx.doi.org/10.1787/9789264235120-en*; and OECD.Stat (n.d.), Income Distribution and Poverty Database, *http://stats.oecd.org/Index.aspx?DataSetCode=IDD#*.

As in other OECD countries, wage restraint helped to limit employment losses during the recession (Table 1.1), however, in the Czech Republic there was a real decline in wages which has contributed to economic hardship, especially for those on lower incomes (OECD, 2015a). Notably, following the crisis the minimum wage relative to the median national wage has decreased by five percentage points. Compared to both median and average national wages, the minimum wage in the Czech Republic is the lowest in the OECD (OECD, 2015a, Figure 1.11). The working hours required to escape poverty on a minimum wage are unrealistic for a lone parent; for two-parent households on a minimum wage both parents would need to work to ensure that children do not grow up in poverty (OECD, 2015a). Also, there are indicators that work has become more precarious with one in ten Czech workers now in temporary work (this represents a 25% increase between 2007 and 2014 (OECD, 2015a, Figure 1.7).

Fourteen self-governing regions with a large number of self-governing municipalities

In 2002, there was a significant reform of public administration in the Czech Republic when fourteen self-governing regions were established, including Prague the capital city. This move away from a centralised governance structure notably gave the 14 regions autonomy to govern their own education system. Four of the Czech regions are home to nearly half (47%) of the Czech population: Prague, Central Bohemia, Moravia-Silesia and South Moravia (Table 1.2). The Czech regions mainly operate schools providing upper secondary education.

There are over 6 000 self-governing municipalities in the Czech Republic, of which only 453 are urban municipalities (Table 1.2). Among these, there are five "cities", that is, municipalities with over 1 million inhabitants: Prague, Brno, Ostrava, Plzen and Liberec. The vast majority of Czech municipalities, therefore, are "rural", having less than 3 000 inhabitants. Half of the total municipalities in the Czech Republic are concentrated in four regions: the Central Bohemian region (18%), the Vysocina region (11%), the South Moravian region (11%) and South Bohemian region (10%). Municipalities operate pre-school and basic schools (primary and lower secondary education), although not all Czech municipalities have a school (see Chapter 2).

An ageing population with low levels of migration

The Czech Republic has a population of 10.5 million (Table 1.2). As in a number of OECD countries, the Czech population is ageing. Between 1990 and 2015, the Czech population aged 15 to 64 grew by 2.6%, but the Czech population aged 65 or older grew by 47%, while at the same time the population aged 15 years or younger shrank by 28%.[1] The decline in the school age population has been steep (see Figure 1.3). Ageing populations are a common challenge in the European Union. By 2030, the old-age dependency ratio (65 years or older / population aged 15 to 64) in the Czech Republic is predicted to be 35, that is ten percentage points higher than the 2013 ratio (European Commission, 2015a, Table 1.1.14). While this would remain just below the EU average, these population projections indicate significant pressures on securing funding for education in the future, given increased needs for pension funding. In 2011, the Czech Republic spent 8.9% of GDP on public pensions, which is above the OECD average of 7.9% (OECD, 2015c). The Czech Republic is gradually raising the age of retirement (as are other OECD countries) to 66 years, with steeper increases for women so as to level out the retirement ages for men and women. Currently, men retire at age 62 years and 8 months and women at age 61 years and 4 months (OECD, 2015c).

Table 1.2. **Czech regions: area, population and number of municipalities**

Territorial unit	Area (km^2)	Population			Number of municipalities				
		Total (thousands)	Percentage of the national total	Average age (years)	**Total**	Percentage of the national total	Rural (< 3 000)	Urban (> 3 000)	Of which: City (> 1 million)
Czech Republic	78 868	**10 538**	100	41.7	**6 253**		5 800	453	5
Prague	496	**1 259**	12	42.0	**1**	0.0	-	1	1
Central Bohemia	11 016	**1 315**	12	40.7	**1 145**	18.3	1 073	72	-
South Bohemia	10 057	**637**	6	41.9	**623**	10.0	590	33	-
Pilsen	7 561	**575**	5	42.1	**501**	8.0	472	29	1
Karlovy Vary	3 314	**299**	3	41.8	**132**	2.1	114	18	-
Usti	5 335	**824**	8	41.2	**354**	5.7	318	36	-
Liberec	3 163	**439**	4	41.4	**215**	3.4	193	22	1
Hradec Kralove	4 759	**552**	5	42.3	**448**	7.2	419	29	-
Pardubice	4 519	**516**	5	41.7	**451**	7.2	424	27	-
Vysocina	6 796	**510**	5	41.9	**704**	11.3	679	25	-
South Moravia	7 195	**1 173**	11	41.9	**673**	10.8	625	48	1
Olomouc	5 267	**636**	6	42.0	**399**	6.4	373	26	-
Zlín	3 963	**585**	6	42.2	**307**	4.9	276	31	-
Moravia-Silesia	5 427	**1 218**	12	41.8	**300**	4.8	244	56	1

- : Absolute zero.

Source: Czech Statistical Office (2015), *Statistical Yearbook of the Czech Republic – 2015*, *www.czso.cz/csu/czso/statistical-yearbook-of-the-czech-republic-2015*, Table 2.3 and author calculations.

Birth rates were low in the early 2000s, but increased considerably between 2005 and 2010; the number of live births has been relatively stable since 2011 and stands at 109 860 in 2014 (Czech Statistical Office, 2015, Table 4.10). Population growth between 2003 and 2012 has been driven by migration (Table 1.3). However, the Czech population remains ethnically very homogenous. Among OECD countries, the Czech Republic has one of the lowest proportions of foreign-born population, although since 2000 this increased significantly and stood at 7.0% in 2013 (OECD, 2015d, Figure 1.11). There are less than half a million foreigners with resident permits (4.1% of the population in 2013) (OECD, 2015d). The proportion of foreign residents with permanent residence has been steadily increasing since 2010 and in 2014 stands at 55%,

Table 1.3. **Components of population growth in the Czech Republic**

	Growth per 1 000 inhabitants						Level (thousands of individuals)
	2005	2010	2012	2013	Average		
					2003-07	2008-12	2013
Total	3.0	2.5	1.0	-0.4	3.4	3.5	-4
Natural increase	-0.6	1.0	0.0	-0.2	-0.3	0.7	-2
Net migration	3.5	1.5	1.0	-0.1	3.9	2.7	-1

Source: OECD (2015d), *International Migration Outlook 2015*, *http://dx.doi.org/10.1787/migr_outlook-2015-en*.

that is, a quarter of a million permanent residents (Czech Statistical Office, 2015, Table 4.21). Between 2003 and 2012, the largest inflows of migrants have been from the Slovak Republic, the Ukraine and Vietnam. These three nationalities made up 57% of foreign residents in the Czech Republic (OECD, 2015d). In 2013, migrants from the Slovak Republic were the most numerous, at the same time the largest outflows were Ukrainian nationals (a net outflow of 7 000 Ukrainians in 2013). Bussolo, Koettl and Sinnott (2015) estimate the need for a net migration of 4.6 per 1 000 habitants between 2015 and 2025 to meet the population replacement rate. This is much higher than the net migration over recent years (Table 1.3).

In 2013/14, migrants made up less than 2% of the school population (MŠMT, forthcoming). The proportion of migrants in the PISA 2003 sample was 1.3% and in the PISA 2012 sample was 3.2%. In both surveys there was a clear performance disadvantage for migrant students, but this was not as pronounced as in the OECD on average (OECD, 2013a, Table II.3.4b). A closer look at the performance of the three major migrant groups shows above average performance for students from Vietnam and below average performance for students from the Slovak Republic and the Ukraine (OECD, 2013a, Table II.3.11).

Increase in educational expenditure since 2005, but investment in schooling remains comparatively low

Compared to other OECD countries, the Czech Republic has more limited potential resources available for education as indicated by its comparatively low national income (in 2012, per capita Gross Domestic Product [GDP] was USD 25 364 compared to USD 33 732 on average in the OECD) (Figure 1.2). Contrary to in the OECD on average, since 2000 the Czech Republic has gradually increased public expenditure on education as a percentage of total public expenditure (from 8.0% to 8.9%; compared to a decrease from 11.8% to 11.6% on average) (OECD, 2015e, Table B4.2). Over the same period, public expenditure has also increased as a percentage of GDP (from 3.2% to 3.7%).

Between 2005 and 2012, expenditure at the primary, secondary and post-secondary non-tertiary levels increased by 14%, that is, at exactly the same pace as in the OECD on average (OECD, 2015e, Table B1.5a). However, due to the decline of 15% in the Czech school population over the same period (see also Figure 1.3), expenditure per student increased by 34% – a bigger increase than in the OECD on average (21%) (OECD, 2015e, Table B1.5a). A far greater increase occurred in expenditure per student at the tertiary level and this increased at a greater rate than in the OECD on average (33% increase in the Czech Republic; 11% in the OECD on average) (OECD, 2015e). This is reflected in the indicator of expenditure as a percentage of GDP: since 2005 expenditure at the primary and secondary level had slightly decreased, but in 2012 was back at the 2005 level (2.8%); in contrast, expenditure at the tertiary level has steadily increased from 1.0% of GDP to 1.4% in 2012 (OECD, 2015e, Table B2.2).

Compared to the OECD on average, expenditure per student at the primary level is particularly low (Table 1.4). For primary and lower secondary education, expenditure on educational institutions relative to GDP is 0.7 percentage points lower than on average in the OECD. Cumulative expenditure per student (aged 6 to 15) is among the lowest in the OECD (USD 54 519 compared to USD 83 382 on average) (Figure 1.2). Based on these indicators as well as the comparatively smaller proportion of the Czech adult population educated to the tertiary level, the OECD (2014a) classes the Czech Republic among the OECD countries with the most challenging demographic, social and economic contexts for compulsory education. Other OECD countries in this group include other Central European countries Hungary, Poland and the Slovak Republic, and also Chile, Mexico, Portugal and Turkey.

Table 1.4. **Key indicators on investment in education, 2012**

		Czech Republic	OECD average
Annual expenditure per student (in equivalent USD, using PPPs)	Primary education	4 728	8 247
	Secondary education	7 469	9 518
	Tertiary (including Research and Development activities)	10 319	15 028
Expenditure on educational institutions as a percentage of GDP (%)	Total primary to tertiary	4.2	5.2
	Primary and lower secondary	1.7	2.5
	Upper secondary	1.1	1.2
Total public expenditure on primary to tertiary education	As a percentage of total public expenditure (%)	8.9	11.6

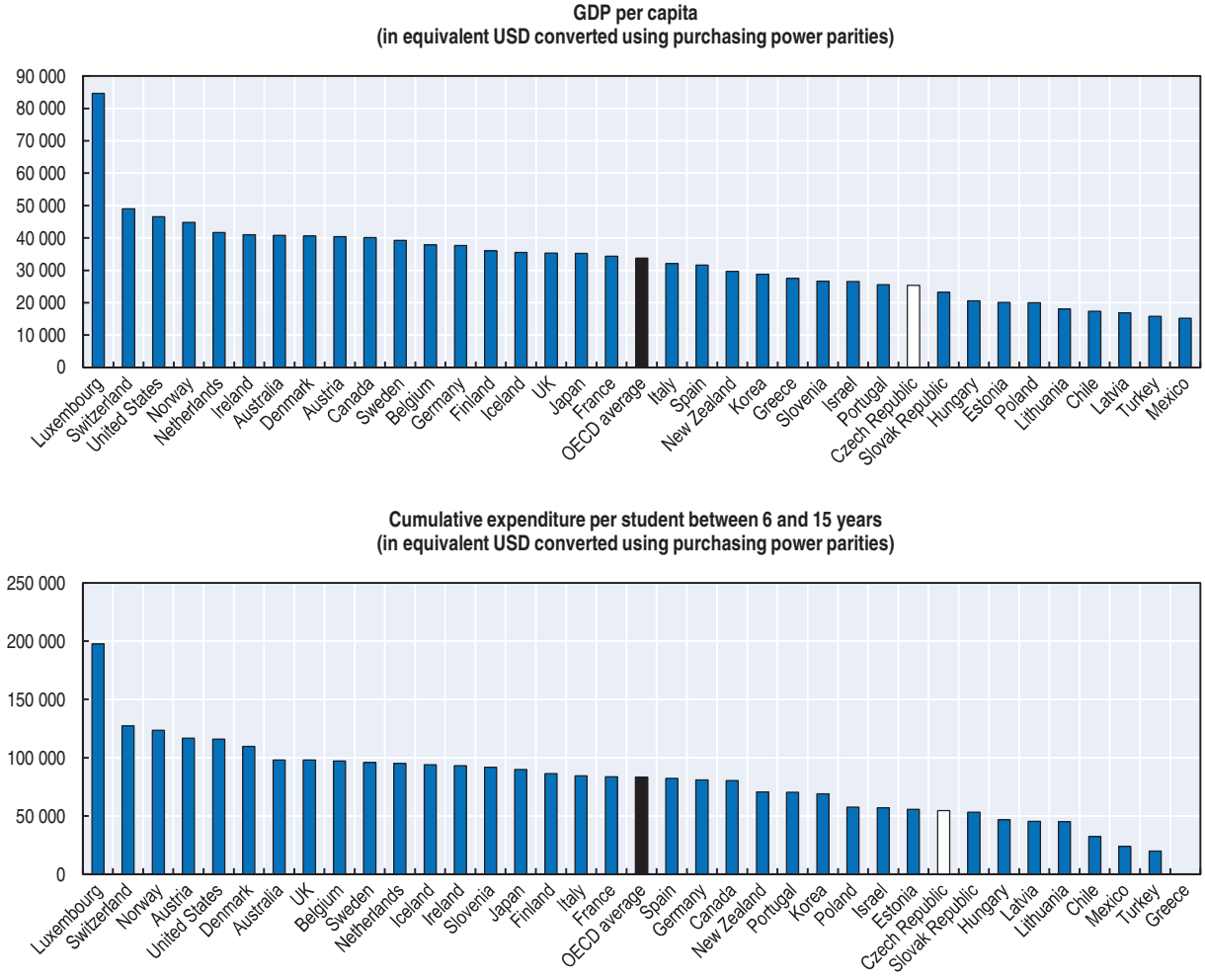
Source: OECD (2015e), *Education at a Glance 2015: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2015-en*.

Indicators of low levels of trust in society and in the government

According to the results of various opinion surveys, there appears to be a generally low level of trust in Czech society. For example: results from a Pew Research Centre survey in 2007 revealed around 60% of individuals surveyed did not agree with the statement "Most people in this society are trustworthy" (Cerna, 2014, Figure A.9); also, Czech adults participating in the OECD Survey of Adult Skills reported comparatively low levels of interpersonal trust (e.g. OECD, 2014c, Chart A8.4). There also appears to be a growing lack of trust in the Czech government: results from the International Social Survey Programme point to a deterioration in the level of trust in government administrators (civil servants) in the Czech Republic between 1996 and 2006 (Cerna, 2014, Figure A.8); and results of the Gallup World Poll indicate that the international financial crisis has further fuelled the perception that the Czech government is corrupt (OECD, 2014d, Figure 7.9). According to Guasti et al. (2014) there is strong government rhetoric on the need to tackle corruption which is a problem on all political sides and both the Czech media and police play an active role in exposing political corruption.

However, there appears to be greater trust in the education system. According to results of the Gallup World Poll, just over 60% of individuals surveyed in the Czech Republic reported having confidence in the education system in both 2006 and 2012, which is similar to the average among participating countries (Cerna, 2014, Figure 2).[2] However, in the Strategy for Education Policy of the Czech Republic until 2020 (hereafter "Strategy 2020"), it is stated that: uncertainty over what policy moves would be taken by the ministry and other key policy makers has intensified a growing level of uncertainty in the education system; and mutual trust between the various stakeholders in education has been diminishing (MŠMT, n.d.).

Figure 1.2. **Comparatively low national income and investment in schooling**



Note: Reference year is 2010.

Source: OECD (2014b), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, *http://dx.doi.org/10.1787/9789264208780-en*, Table 1.2.27.

The school system in the Czech Republic

The Czech school system is highly differentiated and is organised around three main stages: first stage of basic education; second stage of basic education; and secondary education.

Basic education (compulsory school education: primary and lower secondary education)

Czech children must attend school for a period of nine years. Compulsory school attendance commences at the beginning of the school year following the day a child turns six years old, unless deferment is granted.

First stage of basic education (primary education)

All children complete the first five years of compulsory education (School Years 1 to 5) in a basic school, typically from ages 6 to 10. This corresponds to the first stage of basic education and is equivalent to primary education internationally (ISCED [International Standard Classification of Education] 1).

Second stage of basic education (lower secondary education)

The second stage of basic education comprises four years (School Years 6 to 9) from the typical ages of 11 to 14 years. Most children continue the second stage of basic education in a basic school. However, from the age of 11 or 13, children may select to study lower secondary education (ISCED 2) in a different institution:

- a *gymnasium* (schools offering either six- or eight-year study programmes). Students demonstrating strong academic skills may enter a *gymnasium* on completion of the 5th year at the typical age of 11 (8-year study programme), or possibly on completion of the 7th year at the typical age of 13 (6-year study programme)
- or a *conservatoire*. Students with a special artistic talent may, on completion of the 5th year of basic school (at typical age of 11), enrol in an 8-year study programme.

Admission to these school types may require children to complete an entrance examination or aptitude test. All such conditions and requirements are set by the school.

Basic education for children with special educational needs

Children with special educational needs can follow basic education in mainstream classes of basic schools (individual integration), in special classes of basic schools (group integration) or in special schools which are designed for students with specific educational needs. Within the appropriate framework, children with special educational needs may follow a ten-year programme.

Secondary education (non-compulsory education: upper secondary education)

"Secondary education" comprises an offer of different educational programmes, on completion of which the majority of students acquire a qualification internationally equivalent to an upper secondary qualification (ISCED 3). Studying from the typical age of 15 and in different school types, students may acquire:

- "Secondary education" (two-year programmes which do not require a certificate of completion, this is actually classified as ISCED 2). In 2013, 0.4% of students in secondary schools were enrolled in such programmes (MŠMT, forthcoming). These are offered by **practical schools** and are geared towards entering the job market. Students are typically aged 15 to 16.
- "Secondary education with a certificate of apprenticeship" (two- or three-year programmes). In 2013, 21.8% of students in secondary schools were enrolled in such programmes (MŠMT, forthcoming). These are offered by **vocational secondary schools** and are mainly geared towards preparing students for access to the labour market, but can also lead to further study. Students are typically aged 15 to 17 when following these programmes.
- Or "secondary education with a general certificate of education" (four-year programmes). In 2013, 71.9% of students in secondary schools were enrolled in such programmes (MŠMT, forthcoming). Some students in *conservatoires* would also study toward this qualification.
  - ***Gymnasia* and lyceums:** These offer students various branches of study programmes and are mainly geared towards preparing students for further education and study. Such programmes and schools are regarded as prestigious. Students are typically aged 15 to 18 when following these programmes, but may enrol in a *gymnasium* at an earlier age (age 11 or 13).

- **Technical secondary schools:** These offer students four-year technical secondary programmes and are mainly geared towards preparing students for higher vocational education and study. Such programmes and schools are regarded as prestigious. Students are typically aged 15 to 18 when following these programmes.
- ***Conservatoires:*** These develop skills in basic and basic artistic education, and prepare students for the performance of exacting artistic and pedagogical activities in the branches of education: music, dance, singing and dramatic art. In 2013, 0.1% of students in secondary education were enrolled in 18 *conservatoires*.

Evidence on the quality, equity and efficiency of the Czech school system

A highly educated population, typically attaining upper secondary education

Compared to other European countries, a higher proportion of Czech citizens aged 25 to 64 years has attained upper secondary education: 92% compared to 75% on average in the OECD (OECD, 2014c, Table A1.2a). In fact, upper secondary is the highest level of education attained by the vast majority of Czech 25-64 year-olds (73%, compared to 44% on average in the OECD) (OECD, 2014c, Table A1.5b). This is similar to in other Eastern European countries, although, with the exception of Prague, the Czech regions dominate the top ten European regions on this indicator (Ballas et al., 2012, Table 3.15). In 2012, upper secondary graduation rates in the Czech Republic were around the OECD average (82% in the Czech Republic; 84% in the OECD) (OECD, 2014c, Chart A2.1). The majority of upper secondary graduates had completed an academic programme preparing the students for entry to university (58%; 61% on average in the OECD).

Historically low level of tertiary attainment, but a rapid expansion

Historically, the proportion of the Czech population that has attained tertiary education is comparatively low. In 2012, 19% of 25-64 year-olds held a tertiary qualification, compared to 32% on average in the OECD (OECD, 2014c, Table A1.3a). However, a steadily increasing proportion of young Czechs attains tertiary education and first-time graduation rates from university programmes are now just above the OECD average. In 2012:

- The first time graduation rate from university programmes was 40% – just above the OECD average and three times as many as in 1995 (13%) (OECD, 2014c, Table A3.2a).
- Twenty-eight per cent of Czech 25-34 year-olds had attained tertiary education (OECD, 2014c, Table A1.3a), representing an annual growth rate of 7.9% since 2000 – more than twice the rate than on average in the OECD (OECD, 2014c, Table A1.4a). The growth rate in tertiary education attainment is particularly pronounced among Czech women aged 25 to 34 (9.6%, compared to 6.0% for men) (OECD, 2014c, Table A1.4b).
- The difference between the younger and older generations in levels of tertiary attainment in the Czech Republic was slightly above the difference on average in the OECD (OECD, 2014c, Chart A1.3).
- Entry rates into university programmes were just above the OECD average (60% compared to 58% in the OECD) (OECD, 2014c, Table C3.1a) and have more than doubled since 2000 (25%) (Table C3.2a).

The link between educational attainment and employment is particularly pronounced

Employment rates are considerably lower for Czechs who do not have upper secondary education (41% compared to 73% with upper secondary education) and are 43 percentage

points lower than those who have tertiary education – one of the biggest employment disadvantages among OECD countries (OECD, 2014c, Table A5.1a). Equally, unemployment rates for those without upper secondary education are significantly higher: in 2012, 25.5% for 25-64 year-olds, compared to 13.6% on average in the OECD, and 32.8% for 25-34 year-olds, compared to 19.8% on average in the OECD (OECD, 2014c, Table A5.2a). At the same time, results from the OECD Survey of Adult Skills indicate that among OECD countries the Czech Republic has the highest rates of skills mismatch with just under 30% of workers over-skilled (OECD, 2013c).

Toward the end of compulsory education Czech students perform around the OECD average

According to results from the OECD Programme for International Student Assessment (PISA), Czech 15-year-olds perform around the OECD average in the reading and mathematics assessments and above the OECD average in the science assessment (Table 1.5). Across the different PISA performance areas, the Czech Republic has average proportions of both high and low performers, with the exception of fewer low performers in science – the area where Czech average performance was strongest (Table 1.5). However, between the PISA 2003 and 2012 assessments, there has been a steady decline in student performance on the mathematics assessment.

Table 1.5. **Educational outcomes in international comparison**

	Average performance in PISA score points (PISA 2012)			Trend in mathematics performance (PISA 2003-12)	Annualised change in PISA score points	Percentage of 35-44 year-olds with tertiary education
	Mathematics	Reading	Science			
Austria	506[1]	490[1]	506	Steady, unchanged	0.0	21
Czech Republic	499	493	508[1]	Steady decline	-2.5[1]	18
Germany	514[1]	508[1]	524[1]	Steady improvement	1.4[1]	29
Hungary	477[1]	488[1]	494[1]	Accelerating decline	-1.3[1]	21
Poland	518[1]	518[1]	526[1]	Accelerating improvement	2.6[1]	24
Slovak Republic	482[1]	463[1]	471[1]	Steady decline	-1.4[1]	17
OECD average	494	496	501	Annualised change	-0.3	34

1. Value that is significantly above or below the OECD average (columns 1 to 3) or statistically significant (column 5). Data from OECD PISA 2012 reflect results of Czech students at both the lower secondary and upper secondary levels. In PISA 2012, 44.1% of participating Czech students were in the 10th year (upper secondary education), while 51.1% were in the 9th year and 4.5% were in the 8th year (lower secondary education) (OECD, 2014b, TablegA2.4a).

Source: OECD (2014a), *OECD Economic Surveys: Czech Republic 2014*, *http://dx.doi.org/10.1787/eco_surveys-cze-2014-en*; and OECD (2014b), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, *http://dx.doi.org/10.1787/9789264208780-en*.

Selection from age 11 and strong link between school socio-economic composition and performance

The Czech Republic's school system ranks among the most horizontally stratified in the OECD. Children may be selected to enrol in an eight-year *gymnasium* programme as early as age 11; on average in the OECD the first age of selection is 14 years (Table 1.6). Insights from PISA 2012 results show a very strong association between the school's average socio-economic composition and the average performance of its students – more than double the score point difference found in the OECD on average (Table 1.6). Students in the most socio-economically advantaged schools scored an average of 588 points in the

Table 1.6. **Selected indicators of equity in student performance, PISA 2012**

Indicator		Czech Republic	OECD average
Top performers (%)	Mathematics	13	13
	Reading	6	9
	Science	8	8
Low performers (%)	Mathematics	22	23
	Reading	17	18
	Science	14	18
Gender performance difference in PISA score points (girls minus boys)	Mathematics	-12	-11
	Reading	39	38
	Science	-1	-1
First age of selection		11	14
Number of distinct programmes/schools for 15-year-olds		6.0	2.6
Students who repeated a year (%)		5	12
Variance in performance explained by economic, social and cultural status (ESCS) (%)	Mathematics	16	15
	Reading	15	13
	Science	14	14
Score point difference associated with a one unit increase in ESCS	Mathematics	51	39
	Reading/Science	46	38
Score point difference in mathematics associated with an one unit increase in school average ESCS		89	35

Note: Top performers = students performing at PISA level 5 and above; low performers = students performing below PISA level 2.

Source: OECD (2014b), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, *http://dx.doi.org/10.1787/9789264208780-en*; OECD (2013a), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed*, *http://dx.doi.org/10.1787/9789264201132-en*; OECD (2013b), *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*, *http://dx.doi.org/10.1787/9789264201156-en*.

mathematics assessment – this compares to the Czech average performance of 499 points (OECD, 2013a, Table II.4.2).

By age 15, Czech students can be in 6 distinct educational programmes – twice the OECD average number. Some research has shown that family background strongly influences access to six- and eight-year *gymnasium* programmes (e.g. Koucký et al., 2004 and Münich, 2005 in Santiago et al., 2012). According to MŠMT (forthcoming) results of the Eurostudent V survey indicate a high degree of social selectivity that increase the differentiation of schools at all levels of the education system and favour the reproduction of elites. While students' socio-economic background explains the same amount of variance in overall performance as in the OECD on average, the performance disadvantage for those from less advantaged socio-economic backgrounds is much greater than on average in the OECD (Table 1.6).

Access for children from more advantaged families to the most "prestigious" educational tracks (six- or eight-year *gymnasium* programmes) appears to be confirmed in international data showing that the Czech Republic has the lowest educational upward mobility rate of all OECD countries: 71% of 25-34 year-olds have the same attainment as their parents (compared to the OECD average of 52%); only 17% of 25-34 year-olds have exceeded their parents' educational attainment (compared to the OECD average of 32%) (OECD, 2015e).

Comparatively low proportions of early school leavers and students who have repeated a school year

There is a comparatively low proportion of Czech 18-24 year-olds leaving school early (in 2014: 5.5% in the Czech Republic; 11.1% in the European Union on average), although

this is increasing gradually, in contrast to the decreasing trend in the European Union (European Commission, 2015b). Similarly, a much lower proportion of Czech fifteen-year-olds reported having repeated a year at some stage of their schooling compared to on average in the OECD (Table 1.6).

However, it is an established practice in the Czech Republic to delay a child's enrolment in basic school. In 2014/15, 19% of children admitted to Year 1 of basic education were older than 6 years.

Gender differences mirror those in the OECD in compulsory education, but become more pronounced in tertiary education

The magnitude and direction of performance differences between Czech boys and girls at age 15 mirrors that of their counterparts in the OECD on average (Table 1.5). Girls show a clear performance advantage in reading; boys perform better at mathematics; and there is no difference in science performance. However, in terms of access to and completion of tertiary education, Czech women dominate more than on average in the OECD. In 2013, the percentage of female tertiary graduates in the Czech Republic were among the highest in the OECD: 66% from 2-3 year programmes, 63% from bachelor's or equivalent and 61% from master's or equivalent, compared to OECD averages of 56%, 58% and 56% respectively (OECD, 2015e, Table A3.4). While women make up the majority of new entrants to tertiary education in all but three OECD countries, the Czech Republic sees the largest share of women (58%, compared to the OECD average of 54%) (OECD, 2015e, Table C3.2). At the same time, unlike in other OECD countries (with the exception of Korea), higher skilled Czech women are equally likely to be outside the labour force, compared to lower skilled women (OECD, 2013c).

Economic and educational inequalities among the Czech regions

Regional income (as measured by GDP) varies significantly within the Czech Republic. Half of the Czech national GDP is concentrated in the four regions with the largest populations (Table 1.2): Prague (25%), the Central Bohemian region (11%), the South Moravian region (10%) and the Moravian-Silesian region (10%) (Table 1.A1.1). All except the Moravian-Silesian region also enjoyed higher than the national average economic growth between 2005 and 2011 (Table 1.A1.1). In contrast, the two poorest regions (Liberec region and Karlovy Vary region) had very low growth compared to the Czech national average over the same period (Table 1.A1.1). However, with the exception of Prague, the proportion of 25-64 year-olds whose highest level of attainment is upper secondary education does not vary greatly among the Czech regions (Table 1.7). The population in Prague stands out as being comparatively much better educated and features among the top ten European regions with the lowest proportions of population over 15-years-old that has attained less than upper secondary education (Ballas et al., 2012, Table 3.18).

However, there are pronounced disparities among the Czech regions in terms of tertiary education attainment (Table 1.6). The regions Karlovy Vary and Ústi (collectively classified as the Northwest in European statistics) feature among the ten European regions with the lowest proportion of persons aged 15 or over with tertiary education (Ballas et al., 2012, Table 3.22). These regions also have the highest unemployment rates in the Czech Republic (Figure 1.A1.3) and a low proportion of students in tertiary education (Table 1.6). The literature suggests that, where education plays an important role, levels of tertiary education are most strongly linked with stronger regional economic performance and, therefore, rates of access to tertiary education and keeping tertiary graduates in a region

Table 1.7. **Educational attainment and proportion of the population in education for Czech regions**

	Educational attainment – Percentage of population aged 15 years or more with:			Students in tertiary education as a proportion of 20-24 year-olds in the region (%)	Students in all levels of education as a proportion of total population in the region (%)
	Tertiary education	Upper secondary and post-secondary non-tertiary education	Pre-primary, primary and lower secondary education		
Prague	25.8	63.5	10.7	100	28.7
Southeast	13.7	69.4	16.9	72.9	22.6
Southwest	11.5	71.1	17.3	44.2	19.6
Moravia-Silesia	11.4	68.6	20.0	52.5	21.5
Central Bohemia	10.9	72.5	16.6	5.6	14.7
Northeast	10.6	72.1	17.4	32.3	19.3
Central Moravia	10.3	71.0	18.6	37.2	20.1
Northwest	7.0	69.2	23.8	20.4	18.5
Range among regions	18.7	8.9	13.1	94.4	14.0

Note: The table presents European data according to the Nomenclature of Territorial Units for Statistics classification Level 3 (NUTS3). Southeast comprises the Vysočina region and the South Moravian region; Southwest comprises the Central Bohemian region and the Pilsen region; Northeast comprises the Liberec region, the Hradec Kralove region and the Pardubice region; Central Moravia comprises the Olomouc region and the Zlín region; and Northwest comprises the Karlovy Vary region and the Ústi region.
Source: Ballas, D. et al. (2012), *Mind the Gap: Education Inequality across EU Regions*, European Commission by the NESSE network of experts, European Union, Tables 4.7 and 4.8.

are critical factors for economic performance (Ballas et al., 2012). When comparing regions across Europe, Prague has one of the highest proportions of students in tertiary education in relation to the 20-24 year-old population in the region (100%; joint third highest proportion across European regions), while the Central Bohemian region that surrounds Prague has the second lowest proportion among European regions (5.6%) (Ballas et al., 2012, Tables 3.10 and 3.11).

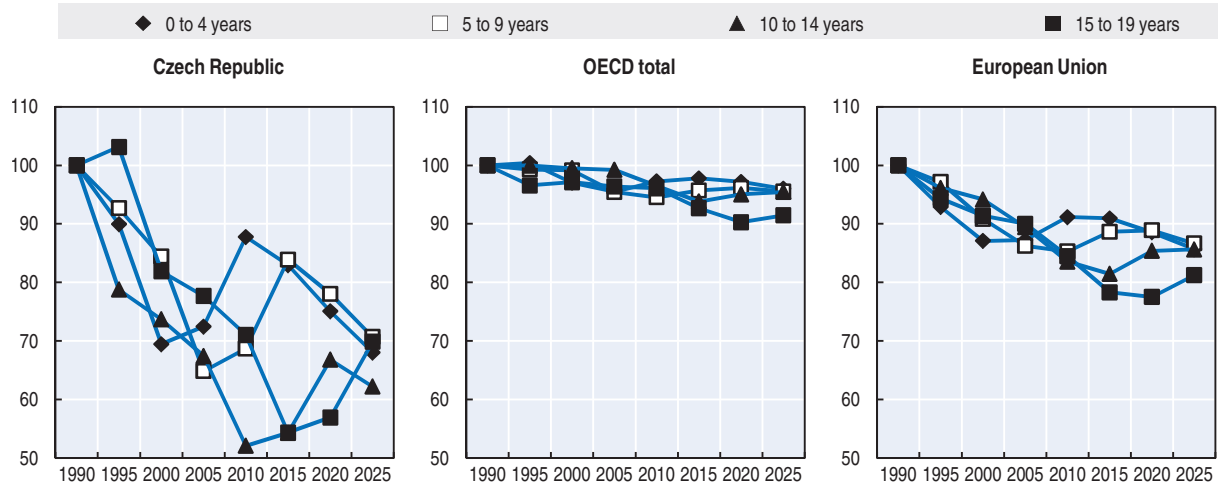
Unfortunately, there are no internationally comparable data allowing the comparison of performance between different Czech regions in the PISA assessments. However, results do allow a comparison of student performance on average between rural and urban areas. Among the Czech 15-year-olds participating in PISA 2012, 27% were in schools located in a city (over 1 million inhabitants), 66% were in schools located in a town (between 3 000 and 100 000 inhabitants) and 8% were in rural schools (fewer than 3 000 inhabitants) (OECD, 2013a, Table II.3.3a). Compared to observed performance differences between rural and urban areas internationally, these were rather moderate in the Czech Republic and were almost entirely accounted for by socio-economic differences (OECD, 2013a, Table II.3.3a).

Steep decline in the school age population has challenged the efficiency of the school network

One of the greatest challenges in recent years to the Czech school system has been the steep decline in the school-age population (MŠMT, forthcoming). The number of students in the Czech school system (compulsory education, upper secondary education and post-secondary non-tertiary education) dropped from 1.958 million in 1990/91 to 1.648 million in 2013/14, that is, a reduction of 16%. This decline has been dramatic in comparison to the evolution in the school-age populations in the European Union and certainly compared to in the OECD (Figure 1.3). While the decline has hit all age groups in compulsory and upper secondary education, demographic pressures hit lower secondary and upper secondary education the hardest: compared to in 1990, there was almost half the number of 10-14 year-olds

Figure 1.3. **Variation in school age population in the Czech Republic compared to in the OECD and the EU**

1990 = 100



Source: OECD.Stat (n.d.), Historical population data and projections (1950-2050), Demography and Population (database), *https://stats.oecd.org/Index.aspx?DataSetCode=POP_PROJ*.

in the Czech Republic in 2010; and the number of 15-19 year-olds is predicted to remain over 40% lower than the 1990 numbers until 2020 (Figure 1.3). While birth rates improved between 2000 and 2010, which saw an increase in capacity in primary education (the first stage of basic education), they have started to decline and this is predicted to continue over the coming years (Figure 1.3). This will exert renewed pressure on primary education (first stage of basic education).

Notes

1. While the number of people aged 65 or older increased from 1.296 million in 1990 to 1.91 million in 2015, over the same period the size of the population aged 15 or younger shrank from 2.223 million to 1.6 million (OECD database, Historical population data and projections [1950-2050]).
2. Internationally, reported levels of trust were highest in Ireland, Iceland and Finland (just over 80%); the Czech Republic was one of fourteen countries where between 60% and 70% of individuals reported confidence in the education system; in 12 countries, levels of trust were lower than 60% (in 9 between 50% and 60%; and in one below 50%); and in 14 countries levels of trust were higher than 70% (Cerna, 2014, Figure 2).

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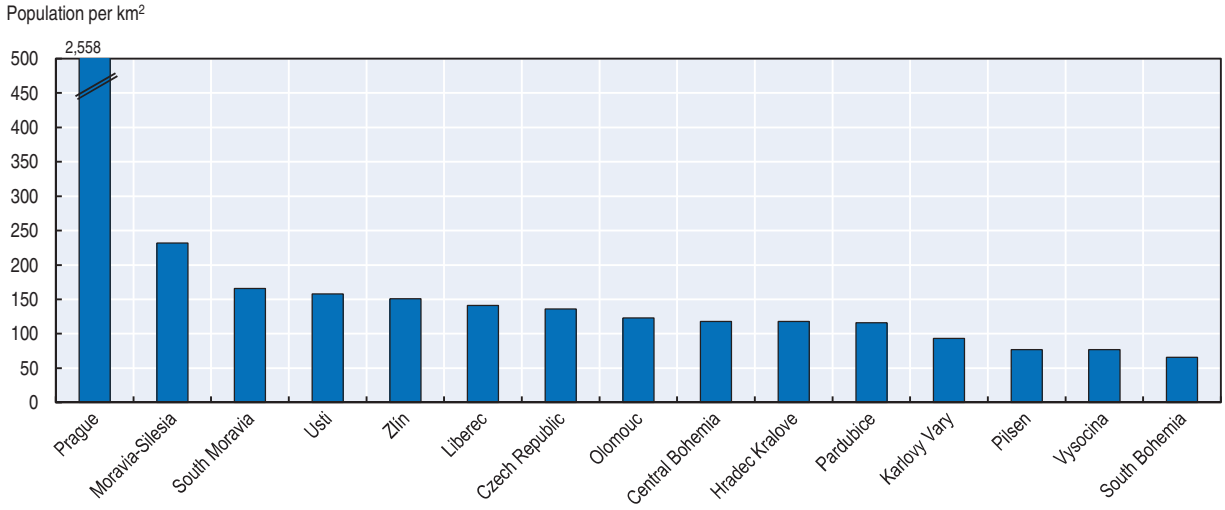
ANNEX 1.A1

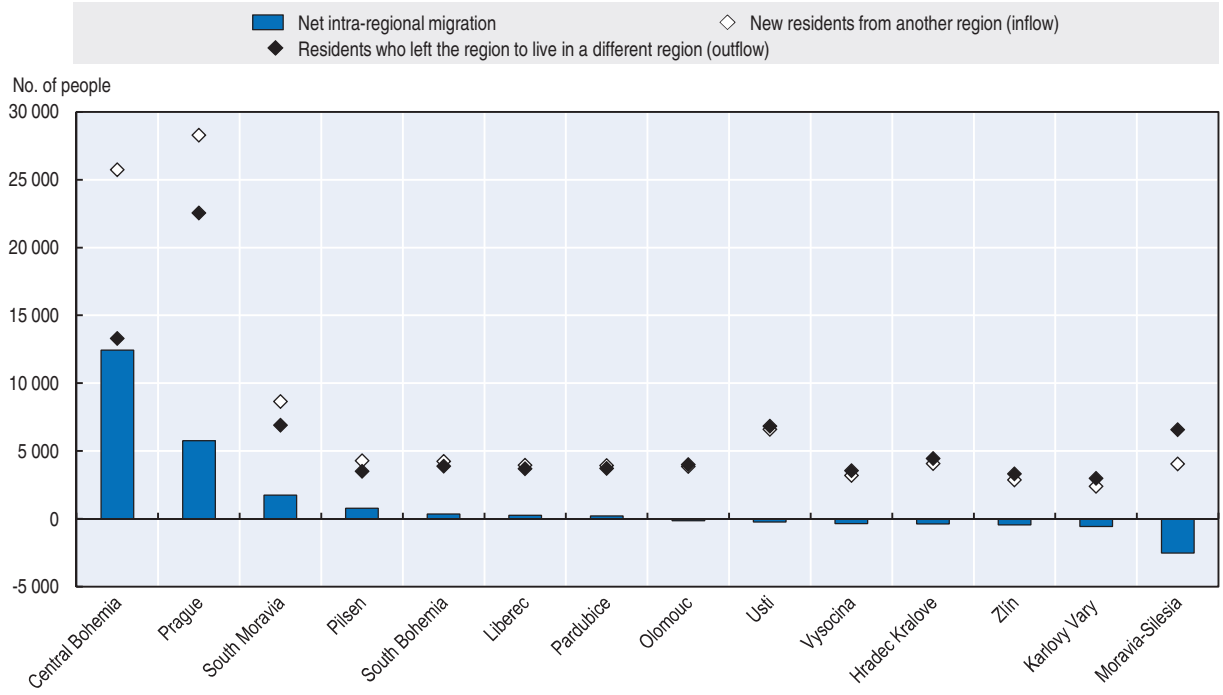
Data for Chapter 1

Figure 1.A1.1. **Population density in different Czech regions, 2012**



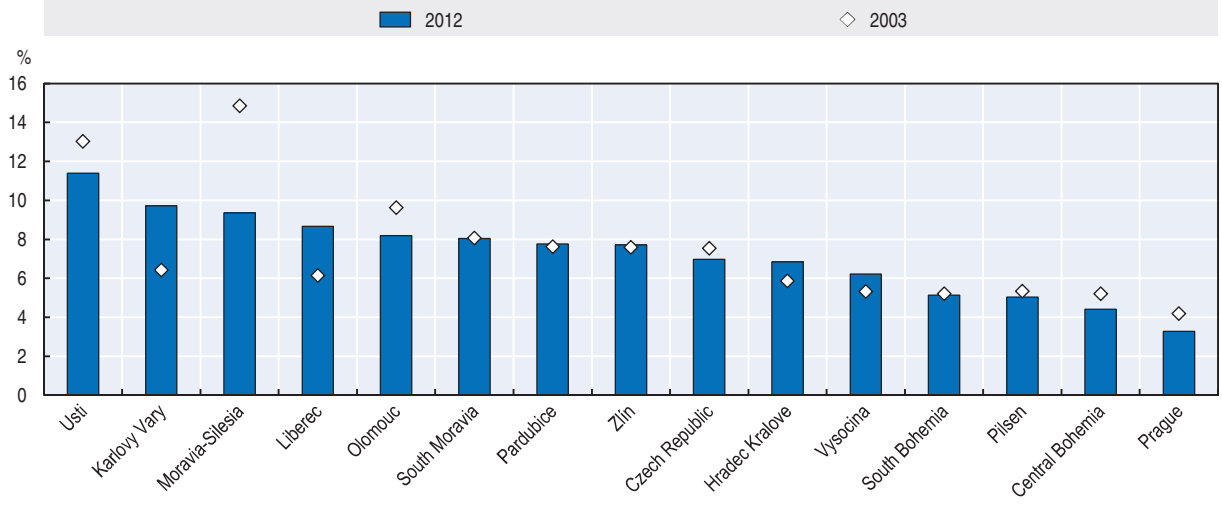
Source: OECD (2015f), OECD Regional Statistics (database), *http://dx.doi.org/10.1787/region-data-en*.

Figure 1.A1.2. **Intra-regional migration in the Czech Republic, 2011**



Source: OECD (2015f), OECD Regional Statistics (database), *http://dx.doi.org/10.1787/region-data-en.*

Figure 1.A1.3. **Unemployment rates in Czech regions, 2012 and 2003**



Source: OECD (2015f), OECD Regional Statistics (database), *http://dx.doi.org/10.1787/region-data-en.*

Table 1.A1.1. **Growth in national and regional GDP between 2000, 2005 and 2011**

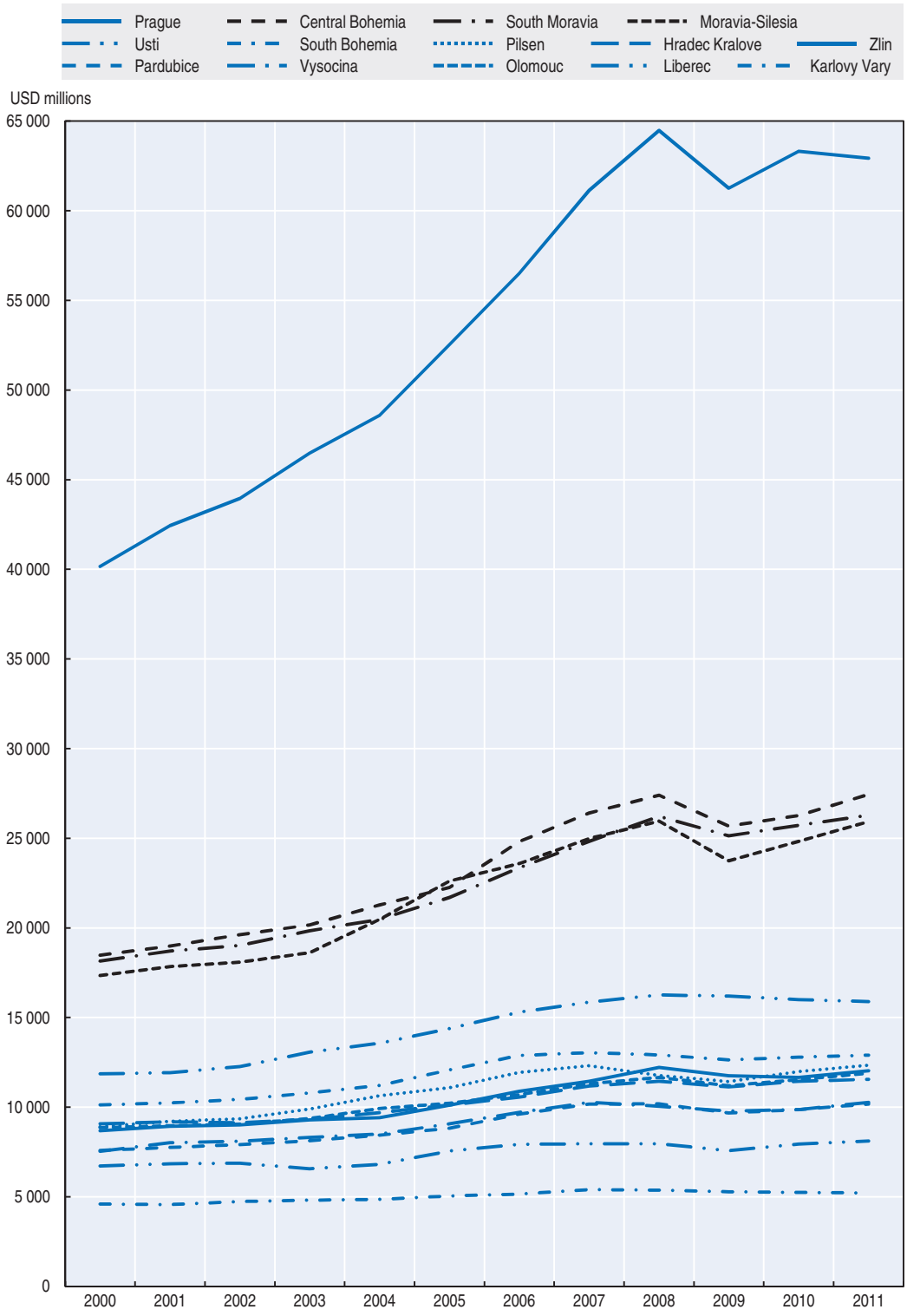
USD millions, Constant prices, constant PPP, OECD base year 2005

	GDP (USD)			Index of change (2005 = 100)	Proportion of national GDP (2011)
	2000	2005	2011	2011	(%)
Central Bohemia	18 481	22 261	27 444	123	10.8
South Moravia	18 157	21 697	26 281	121	10.4
Prague	40 168	52 534	62 924	120	24.9
Zlin	8 683	10 116	12 041	119	4.8
Olomouc	8 851	10 225	11 901	116	4.7
Czech Republic	**178 129**	**217 659**	**252 993**	**116**	..
Pardubice	7 591	8 820	10 171	115	4.0
Moravia-Silesia	17 353	22 613	25 923	115	10.2
Hradec Kralove	9 080	10 135	11 559	114	4.6
Vysocina	7 543	9 078	10 274	113	4.1
Pilsen	8 910	11 090	12 347	111	4.9
Usti	11 868	14 394	15 892	110	6.3
Liberec	6 716	7 562	8 110	107	3.2
South Bohemia	10 122	12 080	12 900	107	5.1
Karlovy Vary	4 604	5 053	5 223	103	2.1

Note: Czech regions are presented in descending order of growth in regional GDP between 2005 and 2011.
.. : not available.
Source: OECD (2015f), OECD Regional Statistics (database), *http://dx.doi.org/10.1787/region-data-en* and author calculations.

Figure 1.A1.4. **Regional GDP**

Constant prices, constant PPP, OECD base year 2005



Note: The Czech economy further contracted between 2011 and mid-2013 (see Figure 1.1).

Source: OECD (2015f), OECD Regional Statistics (database), *http://dx.doi.org/10.1787/region-data-en*.

Chapter 2

Governance of schooling and the school network in the Czech Republic

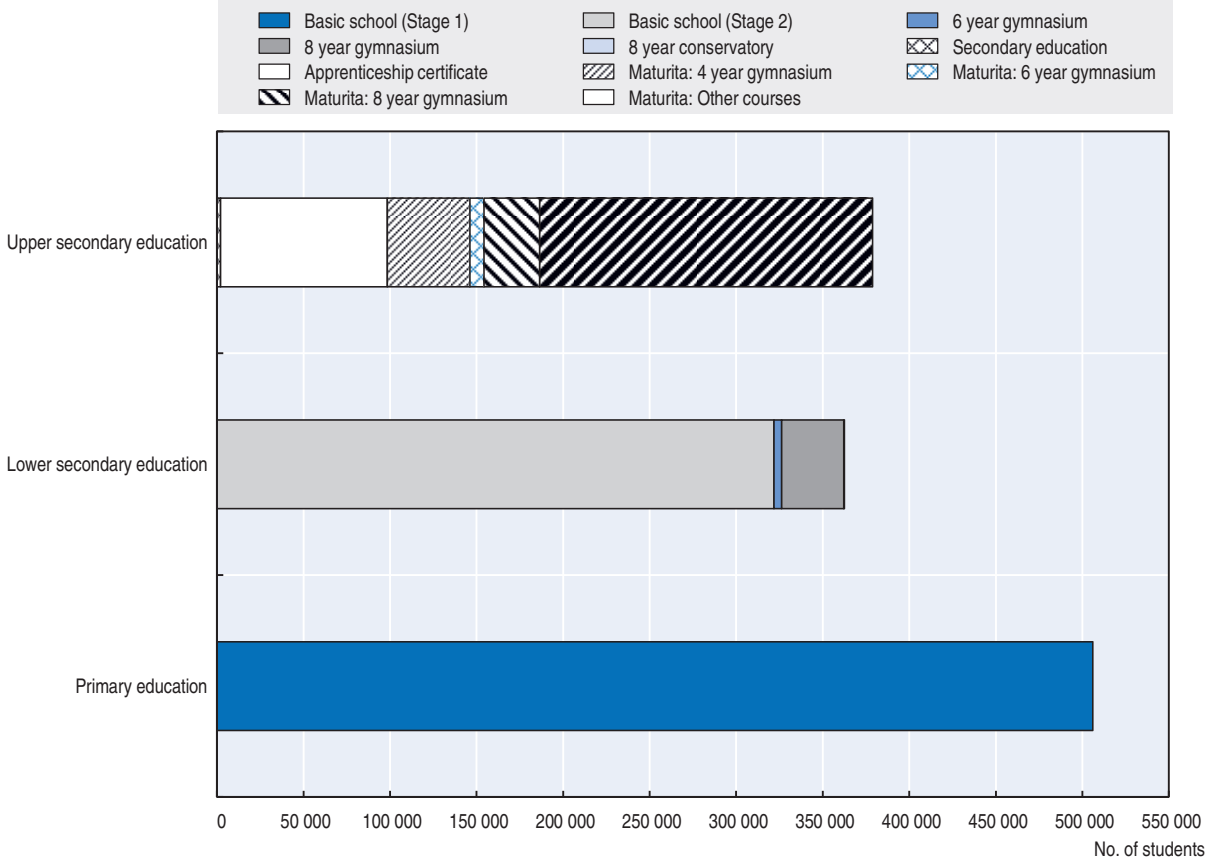
This chapter focuses on the framework of governance applied to schooling in the Czech Republic and on how the school network is organised. It looks at the oversight and management of the schooling system at the national, regional, municipal and school level and considers how different regions face different challenges to their respective network of schools. It considers the strengths and challenges inherent in the current system and makes policy recommendations designed to improve the governance of how resources are used effectively.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Context and features

As presented in Chapter 1, a steep decline in the school age population during the 1990s and 2000s majorly impacted the Czech school network. In the school year 2013/14, the Czech Republic educated 367 352 children in pre-school education, 868 934 students in basic education, that is primary and lower secondary education, and 378 754 students in upper secondary education (MŠMT, 2014). Figure 2.1 presents an overview of the current distribution of Czech students across the three main stages of schooling: first stage of basic education (primary education); second stage of basic education (lower secondary education); and secondary education (upper secondary education).

Figure 2.1. **Students enrolled in different levels of education, 2013/14**



Note: Secondary education is equivalent to lower secondary education in the international standard classification of education systems, but is presented as upper secondary education here to reflect the Czech school system and the typical age that students study this.
Source: MŠMT (2014), *Výroční zpráva o stavu a rozvoji vzdělávání v České republice v roce 2013: Vzdělávání v roce 2013 v datech* [*Annual Report on the Status and Development of Education in the Czech Republic in 2013: Education in 2013*], *www.msmt.cz/file/33944/*, Table 10.

Shared responsibilities within the school network

There are four major tiers of governance in the Czech school system. This has been the case since 2002-03 (Chapter 1). Responsibilities for organising and providing education in the public sector at different stages are broadly split as follows: first and second stages of basic education (municipalities); secondary education (regions). However, there are some complexities, including the organisation of some specialised school provision by the Ministry of Education, Youth and Sports and by regions at the second stage of basic education. In secondary education, there is also a well-established private sector (see below).

1. *The Ministry of Education, Youth and Sports*

The Ministry of Education, Youth and Sports (MŠMT) establishes the legal framework for the school system (and higher education) and sets parameters for the organisation of schooling. Notably, the MŠMT takes the lead on developing the long-term strategic orientations for the Czech school system – the current strategy has been established for a period of five years and constitutes a key steering document, the Strategy for Education Policy of the Czech Republic until 2020 (here after "Strategy 2020"). Based on this, a long-term plan for implementation of the strategy was being finalised around the time of the OECD review visit. The Long-term Plan for Education and Development of the Education System in the Czech Republic for the Period 2015-20 is now available in Czech on a dedicated website to the Strategy 2020 (*www.vzdelavani2020.cz/*).

The MŠMT also oversees the development of national curricula (the Framework Education Programmes) and holds overall responsibility for the School Registry of Schools and School Facilities (here after "school registry"). At the time of the OECD review visit, the Ministry of Education, Youth and Sports (MŠMT) had 986 employees. The majority of these (513 employees) was funded with European Union (EU) grants and the remaining (473 employees) by the state.

At the central level, there are a number of specialised bodies to support the implementation of MŠMT policies. The major bodies include:

- National Institute of Education (NÚV): The NÚV is directly managed and funded by the Ministry of Education, Youth and Sports. Its main objectives are:
  - to manage the development of Framework Education Programmes (FEP) and assist schools in creating their School Educational Programmes (SEP) as well as their introduction into teaching
  - to broadly promote the development of general, vocational, art and language education and support schools in the pedagogical-psychological, educational and career counselling and further education of teachers (with an emphasis on lifelong learning and co-operation with the EU).
- Centre for Evaluation of Educational Achievement (CERMAT): CERMAT was founded in 2006 and is directly managed and funded by the Ministry of Education, Youth and Sports. Its main objectives are:
  - to manage the common part of the state school-leaving examination (the *maturita*). The first *maturita* were organised in 2010
  - to prepare the proposals of the standards of evaluation of learning outcomes based on the curricula for approval by the Ministry of Education, Youth and Sports

- to conduct research in the field of forms, tools and methods of assessment of learning outcomes.

CERMAT provides results of the *maturita* to regional education offices and they choose whether or not to publish these.

- Czech School Inspectorate (ČŠI): The ČŠI is administrative body of the Czech Republic and part of the state organisational bodies. The MŠMT appoints (and dismisses) the chief school inspector. The ČŠI has its headquarters in Prague and 14 regional inspectorates. Its main objectives include:
  - evaluating operations in all schools and school facilities (e.g. school canteens, youth dormitories) which are in the school registry (inspectors visit schools established by various founders – state, private or church schools)
  - controlling compliance with legal regulations related to the provision of education and school services and checking and auditing state budget funding
  - producing school inspection reports (on each school inspected), thematic reports and audit protocols
  - analysing and publishing relevant and broadly usable data on conditions and quality of the Czech education system, including an annual school inspection report.

2. Fourteen Czech self-governing regions

The fourteen Czech self-governing regions are responsible for setting long-term development plans for their school systems. The regional long-term development plans should align to the national long-term development plan, but also include specific goals and objectives to fit the regional context. This is also an important steering tool for the Czech regions and the importance of the design of a specific regional development plan is underlined by the considerable differences in economic and educational context among the Czech regions (Chapter 1). The Czech regions are responsible for organising upper secondary educational provision. Also, the Czech regions distribute the state funding for "teaching costs" to all schools in their region, including those run by municipalities (see Chapter 3).

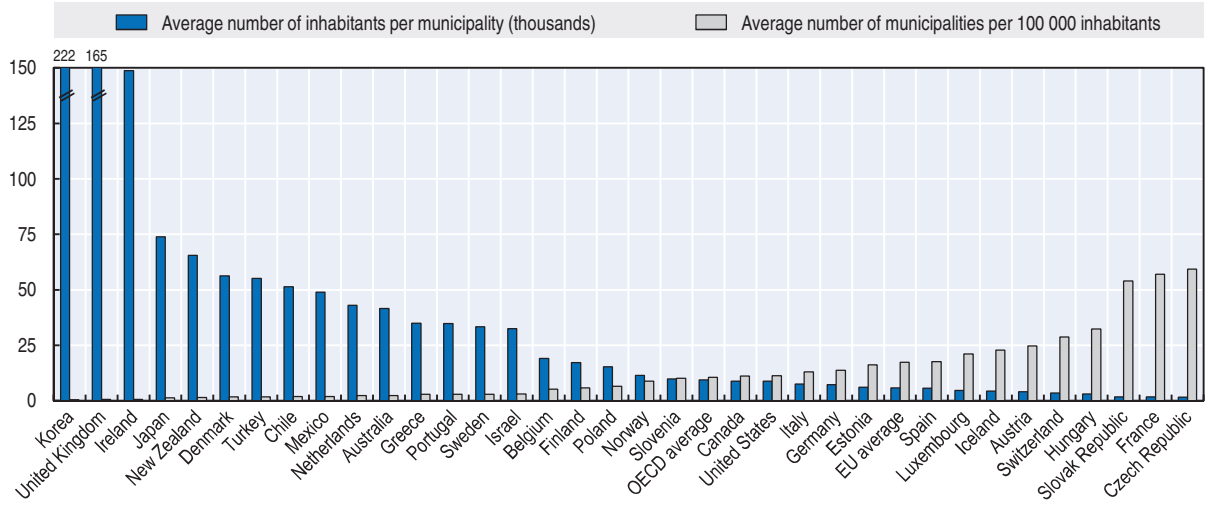
3. Over 6 000 self-governing municipalities

The third tier comprises the Czech municipalities, of which there are over 6 000 (Chapter 1, Table 1.2). The high number of municipalities and low average population in each municipality places the Czech Republic as the OECD country with the highest level of municipal fragmentation (Figure 2.2). Since 1990, the Czech municipalities have been responsible for organising and providing pre-school and basic education. However, less than half (2 560) of the municipalities operate at least one school (Table 2.7). Although municipalities are responsible for providing basic education, in 2013/14, 4.6% of students in the second stage of basic education (lower secondary education) were in schools run by the Czech regions, following either eight-year programmes (4.1%) or six-year programmes in a *gymnasium* (Figure 2.1).

4. Schools

As part of the process of decentralisation, the concept of schools as independent legal entities was fully introduced in 2003, when this was made mandatory for all schools. As independent legal entities, schools enter legal relations under their own name and bear full responsibility for these. The status of independent legal entities has given school

Figure 2.2. **Municipal fragmentation in international comparison, 2014/15**



Source: OECD (2015c), Subnational governments in OECD countries: Key data (brochure), OECD, Paris.

principals greater autonomy for decisions about financial matters, for the management of the school property to the extent determined by the school founder, for the independent management of labour affairs, the possible development of additional school activities and the management of own profits and losses, as well as their own accounting (see Chapter 5). While all schools are independent legal entities, public schools can have three specific legal forms: subsidised organisations, school legal entities, or organisational units of the state. School principals at schools which have the legal status of a subsidised organisation or a school legal entity, that is most public schools, are the authorised body of these schools and as such hold full responsibility for the quality of education, the management and administration of the school, the school's budget and finances, human resource management, and community relations.

These legal changes mean that, in international comparison, Czech schools enjoy high levels of autonomy: lower secondary schools in the Czech Republic make 68.0% of key decisions, compared to an OECD average of 40.6% (see Figure 5.2).[1] In fact, the Czech Republic is one of four countries (others are Australia, Iceland and the Slovak Republic) where there was a trend toward greater decision making at the school level between 2003 and 2011 (OECD, 2012, Indicator D6).

School autonomy is comparatively large in all domains – from the organisation of instruction and personnel management to planning and structures – with the exception of resource management where school autonomy is similar to the OECD average (Table 2.1).[2] However, the majority of school-level decisions are taken against a framework set by the Ministry of Education, Youth and Sports (Table 2.1). For example, for curricular issues, schools have substantial autonomy through the development of School Educational Programmes (SEP) as long as they are in line with national Framework Education Programmes (FEP).

A differentiated and broad educational offer

In international comparison, the Czech school system is one of the most differentiated, meaning that there is a number of different educational programmes and school types

Table 2.1. **Percentage of decisions taken at the school level in public lower secondary education, 2011**

	Czech Republic		OECD average		
	In full autonomy	Within a framework set by a higher authority	In full autonomy	Within a framework set by a higher authority	Other
Organisation of instruction	22	78	39	30	6
Personnel management	33	33	16	12	3
Planning and structures	0	70	3	20	0
Resource management	19	17	21	10	1

Source: OECD (2012), *Education at a Glance 2012: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2012-en*, Tables D6.4a and b.

offering different provision at the second stage of basic education (lower secondary) and secondary education (upper secondary education, both general, technical and vocational). From as young as 11 years of age, Czech children may attend a special school type offering a specialised educational provision. This is much younger than in the OECD on average (14 years, see Chapter 1, Table 1.6).

At the first stage of basic education, Czech children may attend a basic art school which provides a basic education with a specialised focus on dance, music and art. Despite the general context of a reduced student population in basic education, these enjoy high enrolment and remain popular.

At the second stage of basic education, students may attend eight-year or six-year programmes at a *gymnasium* (4.6% of students at the second stage of basic education in 2013/14, see Figure 2.1). These schools are organised by the Czech regions and in some cases also providers in the private sector. Czech children may also choose to follow the second step of specialised education in the arts and attend a *conservatoire* (in 2013/14, a negligible proportion of students in the second stage of basic education did so, see Figure 2.1).

The provision of upper secondary education is the responsibility of the Czech regions and is primarily organised along the lines of the final qualification that students work toward. In 2013/14, at the upper secondary level, 74.1% of students were in educational programmes leading to a *maturita* certificate (Figure 2.1). The *maturita* certificate can be achieved in both general education (in *gymnasia*) and technical education (in secondary technical schools [*střední odborné školy*, SOŠ]). In secondary technical schools, students can follow four-year technical programmes or *lyceum* programmes with a curriculum including up to 70% of general education (Cedefop, 2015).

In 2013/14, 25.4% of Czech upper secondary students were in educational programmes leading to an apprenticeship certificate (Figure 2.1). These are three-year vocational programmes, usually provided by secondary vocational schools (SoU), that prepare students to directly enter the labour market and perform manual work and similar occupations, e.g. bricklayer, hairdresser (Cedefop, 2015). There is a huge diversity in vocational programmes (there can be hundreds of different programmes in a region, see also Chapter 3). The fields of vocational education are organised and planned by the Czech regions.

A negligible proportion of students (0.5%) complete a "secondary education" programme, which is the international equivalent of a lower secondary education qualification. These programmes are offered by "practical schools" or secondary vocational schools (SoU) and are designed primarily for students with special educational needs (Cedefop, 2015). Such programmes aim to prepare students to directly enter the job market.

The private sector mainly provides upper secondary education, but recent increases in basic education

In 1990, an amendment to the Education Act introduced the possibility to establish privately managed schools. The aim was to extend educational possibilities in line with the interests of students and the needs on the labour market and to create a competitive environment in the school system (MŠMT, forthcoming). In 2012/13, 6.4% of Czech students were enrolled in privately managed schools.

Czech statistics distinguish between "church schools" and "private schools". Privately managed schools entered in the school registry receive public funding to cover teaching costs. Church schools receive 100% of the per capita national normatives, while private schools receive basic grants of between 50% to 80% of the per capita national normatives, which can be increased to 80% to 100% if the private school meets a certain set of criteria. Private schools enter into an annual contract with the relevant regional authority which sets the percentage of funding allocation. However, church schools receive their funding allocation directly from the Ministry of Education and some may receive an increased normative amount to also cover operational costs.

In 2012/13, 1.4% of Czech students were in schools established by registered churches and religious societies (MŠMT, forthcoming). Representatives of the Czech Bishops Conference reported that there are 140 denominational schools, all but one of which are Christian (95 Roman Catholic, 44 Protestant, 1 Jewish). The proportion of students enrolled outside the public sector has remained fairly stable since 2005/06 (6.6%). Compared to in other OECD countries, the private sector is less developed in the Czech Republic at the primary and lower secondary levels, that is, the Czech basic schools (Table 2.2), but since 2005/06 there has been a minor expansion in church schools offering basic education (MŠMT, forthcoming).

Table 2.2. **Proportion of students in private schools in international comparison, 2012**

	Pre-primary education			Primary			Lower secondary			Upper secondary		
	Public	Government-dependent private	Independent private	Public	Government-dependent private	Independent private	Public	Government-dependent private	Independent private	Public	Government-dependent private	Independent private
Austria	70	30	..	94	6	..	91	9	..	90	10	..
Czech Republic	**98**	**2**	**x**	**98**	**2**	**x**	**97**	**3**	**x**	**86**	**14**	**x**
Germany	35	65	..	96	4	..	91	9	..	92	8	..
Hungary	93	7	x	89	11	x	88	12	x	76	24	x
Poland	84	1	14	97	1	3	95	1	4	85	1	14
Slovak Republic	96	4	0	94	6	0	93	7	0	85	15	0
OECD average	68	20	11	89	8	2	86	11	3	81	14	5
EU21 average	75	15	11	90	8	2	86	12	2	82	14	4

x: not applicable.
.. : not available and included in the column to the left.
Source: OECD (2014), *OECD Economic Surveys: Czech Republic 2014*, *http://dx.doi.org/10.1787/eco_surveys-cze-2014-en*, Table C7.1.

At the upper secondary level, however, the proportion of students enrolled in the private sector is around the OECD average (Table 2.2). In the Moravian-Silesian region, the

Czech Republic's second most densely populated region (Figure 1.A1.1), out of the 909 schools in the region, 95 are in the private sector. While 0.7% of 6-14 year-old students are enrolled in the private sector, 18.1% of 15-18 year-old students are (data provided to the OECD review team by representatives of the Moravian-Silesian region). A specificity of the Czech private school sector is the predominant offer of vocational education (MŠMT, forthcoming). The PISA 2012 sample included 7.4% of students who were enrolled in privately managed schools (the sample includes both students at the lower and upper secondary levels of education) and showed no performance differences to those students in public schools – this stands in contrast to on average in the OECD where there is a clear performance advantage for students in private schools (OECD, 2014, Table IV.4.7).

A relatively large special education sector

For many years, the approach to educating children with special educational needs in the Czech Republic has been based on a classification with three broad categories of special needs: a health disability; a health disadvantage; or a social disadvantage. At the time of the OECD review, the MŠMT was working on a new classification system with five broad categories. According to legal regulations in force in the area of the school system, there are two ways of educating students with special educational needs: i) individual integration; and ii) group integration (special classes both in normal schools and in schools designed for students with a specific learning challenge) (MŠMT, forthcoming). Table 2.3 gives the numbers and percentages of children in mainstream and special classes for different levels of schooling.

Table 2.3. **Trend in number and proportion of children with special educational needs**

	2009/10	2010/11	2011/12	2012/13	2013/14
Pre-schools					
Children individually integrated into mainstream classes	1 780	1 911	2 032	2 156	2 299
Share of children integrated in mainstream (%)	0.6	0.6	0.6	0.6	0.6
Number of children in special classes	7 190	7 325	7 478	7 611	7 764
Share of children in special classes (%)	2.3	2.2	2.2	2.1	2.1
Basic schools					
Individually integrated into mainstream classes	34 761	36 226	39 160	40 888	43 352
Share of children integrated in mainstream (%)	4.4	4.6	4.9	5.1	5.2
Number of children in special classes	37 040	34 497	32 631	31 222	30 277
Share of children in special classes (%)	4.7	4.4	4.1	3.9	3.7
Secondary schools					
Individually integrated into mainstream classes	6 284	6 532	7 295	7 807	8 872
Share of children integrated in mainstream (%)	1.2	1.3	1.6	1.8	2.1
Number of children in special classes	13 444	12 199	11 830	11 353	11 004
Share of children in special classes (%)	2.6	2.5	2.5	2.6	2.6

Source: MŠMT (2014), *Výroční zpráva o stavu a rozvoji vzdělávání v České republice v roce 2013: Vzdělávání v roce 2013 v datech* [*Annual Report on the Status and Development of Education in the Czech Republic in 2013: Education in 2013*], *www.msmt.cz/file/33944/*, Table 29.

A set of school advisory facilities is responsible for both diagnosing and providing support to children and students with special educational needs (as established in Decree No. 72/2005 on providing advisory services at schools and in-school advisory facilities). A professional diagnosis by a school advisory facility can lead to a child being certified as having a special educational need. The parents or legal guardians must then decide on the type of

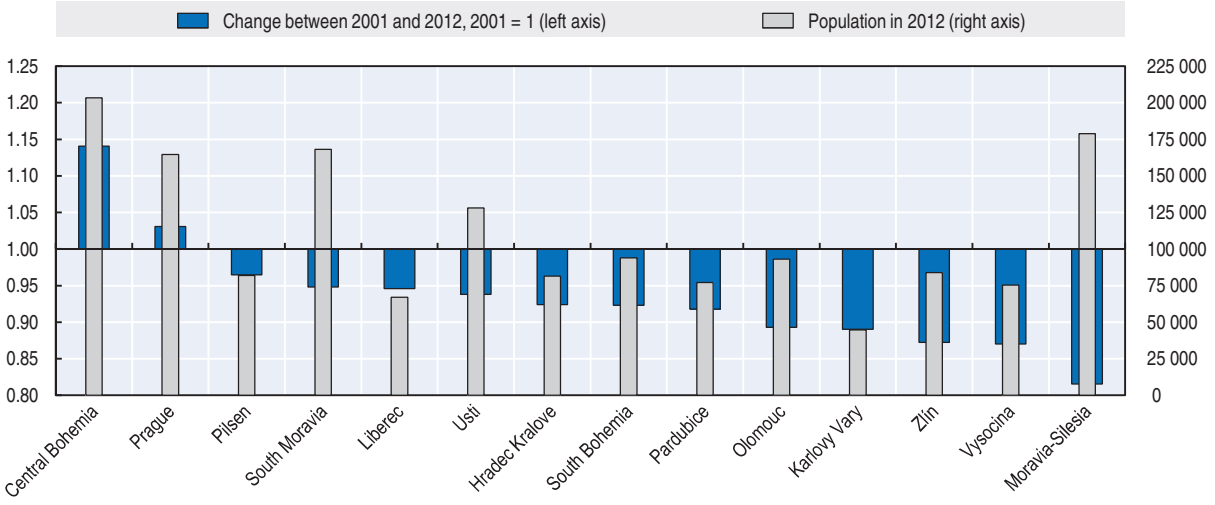
education that the child will follow and must give their consent if a child is to follow special classes (with reduced curriculum) in mainstream schools or to attend a special education school. Schools providing education to students with certified special educational needs can benefit from additional resources in a variety of ways. For example, special teaching aids, diagnostic tools, special textbooks and other materials and/or additional human resources, including teacher assistants and school psychologists (MŠMT, forthcoming).

Different educational planning challenges for different Czech regions

Decreasing birth rates during the 1980s and 1990s has been one of the biggest challenges to the Czech school system (MŠMT, forthcoming; also Chapter 1). Despite the fact that the birth rates started to increase from 2002, over the period 2001 to 2012 the Czech population of children under the age of 15 decreased by 4%. However, due to internal migration, this has impacted various Czech regions differently. With the exception of Prague (urban area) and the Vysocina region (rural area), all Czech regions are internationally classified as "intermediate", that is, a mix of rural and urban areas (OECD regional database). Unsurprisingly, Prague stands out from other Czech regions with a high population density (2 558 people per square kilometre) (Figure 1.A1.1). Prague, and to a greater extent its surrounding region, the Central Bohemia region, had a positive net migration from other Czech regions in 2011 (Figure 1.A1.2). In contrast, the Moravian-Silesian region, which has the second highest population density among Czech regions, saw a negative net migration to other Czech regions in 2011 (Figure 1.A1.2).

Such demographic changes have seen a growth in the number of children of compulsory school age in Prague, and most notably in the Central Bohemian region (3% and 14% respectively; Figure 2.3). All other regions have seen the compulsory school age population shrink, which would have sustained the pressure to consolidate the school network. In particular, the compulsory school age population dropped by 11% in Olomouc and Karlovy Vary, by 13% in Zlín and Vysocina and by 18% in Moravia-Silesia (Figure 2.3).

Figure 2.3. **Number of children under the age of 15 by region**



Source: OECD (2015a), OECD Regional Statistics (database), *http://dx.doi.org/10.1787/region-data-en*.

Strengths

Education is accorded strong political priority and recognition that teacher quality needs to improve

While educational investment remains low in international comparison, there has been a clear policy to increase investment in the Czech school system (and also at the tertiary level) (see Chapter 1). Expenditure per student at the primary, secondary and post-secondary non-tertiary levels saw a larger increase than on average in the OECD between 2005 and 2012. This reflects the recognition that teacher salaries are not competitive compared to those on offer in other jobs requiring tertiary qualifications in the Czech labour market and initial efforts to address this over the past decade (see Chapter 4, Figure 4.9). On 1 January 2015, there was a further 3.5% increase in the level of resources for teacher remuneration and the strategic orientations aim to continue to fund salary increases for teachers. At the time of the OECD review, the MŠMT (*Ministerstvo školství, mládeže a tělovýchovy* – Ministry of Education, Youth and Sports) was holding negotiations with the Ministry of Finance to secure additional funding to support the teacher career system (see Chapter 4). Collectively, these are significant efforts to address an identified weak point of the system, that is, the need to attract and retain high quality teachers.

There is continuity in the policy aim to improve teacher quality. "Support for educational staff" was one of four long-term policy objectives set for the 2011-15 period and included an ambition to improve professional standards and working conditions and to establish a career structure with links to remuneration (Santiago et al., 2012). However, the OECD review team notes that the implementation of the career structure has been delayed. The Strategy 2020 proposes "Supporting high-quality teaching and teachers as a prerequisite for such teaching" as one of the three long-term policy objectives for the period 2016-20 (MŠMT, n.d.).

The ministry's five year strategic plan for education (Strategy 2020) targets the major challenges

Recognition of the need for stability and more strategic oversight

The ministry's Strategy 2020 is of fundamental importance. It acknowledges the need for "sufficient stability in the system and support for its long-term, continual development" (MŠMT, n.d.). A general weakness in Czech governance has been limited strategic vision, with ministers enjoying considerable discretion to develop policies that other ministers do not feel able to support (Guastia et al., 2014). The preparation of the Strategy 2020 was initiated in 2011 and four different Ministers of Education from different political parties contributed to its development. This ensured that, at least in part, the Strategy 2020 is perceived as a non-partisan framework for future education policy development (MŠMT, forthcoming).

At the same time, the fact that over recent years the average time each minister has served is roughly one year underlines the importance of having an authoritative strategic plan to guide educational policy development. Such political instability has also impacted on the capacity for general management at the ministry and its subordinated organisations (MŠMT, forthcoming). A broader challenge for the Czech Republic is to change the political culture that currently is based on a low quality of decision making with inexperienced ministers taking decisions without adequate advice and consultation (Guastia et al., 2014). The high fluctuation of decision makers and senior ministry officials has fuelled a low quality of public administration and a relatively high degree of corruption (MŠMT, 2014).

Subsequent to the OECD review team's visit, a new version of the Service Act for public administration employees was passed and should address some of the staff turnover problems. This could present an opportunity to increase the effectiveness of central administrative capacity.

New focus on addressing inequities in Strategy 2020

There is clear evidence of entrenched inequities in the Czech school system (Chapter 1). First, there are considerable economic and educational differences on average among the 14 Czech regions, which provides an important backdrop to the respective school networks. Second, the early age of selection into "prestigious" school types (*gymnasia* and *lyceums*), coupled with the provision of reduced curricula in some provision (practical schools) and the existence of a strong special education sector sets conditions that favour a social selectivity in different school types. An earlier OECD review (Santiago et al., 2012) noted that the 2005 Education Act did not specify equity or inclusiveness among the stated education goals and that none of the 4-year long-term policy objectives (2011-15) were directly associated with equity and inclusion. In contrast, the Strategy 2020 clearly sets "Reducing inequality in education" as one of three strategic priorities for the 2016-20 period.

Table 2.4. **Indicators of socio-economic background and participation in pre-primary education for Roma and non-Roma children, 2011**

	Czech Republic	Hungary	Poland	Slovak Republic
Persons living in households at risk of poverty (%)				
Roma	83	82	83	92
Non-Roma	51	37	52	47
Respondents aged 20 to 64 who considered themselves as unemployed (%)				
Roma	38	36	33	34
Non-Roma	9	22	15	8
Household members aged 20 to 24 with at least general or vocational upper secondary education (%)				
Roma	30	23	26	18
Non-Roma	83	63	86	87
Children aged 4 to starting age of compulsory education attending pre-school or kindergarten (%)				
Roma	32	83	43	29
Non-Roma	73	88	63	59

Note: The survey results are representative for Roma living in areas in a higher than national average density of Roma population. Other residents in the same area were surveyed as a rough benchmark, but are not representative of the wider population. In the Czech Republic, 1856 Roma households and 850 non-Roma households were surveyed and at least two out of three Roma households were in urban areas.
Source: UNDP/World Bank/EC regional Roma survey 2011 results in European Union Agency for Fundamental Rights and UNDP (2012), *The Situation of Roma in 11 EU Member States – Survey Results at a Glance*, *http://fra.europa.eu/sites/default/files/fra_uploads/2099-FRA-2012-Roma-at-a-glance_EN.pdf*.

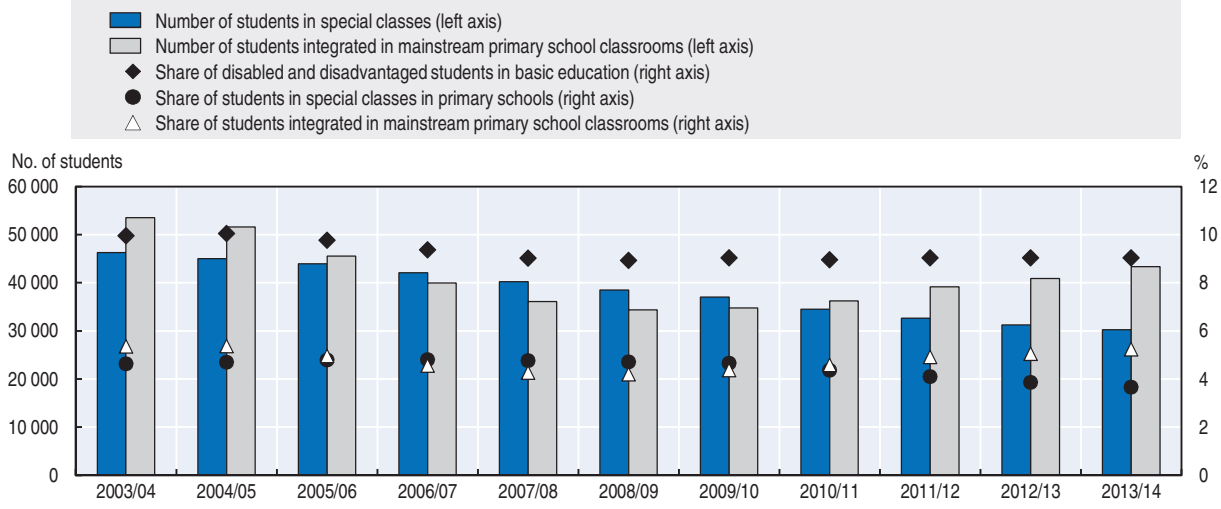
The Strategy 2020 focus on addressing inequities is also well aligned to a recent country specific recommendation by the European Commission to support underperforming schools and take measures to increase participation in mainstream education of disadvantaged children (European Commission, 2015). To this end, the proposed extension of the early childhood and care offer and introduction of a compulsory year of pre-primary education is expected to better mitigate socio-economic influences on early childhood learning development. While national statistics do not collect information by ethnicity,

results from a 2011 survey by the UNDP, World Bank and European Commission indicate that an important disadvantaged group, the Roma, is currently underrepresented in pre-primary education (Table 2.4). Only one-third of Roma households surveyed reported that children attended either pre-school or kindergarten. At the same time, survey results revealed low educational levels and tougher economic conditions for Roma households. In the absence of official data to monitor the integration of Roma children in mainstream education, some research reports compile data from different sources to provide estimates. One recent attempt (Decade of Roma Inclusion Secretariat Foundation, 2015) estimates a significant proportion of Roma children are educated in segregated schools, although the data are contested by the Czech government.

Political will to further integrate students with special educational needs

National statistics clearly show a trend toward favouring integration of students with special educational needs in mainstream classes in basic education. Since 2010/11, while the number of students diagnosed as having special educational needs has remained pretty stable, the proportion attending mainstream classes in basic schools has steadily increased (Figure 2.4).

Figure 2.4. **Change in proportion of students with special educational needs in basic education**



Source: MŠMT (2014), *Výroční zpráva o stavu a rozvoji vzdělávání v České republice v roce 2013: Vzdělávání v roce 2013 v datech* [*Annual Report on the Status and Development of Education in the Czech Republic in 2013: Education in 2013*], *www.msmt.cz/file/33944/*, Table 29.

The Action Plan for Inclusive Education 2016-18 includes policy measures to promote equal opportunities and equal access to quality education. At the time of the OECD review visit, work was being conducted to finalise and introduce a set of individualised support measures for students with special educational needs in line with the amendment to the Education Act approved in April 2015 (to be enforced as of 1 September 2016) guaranteeing the rights of students to support measures in mainstream education. This specifies five broad, legal categories of special educational needs and the OECD review team was informed that the intention was to support this with a detailed catalogue of different educational needs that would fit into each broad category. While the OECD review team underlines the need to pay adequate attention to building professional capacity to implement this, the general approach has much merit. The basis of the categories in a legal

framework suits the general Czech educational context where there is much focus on compliance with laws. The detailed catalogue of different educational requirements enhances the focus on the student and his/her particular needs. The exercise of going through these finer classifications will be positive in familiarising educators with the diversity of educational needs. Indeed, representatives from inclusive education informed the OECD review team that already at the macro level the process of developing a catalogue had brought together diverse partners that had previously not collaborated, notably the engagement of the pedagogical advisory centres.

Platforms for collaboration exist for regions and municipalities

The OECD review team notes that there are different associations or umbrella organisations that offer a platform for collaboration and representation to different self-governing authorities. Membership of these associations is voluntary and representatives of such associations with whom the OECD review team met reported that they are apolitical. The Association of Regions enjoys full membership of all 14 Czech regions and was formed to represent the collective voice of regions. It plays an important role in discussion and design of national level steering documents. For example, the Association of Regions agreed on a list of fields of specialised vocational education that will guide future planning of each region's educational offer.

The OECD review team met with two different umbrella organisations for municipal authorities. The Union of Towns and Municipalities of the Czech Republic brings together approximately 2 500 municipalities and towns, which represent more than 70% of the total population of the Czech Republic. The Union aims to support and develop self-government democracy in the public administration, to participate in the preparation of laws and other measures impacting local authorities, and to enhance the economic independence of towns and municipalities. Representatives reported to the OECD review team that the Union was very much "an equal partner" in negotiations with the MŠMT and thus plays an influential role in national policy development. The Association of Local Autonomies brings together approximately 1 100 municipalities and towns and aims to support and protect its members' common interests, to create a platform for addressing issues and co-operation with non-governmental organisations.

Given the high level of municipal fragmentation in the Czech Republic, the existence of these umbrella organisations is a real strength. They provide a platform for collaboration, discussion and exchange of ideas on how to approach and address shared challenges.

High level of autonomy at school level with some checks and balances in place

The fact that Czech schools enjoy a high degree of autonomy to make decisions in core areas can support a more efficient educational provision. Schools can tailor their educational programmes and other activities to the needs of their students and community. Schools can develop a particular profile anchored against the Framework Education Programmes. Depending on how the school management and staff approach this, such an exercise can help focus staff on the educational offer and what really matters at that school. The development of the School Educational Programme, if linked to the school development plan, can also be linked to core strategic priorities for the students, staff and community. Schools also are free to choose textbooks – although there appear to be funding limits here. There was also an initial check of the School Educational Programmes by the ČŠI and a look

at a few sample inspection reports indicates that this is still a focus of school inspections. In this way, there is a good balance of autonomy and accountability in this area.

School principals enjoy the flexibility to directly recruit teachers who are the best fit for their school needs (Chapters 4 and 5). Similarly, teachers can apply to work in school settings suited to their skills and motivations. However this flexibility needs to be carefully monitored at a system level to ensure an equitable distribution of teachers (discussed in challenges in Chapter 4). Also, school principals are responsible for managing the professional development and performance of their own teaching staff, including an internal appraisal process. School inspections involve the checking of a school's approach to staff professional development, so again there is some system in place to monitor how schools use this autonomy.

Steering tools available at national level for the school network

Although not directly responsible for the operation of the majority of Czech schools, the ministry has several tools to steer the school network. Notably, the ministry designs and amends the general legal framework, e.g. the Education Act, including the setting of minimum class sizes and school sizes which set binding parameters for the organisation of schooling. One example of the impact of changes to the Education Act is the reduction of the number of private schools following a revision to the Education Act in 1995 that set stricter conditions for entry in the school registry and defined conditions for the removal of a school from the school registry (MŠMT, forthcoming). The school registry is a strong administrative instrument that gives the MŠMT a high degree of control in the otherwise highly decentralised school system. While regional authorities share responsibility for data entry and approval of schools entering or being removed from the school registry, the use of one centralised register supports the ministry's responsibility to guarantee "the relevant education at the level a specific school is designed for" in schools receiving core public funding (the "national normatives" or per student funding to cover teaching costs).

Another important steering tool is the Framework Education Programmes (FEP), that is, the national curricula based on which each school develops its School Educational Programme (SEP). The FEP provide a common framework to ensure that Czech children learn core knowledge, skills and competencies at particular stages of their education. If well designed and supported by adequate capacity building, this is, therefore, a powerful tool to manage the design of educational provision in different schools, municipalities and regions. However, the initial experience of implementing these was problematic (see Santiago et al., 2012; and also Shewbridge et al., 2013 for a similar experience in the Slovak Republic). During the OECD review, the NÚV reported that there were considerable challenges to combat the perception that the FEP had contributed to lowering the quality of education in basic schools and, very much in Prague, had fuelled greater competition from *gymnasia*. The continued evaluation and review of the FEP, including the knowledge and feedback gathered from the ČŠI individual school inspections and the NÚV via its ongoing development work and collaboration with schools are keys to strengthening the FEP as a steering tool. During the OECD review, the NÚV reported that it has productive collaborations with the trade unions, employer representatives and other non-governmental organisations, which all feed into ongoing review work of the FEP.

There is also great potential in the system of national normatives that allocates core funding for teaching costs to schools. In theory, this can allow the ministry to steer the further development of the school network by its funding allocation. Arguably, the setting

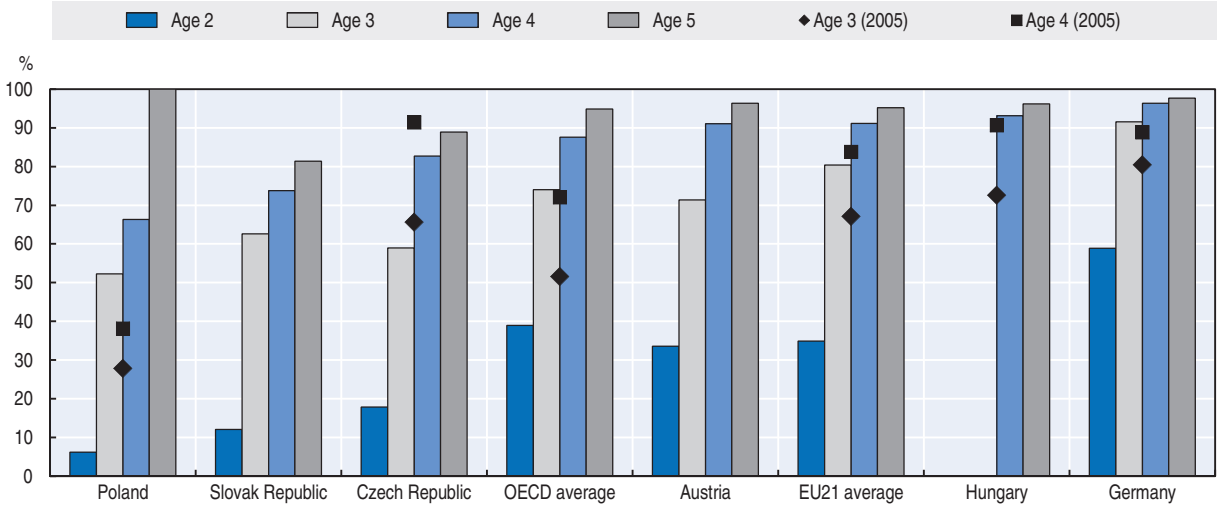
of a central per capita allocation put pressure on school founders to address efficiency challenges posed by the declining school age population from the early 1990s. However, the OECD review team notes that the system of national normatives is not currently being used to address one of the greatest challenges in the Czech school system: the impact of social inequities on schooling (see Chapter 3).

The potential for the Czech Republic to draw on EU operational funding is also an important policy steering tool. For example, the new EU funding to improve the quality and inclusiveness of education for each child, from pre-school to upper secondary and higher education. With careful planning, these can be used to support optimisation of the upper secondary network.

Political support for strengthening the provision of pre-school

Czech children typically start their nine years of compulsory education at age 6. The MŠMT plans to introduce a mandatory year of pre-school (pre-primary education) in 2017 (MŠMT, forthcoming), i.e. to extend compulsory education to 10 years (the Chamber of Deputies approved the draft Amendment to the Education Act on 9 February 2016 [Eurydice, 2016]). International data show that 89% of Czech 5-year-olds were enrolled in pre-primary education in 2013 (Figure 2.9). This compares to 95% of 5-year-olds on average in the OECD, who are enrolled in either pre-primary or primary education. In the Czech Republic, enrolment rates for children aged 3 and 4 have actually decreased since 2005 (Figure 2.6). This reflects that municipalities have not been able to keep pace with the growing demand over recent years. In 2012, the MŠMT registered 59 000 rejected applications for kindergartens (including applications for more than one kindergarten). This confirms a continuing trend of increases in the number of rejected applications: 13 000 in 2007/08 and 49 000 in 2011/12 (MŠMT, n.d.). The weak provision of facilities enabling parenting to be combined with work has contributed to reduced credibility of the Czech government (Guastia et al., 2014).

Figure 2.5. **Enrolment rates for children aged 3, 4 and 5, 2013 and 2005**



Note: In 2013, in the OECD on average 2% of 4-year-olds and 14% of 5-year-olds were enrolled in primary education (ISCED 1). For countries shown in this graph, all 4 and 5 year-olds were enrolled in pre-primary education, with the exception of Poland where 8% of 5-year-olds were enrolled in primary education.
Source: OECD (2015b), *Education at a Glance 2015: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2015-en*, Table C2.1.

In this context, the state plans to allocate European funding to support the increase of capacity for pre-school. Although the organisation of pre-school remains a municipal responsibility, additional funding will provide welcome support to meet the growing demand for these services. If the provision of pre-school is aimed well it can help to prepare children from less advantaged socio-economic backgrounds for basic education. This would be a key pillar in the overarching strategic goal to reduce inequities (see above). Furthermore, with careful planning, this could help to address some efficiency concerns in parts of the current school network, for example, by making use of existing infrastructure that is not fully used due to a reduced number of children of school age. The OECD review team cautions that without careful planning, investment in new infrastructure could create another network problem.

Evidence of consolidation in the network offering basic education

For the main part, municipalities are responsible for organising pre-primary and primary education (first stage of education in basic schools) and the majority of lower secondary education provision (second stage of education in basic schools), while regions are responsible for organising upper secondary education. While there are some caveats that complicate the distribution of responsibilities for basic education (i.e. the six- and eight-year *gymnasia* programmes and specialised educational provision), this broadly clear distribution of responsibilities in combination with the central per student funding system (the national normative) and the legal possibility to operate different kinds of schools and facilities under one legal entity appears to have supported an initial adjustment of the school network in basic education.

Notably, the process of merging schools intensified after 2003 (MŠMT, forthcoming) and these adjustments, at least at the macro level, appear reasonably well aligned with demographic changes. As the number of students dropped by 9.7% (10.3% in the public sector) between 2005/06 and 2013/14, the number of schools dropped by 8.5% (9.4% in the public sector) and the number of teachers decreased by 7.7% (8.5% in the public sector) (see Table 2.5). The greatest drop in number of schools occurred between 2005/06 and 2006/07 – this may well reflect the greater reorganisation of schools into legal entities combining different sites (national statistics counted the number of individual sites up until the 2005/06 data, but there may have been some lag in statistical adjustments). However, the drop in number of teachers occurred later. It is of note that, in the context of an overall decline in the number of students in basic education, there has been considerable expansion of the private sector.

A closer look at the provision of basic education in the public sector indicates that adjustments in number of teaching staff by municipalities and regions have broadly kept pace with declining numbers of students in their respective networks. Such adjustments have limited the impact on the student/teacher ratios in these networks. For example, assuming the number of teachers had remained constant since 2005/06, the student-teacher ratio in the municipal network would have dropped to 13.9 by 2013/14. These data illustrate the capacity of the decentralised system to reorganise and adapt to demographic changes.

Table 2.5. **Evolution in number of schools, students, teachers and classes in basic education**

Reference year 2005/06

	Number of schools					Percentage change compared to 2005/06		
	2003/04	2004/05	2005/06	2006/07	2013/14	2003/04	2006/07	2013/14
Total schools	**4 838**	**4 765**	**4 474**	**4 197**	**4 095**	**8.1**	**-6.2**	**-8.5**
Public schools	4 704	4 630	4 358	4 100	3 948	7.9	-5.9	-9.4
Private sector	92	92	80	61	105	15.0	-23.8	31.3
Total classes	**49 740**	**47 620**	**45 769**	**44 527**	**42 334**	**8.7**	**-2.7**	**-7.5**
Public schools	49 056	46 924	45 064	43 785	41 287	8.9	-2.8	-8.4
Private sector	416	418	424	447	650	-1.9	5.4	53.3
Total students	**998 026**	**958 203**	**916 575**	**876 513**	**827 654**	**8.9**	**-4.4**	**-9.7**
Public schools	988 847	948 893	907 257	866 951	813 940	9.0	-4.4	-10.3
Private sector	4 578	4 565	4 647	4 842	7 731	-1.5	4.2	66.4
Total teachers (FTE)	..	..	**63 158**	**62 658**	**58 269**	..	**-0.8**	**-7.7**
Public schools	..	..	62 190	61 630	56 886	..	-0.9	-8.5
Private sector	..	..	570	601	876	..	5.6	53.7

.. : Missing value or not available.

Note: In 2003/04 and 2004/05 the number of schools is based on individual work places/sites. From 2005/06, the number of schools is based on legal entities.

Source: MŠMT (2015), "File 02_Zs_13.xlsx, Table T2", Výkonová data o školách a školských zařízeních – 2003/04-2013/14 [Performance data for schools and educational establishments – 2003/04-2013/14 (database)], *www.msmt.cz/vzdelavani/skolstvi-v-cr/statistika-skolstvi/vykonova-data-o-skolach-a-skolskych-zarizenich-2003-04-2013* and author calculations.

Table 2.6. **Evolution in public sector network of schools offering basic education, 2005/06-2013/14**

	2005/06	2006/07	2013/14	Percentage change between 2013/14 and 2005/06
Ministry				
Schools	74	48	45	-39.2
Classes	259	281	245	-5.4
Students	1 522	1 522	1 315	-13.6
Teachers (FTE)	371.9	382.5	382.6	2.9
Number of students per teacher	4.1	4.0	3.4	
Municipality				
Schools	3 785	3 728	3 628	-4.1
Classes	41 672	40 454	38 571	-7.4
Students	879 090	839 736	792 805	-9.8
Teachers (FTE)	57 055.8	56 553.6	52 825.1	-7.4
Number of students per teacher	15.4	14.8	15.0	
Region				
Schools	499	324	275	-44.9
Classes	3 133	3 050	2 471	-21.1
Students	26 645	25 693	19 820	-25.6
Teachers (FTE)	4 762.1	4 694.3	3 678.1	-22.8
Number of students per teacher	5.6	5.5	5.4	

Source: MŠMT (2015), "File 02_Zs_13.xlsx, Table T2", Výkonová data o školách a školských zařízeních – 2003/04-2013/14 [Performance data for schools and educational establishments – 2003/04-2013/14 (database)], *www.msmt.cz/vzdelavani/skolstvi-v-cr/statistika-skolstvi/vykonova-data-o-skolach-a-skolskych-zarizenich-2003-04-2013* and author calculations.

Challenges

Important concerns regarding regional and municipal strategic management

A previous OECD review found that the long-term policy objectives for the Czech regions vary considerably in scope and quality, and their alignment with the national-level objectives is not systematically monitored (Santiago et al., 2012). Discussions during the OECD review visit, did not contradict this earlier finding. Although officially each region has a regional development plan for schools, these were not referred to during discussions and did not appear to play the role of an important strategic guiding document. Subsequent to the OECD review, the team has looked at a sample of regional development plans. While they present core objectives, these often are vaguely defined and there appears to be minimal reporting on progress towards achieving these objectives (a lack of clear targets, little – if any – supporting data).

At the municipal level, the over fragmentation in the system (Figure 2.2 and Table 2.7) generally means weaker capacity at local levels and by default a continued strong role for the centre.

A striking finding that emerged during discussions with several stakeholders at national, regional, municipal and school levels was the overriding perception that the Czech School Inspectorate bears sole responsibility for the oversight of the quality of educational provision. Often the legal framework underlying the ČŠI's rights and responsibilities to evaluate school provision was cited as a barrier to any oversight or discussion between school organising bodies (regions or municipalities) and school principals and school councils. Equally, stakeholders would refer to the legal framework that stipulates that school organising bodies should focus on budget issues and financial compliancy.

At the same time, school organising bodies are responsible for selecting, hiring and dismissing school principals, who arguably carry the greatest responsibility for the quality of teaching and learning in schools – although this is not yet sufficiently promoted through legal frameworks (see Chapter 5). But, an important legal basis does exist to support a regular documenting of school quality and strategic development: the requirement for schools to draw up a School Development Plan. During the OECD review, organising bodies and also school staff appeared not to perceive this as a useful tool for quality oversight and development. In this way, there appeared a disconnect between the management responsibilities of school organising bodies and their oversight of how school principals undertake their core professional duties, including unclear criteria on financial rewards for school principals (see Chapter 5).

Lag in introducing adequate mechanisms to monitor educational quality

As noted, Czech schools enjoy higher levels of autonomy than schools in other OECD countries. Much authority is also decentralised to the regional and municipal levels. Given these high levels of decentralisation, the OECD review team notes that there is an inadequate system of checks and balances in place. While the ČŠI is an important and authoritative mechanism for accountability, there are several reasons why this is not enough. First, the regularity of school inspections means that, on the current cycle, each school should be evaluated once every six years. There are clearly needs for more regular monitoring and oversight of key indicators of educational quality. Second, the OECD review notes that the ČŠI has a policy to move increasingly toward the oversight of the quality of the educational process (teaching and learning). The OECD review team would certainly support this as the

right direction of travel as recommended in an earlier OECD international policy review on evaluation and assessment (OECD, 2013). However, the current reality – and established perception – of the ČŠI's activities is that they remain largely focused on monitoring school compliance with legal requirements. It will take time to invest in building capacity within the regional inspectorates to evaluate the quality of teaching and learning and pedagogical leadership. It will also take time to change the culture and to improve the usefulness of feedback for school improvement and the nature of follow-up to ensure improvements are being made.

An important mechanism for monitoring would be the regular assessment of students' core knowledge and skills at strategically important stages of their schooling. While there have been attempts to develop such assessment tools, interestingly parallel initiatives – one led by the ČŠI and another by the CERMAT, these are not yet agreed and implemented. The MŠMT does not benefit from any insight from pilot results to feed into core policy development. Also, existing indicators of student achievement, i.e. results of the *maturita*, may not be published by regions. National policy making is largely reliant on the aggregate outcomes of Czech students as measured in international assessments, but does not have any feedback on how well the Framework Education Programmes are being implemented in terms of demonstrated student outcomes against these. As noted above, the initial approach was for the ČŠI to inspect the School Educational Programmes, which provides an important mechanism for accountability. However, the major focus appeared to be on the content of written School Educational Programmes to ensure they aligned well with the Framework Education Programmes, with limited capacity for the ČŠI to thoroughly evaluate how these were being implemented in lessons.

The legal requirement for each school to have a school council is also a mechanism to ensure horizontal accountability, but the OECD review team gained the impression that these play a limited role. Of course, the capacity of each school council will vary enormously across schools and the building up of capacity remains a shared challenge in many OECD countries (OECD, 2013).

Information gaps and lack of transparency and reporting of available information

The Country Background Report prepared for the OECD review cites one of the great challenges ensuing from decentralisation, as a lack of relevant information making it possible to conduct a policy based on evidence (MŠMT, forthcoming). The OECD review team notes some important information gaps, for example, to support the monitoring of resource allocation and use. Currently it is not possible to fully determine the relative weight in funding allocated to general and vocational education (MŠMT, forthcoming). This is only available for secondary education and "general education" comprises a simple grouping of *gymnasia* and *lyceums*; all other school types are grouped under "vocational".

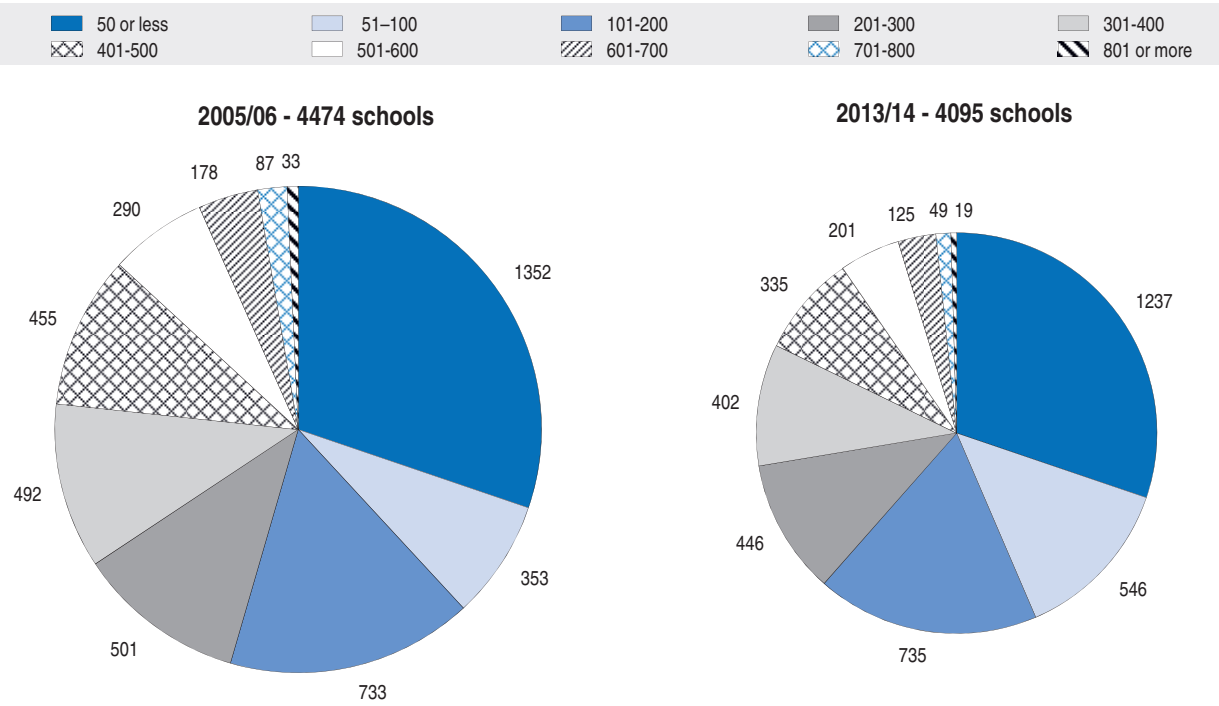
As noted above, there is limited information on educational outcomes. Also, the OECD review team notes important gaps in information to monitor equity, including comparative information across regions and basic indicators of socio-economic factors (also see OECD, 2012). This is ever more pressing given the strategic priority to reduce inequities over the period 2015-20.

However, the OECD review team notes that much information is collected and does exist, but there is a lack of co-ordination of these disparate information sources. This may not only be a technical or procedural challenge: in some cases, there is a lack of political will

to present and examine the available information. In this respect, the Education Act was recently amended to specify that the state and regional authorities are not obliged to share the results of the *maturita* – currently the only national measure available on educational outcomes.

Basic school network consolidation remains a challenge in certain regions

Figure 2.6. **Distribution of basic education schools, by school size, 2005/06 and 2013/14**



Source: MŠMT (2015), "Table 5 ZS - školy ve školním roce 2003/04-2013/14 – podle počtu žáků" [Schools in the academic years 2003/04-2013/14 – number of students], Výkonová data o školách a školských zařízeních – 2003/04-2013/14 [Performance data for schools and educational establishments – 2003/04-2013/14 (database)], *www.msmt.cz/vzdelavani/skolstvi-v-cr/statistika-skolstvi/vykonova-data-o-skolach-a-skolskych-zarizenich-2003-04-2013*.

Despite initial efforts to consolidate the basic school network, the proportion of smaller schools (those with 200 or less students) has increased from 54% to 61% since 2005/06 (as shown by the paler blue parts in Figure 2.6). On aggregate, this indicates persistent inefficiencies in basic education provision. In 2013/14, 72% of Czech schools offering basic education had 300 or fewer students (an increase from 66% in 2005/06) (Figure 2.6). These challenges are particularly pronounced in the Vysocina, Olomouc, Pardubice, Hradec Karlove, Liberec and Zlín regions (Figure 2.A1.2).

Of course, population density is an important consideration in judging the extent of feasibility for further school consolidation or mergers. Indeed, among the Czech regions (with the exception of Prague), there is a positive, albeit weak, correlation (0.32) between the average size of basic schools and the population density per square kilometre in the region. There is a similar correlation found with the size of the 0-15 year-old population in each region (0.33). As an example, the Zlin and Pilsen regions have a similar size population of 0-15 year-olds, but the average size of basic schools in Pilsen is around the Czech average, whereas it is well below average in Zlin (Table 2.7). At the same time, Pilsen has

Table 2.7. **Czech regions: average size of basic schools and number of municipalities with schools**

	0-15 year-old population (2012)	Average size of basic schools (2013)	Population density per km^2 (2012)	Data on municipalities within each region (2014)				
				Total number of municipalities	With extended powers		With one or more schools	
					Number	Proportion (%)	Number	Proportion (%)
Vysocina	75 331	158.1	77	704	15	2.1	208	29.5
Olomouc	92 972	168.0	123	399	13	3.3	216	54.1
Pardubice	77 030	168.5	116	451	15	3.3	182	40.4
Hradec Kralove	81 441	169.4	118	448	15	3.3	181	40.4
Liberec	67 139	178.0	141	215	10	4.7	123	57.2
Zlin	83 903	182.6	151	307	13	4.2	182	59.3
South Moravia	168 031	189.8	166	673	21	3.1	334	49.6
Central Bohemia	203 393	197.2	118	1 145	26	2.3	393	34.3
South Bohemia	93 935	201.4	66	623	17	2.7	174	27.9
Pilsen	81 913	204.9	77	501	15	3.0	152	30.3
Karlovy Vary	44 616	218.2	93	132	7	5.3	65	49.2
Moravia-Silesia	178 888	222.0	232	300	22	7.3	214	71.3
Usti	127 990	254.3	158	354	16	4.5	136	38.4
Prague	164 659	327.7	2 558	1	x	x	x	x
Czech Republic average	x	202.1	136	x	x	3.3	x	40.9
Czech Republic total	**1 541 241**	**x**	**x**	**6 253**	**205**	**x**	**2 560**	**x**

Note: Regions are listed in ascending order of average size of basic schools.
x: not applicable.
Source: Czech Statistical Office (2015b), Public database, *https://vdb.czso.cz/vdbvo2/faces/en/index.jsf*.

one of the lowest population densities in the Czech Republic and its surface area (7 561 km^2) is nearly twice as big as in the Zlin region (3 963 km^2) (Czech Statistical Office, 2015, Table 2.3).

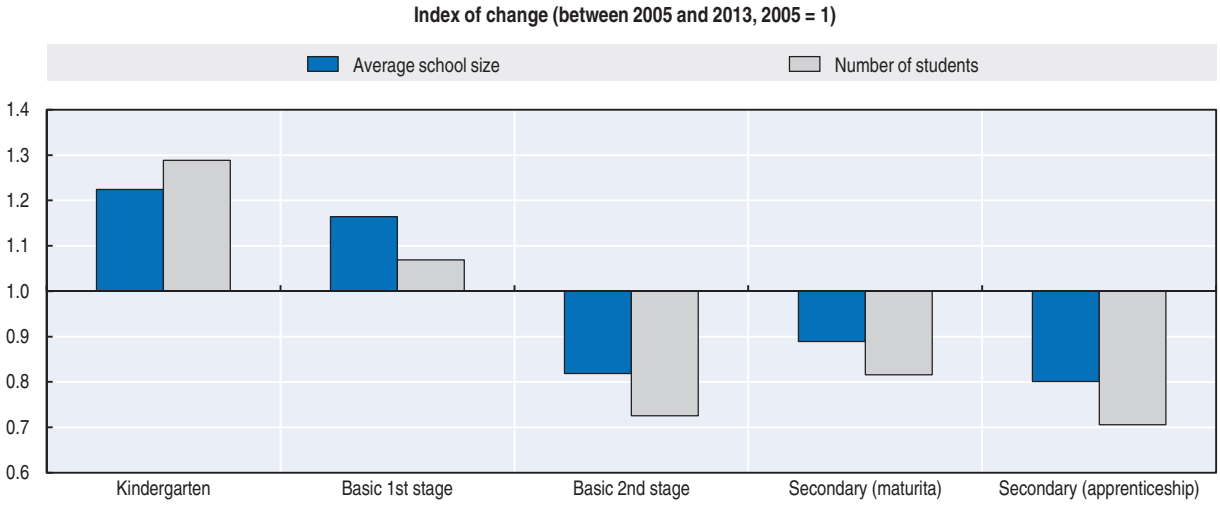
However, national data show that the organisation of the school network has a far greater impact on the average size of basic schools. Not all municipalities operate a basic school. It is of note that both the total number of municipalities and the proportion of municipalities within a region that operate at least one school varies considerably among the Czech regions (Table 2.7). For example, the number of municipalities operating at least one school is similar in the Vysocina and Moravian-Silesian regions, but these represent only 29.5% of municipalities in Vysocina and 71.3% in Moravia-Silesia (Table 2.7). Among the Czech regions (with the exception of Prague), there is a very clear correlation (0.94) between the average size of basic schools and the average number of 0-15 year-olds per municipality with a school. These data suggest, therefore, that in those regions with a comparatively low average size of basic schools, there is room to reduce further the number of municipalities with schools.

Of course, there is acute political sensitivity surrounding any school mergers – and especially closures – and strong will to keep a school open in the case that it is the only municipal school. While the current minor increase in the population aged four years or younger will ease some of this pressure on the first stage of basic school (primary education), the OECD review team notes that this is not forecast to continue (Chapter 1) and is not of the same magnitude across the different Czech regions. In fact, between 2010 and 2014 the size of the population aged four years or younger has declined in the Northwest, the Northeast, Moravia-Silesia, Central Moravia and to a lesser extent in the Southwest (Table 2.A1.2).

Lower secondary education offer is fragmented and enhances inequities

The OECD review team notes a particular challenge for the provision of lower secondary education. The demographic pressures are compounded by the existence of competition between different providers within the public sector. Regional schools (*gymnasia* with eight-year and six-year programmes) compete with municipal basic schools. The decline in both number of students and the average school size at the second stage of basic education is particularly stark (Figure 2.7). Currently, the eight-year *gymnasium* takes over 10% of the lower secondary cohort (Figure 2.1). At the system level, an early age of selection is consistently associated with more pronounced inequities system-wide in the OECD PISA results. National data indicate that the *gymnasia* are not only competing with municipalities for the best students, but rather those from more advantaged socio-economic backgrounds (Chapter 1). There are also offers of specialised education by regions in the *conservatoires*. Therefore, at the lower secondary level there is a particularly complex mix of responsibilities for educational provision.

Figure 2.7. **Evolution in average school size and number of students, 2005-13**



Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

Several barriers remain a challenge to greater levels of inclusion

While it is challenging to compare the provision of special education across countries due to different national definitions and categories of special educational needs, European data indicate that the proportion of children in compulsory education with special educational needs is comparatively high in the Czech Republic (EADSNE, 2012). Also, the proportion of students with special educational needs attending special schools is high compared to in other European countries (EADSNE, 2012). In 2013/14, 9% of all Czech children in basic education were classified as having special educational needs, of which 5.2% were integrated in mainstream classes and 3.7% were educated in special classes. Although there has been some progress in mainstreaming children with special educational needs in basic education (for example, in 2007/08, the proportion of children classified as having special educational needs was also 9.0%, but 4.8% were educated in special classes), the overall level of students diagnosed with special educational needs and the proportion in separate, specialised provision remain high. Since the education of students with special educational

needs, by its nature, is expensive, the way categories of special needs are defined, the way actual decisions to place individual students into these categories are taken and also the forms special education provision can take are among the greatest efficiency challenges in all school systems (Santiago et al., 2016).

The OECD review team gained the impression that there remain several barriers to achieving the policy objective of greater inclusion of students with special educational needs in mainstream education. Discussions with stakeholders during the OECD review gave the review team the impression that there were also some perverse incentives to protect the provision of a network of special education schools. There is an "attitudinal barrier", in as much as, there is a well-established culture and institutional prejudice of segregated education provision. The OECD review team noted a perception that special education schools help to support the quality of education in regular schools. To the extent that this perception is valid, this would require strong and high-level political courage to overcome such prejudice.

It would also be useful to analyse data on the enrolment in special education schools and classes at the upper secondary level and if/how this is impacted by the sharp decline in the population of 15-19 year-olds. Ministry data appear to show that the proportion of students diagnosed with special educational needs at the upper secondary level is increasing (from 3.8% in 2009/10 to 4.8% in 2014/15). Given the steep decline in number of students in upper secondary education, these aggregate data suggest there may be a tendency for regions to protect the enrolment rates in the special education schools they manage. However, it would be necessary to more thoroughly analyse regional-level data. One factor that would support this hypothesis is the fact that the staff at special education schools holds specific pedagogical qualifications. Such qualifications present a structural barrier to reallocating staff from special education schools to mainstream schools.

Vocational education and training offer has many inefficiencies

An earlier OECD review in 2010 focused on the vocational education and training sector. One of the main findings was the rigidity of the vocational offer, which appeared to support the structure of an inherited school system and was largely driven by vocational school capacity. As is the case currently, the vocational specialisations that are offered are limited by a designated number of places which individual schools are permitted to fill. These numbers originated historically and essentially reflect the available human resources and physical equipment in a given school, i.e. the existing structure. The OECD (2010) found that regions tended to adjust the number of places only marginally although they had the authority to do so. The OECD review team's discussions with stakeholders and analysis of regional funding formulae (see Chapter 3) support this finding. The examples of two different regional funding mechanisms illustrate that these are designed to keep existing programmes in place. For example, there is little or no impact on funding if student numbers reduce in a particular programme.

The rigid system of finance (the central normatives and regional normatives for teaching costs) limits regional ability to steer toward a more efficient use of resources, as they need to provide normatives for each educational field. The discussions during the OECD review indicated that there is limited or no attempt by regions to steer this and to co-ordinate a more efficient provision. Such a rigid system also entails high administrative costs, as the MŠMT takes responsibility to document all educational fields. The OECD review team would

argue that this also runs contrary to experimentation and innovation in different educational fields.

In sum, the OECD review team finds that there are too many, disparate fields of vocational education and training. There is the need for more flexibility in this system and in particular to modify and change the structure of educational fields offered.

There remains limited work-based training in vocational education, with no mechanisms to involve small companies in the provision of apprenticeships. As noted in OECD (2010), given that a substantial part of practical training is provided in schools, changes in provision impose extra costs on schools (related to the cost of new equipment and physical infrastructure). This also runs contrary to experimentation and innovation. However, available national data appear to cry out for the need to update the vocational education offer to ensure this is more relevant and meets requirements in the labour market. While the unemployment rate in the Czech Republic remains lower than in the OECD on average, there is greater risk of unemployment for youth and this remains high relative to the average (Chapter 1). A high number of graduates from vocational education are among the unemployed. Also, national data indicate greater risk of unemployment in certain fields (Table 2.A1.1). These appear to indicate fields where educational provision should be reduced. The OECD (2014) had previously recommended the modification of financing to better match vocational programmes with labour market demands. Another indicator of inefficiency in Czech vocational education is provided by Montt (2015) in his analysis of international data from the OECD Programme for International Assessment of Adult Competences, where he demonstrates a comparatively high mismatch between fields of study and occupation (OECD, 2016).

A need to improve the effective use of European funding

As noted, the availability of European funding can be a helpful support to further progress toward efficiency objectives, including core school network challenges, i.e. significantly consolidating upper secondary provision (in line with regional action plans supported by European Structural and Investment Funds) and supporting increased capacity for pre-school and basic education in certain regions with strong demographic growth in these age groups (European Regional Development Fund). All Czech regions qualify to benefit from European funding and these have proved to be an important resource for development of the education system. A report by the Czech School Inspectorate in 2013 identifies improvements in teaching methods, particularly in relation to reading literacy, mathematics and a wider use of ICT in schools. This likely reflects the impact of European Structural Funds to support quality of initial education, quality assurance and the education of pedagogical staff. The vast majority (90%) of Czech primary and secondary schools benefited from the ESF programme focusing on improving the quality of education through the innovative scheme "EU money for schools" using simplified unit cost options which makes access to the funds easier for smaller institutions. Also, the project "Quality assurance in initial education" significantly improved participating schools' understanding of self-assessment tools.

However, there were clear concerns on how European funding was used in previous periods. For 2007-13, the main problems were in particular: late approval of the relevant Operational Programmes; complex implementation structure; existing public procurement legislation; lack of solid monitoring indicators concerning overall achievement; and lack of evaluation capacity (including poorly defined objectives; inefficient implementation and monitoring of individual projects; unrealistic risk assessment; no previous experience with

using evaluation outputs to make policy changes). Many administrative errors were caused by fragmented rules and their frequent changes and also by the frequent turnover of political and administrative staff at the MŠMT (Guastia et al., 2014 also point to political instability). The Operational Programme Education for Competitiveness will not use almost 10% of its initial allocation, due in main to problems at the start of the implementation period. During the OECD review, MŠMT representatives noted that the low absorption rate of EU funds was in large part due to a lack of technical capacity to undertake projects. In recognition of these problems, the new generation of EU funding has been designed to avoid these problems in future and to make better use of the available funding (see Chapter 3). The challenge remains to pay adequate attention to this and to build stronger technical capacity at regional, local and school levels.

Policy recommendations

Note that with the policy recommendations below, the OECD review team aims to recognise that the existing Czech school system governance structure is both relatively recent and complex. The public administration system has undergone major changes in the last fifteen years in the Czech Republic, with the emergence of politically autonomous municipal and regional self-governments which play a major role in shaping the provision of education services, the school network and in assuring appropriate conditions for the daily operation of schools.

In the context of relatively recent governance changes, the way responsibilities are shared between the municipalities or self-governing regions and the national authorities is still in a state of development. The self-governing regions are the most recent significant governance development and are still developing capacity and political weight. There is a high degree of fragmentation at the municipal level, but with a number of municipalities having extended powers. In addition to their authority over the general regulatory framework, the central authorities also hold some strong administrative instruments, notably the school registry. The OECD review team notes the need for caution when analysing the current and possible future public administrative context of educational governance.

However, in Chapter 1and the present chapter, the OECD review team has presented compelling evidence on the different nature of challenges and opportunities facing each region's education system. Within the existing governance structure, the OECD review team notes some barriers to greater efficiency and more effective planning. It does see merit in providing regions with more room and flexibility to perform their strategic functions. At the same time, there is one suggested change to remove the funding allocation from regions to the municipal school network in favour of a direct allocation to municipalities (see Chapter 3).

The major thread of the OECD review team's recommendations is, therefore, to deepen collaboration within the governance structures, while at the same time strengthening accountability mechanisms (including transparent reporting of key information – notably with a focus on quality – and a greater role for school councils). The analysis of the education policy practice of the most effective education systems suggests that the combination of extended local and institutional autonomy with strong accountability mechanisms, continuous capacity building and the use of effective system steering instruments offers the highest chances to create a high performing education system (Mourshed et al., 2010). In most cases the legal frameworks are in place, but it is a matter of providing models, positive

examples and building capacity at local levels in quality assurance as a key part of resource management. At the same time, greater freedom is suggested for school organising bodies in the educational offer, as part of their network responsibilities.

Build support for and ensure effective implementation of the Strategy 2020

The OECD review team's analysis of the international and national evidence on the quality, equity and efficiency of the Czech school system (Chapter 1), confirms the pertinence of the three overarching objectives within the Strategy 2020. The major task for the MŠMT is now to raise awareness of these objectives and to engage key stakeholders in concrete steps toward achieving them. While the OECD review team has not had the opportunity to analyse the implementation plan (the Long-term Plan for Education and Development of the Education System in the Czech Republic for the Period 2015-20), a number of arguments support the broad objectives.

A clear challenge in moving toward the Strategy 2020 objectives will be to secure adequate funding for full and continued implementation. The discontinuity of European funding, for example, had reportedly posed challenges at the central and regional levels in how to continue certain initiatives, regardless of how popular or effective (evaluation studies available in Czech at *www.op-vk.cz/cs/siroka-verejnost/studie-a-analyzy/*) they had proven to be. This underlines the need to better align national funding to ensure the sustainability of effective initiatives that have been supported by EU funding. A major step toward the objective to reduce inequities will be to secure funding to build adequate capacity in pre-school – notably in the regions where expansion of this age cohort is steady. Much international evidence on the importance of early intervention would support the extension of early childhood education and care services, in particular to less advantaged children. Also, to the extent that limited capacity in pre-school education was a barrier to children's participation, the provision of high quality services could see a greater participation of Czech women in the labour market (the low participation of highly educated women stands out internationally).

Develop and implement strategic plan for data collection/compilation to strengthen system monitoring

As noted in an earlier OECD review (Santiago et al., 2012), the Czech Republic needs to strengthen its capacity to monitor the school system. This may be due to limited availability or accessibility of data. A systematic mapping out of key information against the major goals for the school system – as presented in the Strategy 2020 – will allow an identification of existing data, key information gaps and also potential sources for missing information. This will also allow the planning of priorities in future data compilation or collection. The OECD review team also strongly recommends that this "strategic plan for data collection/compilation" underlies all new policy initiatives to the greatest extent possible.

For example, the current work on the new teacher career system (Chapter 4) may allow to fill existing data gaps, such as information on teacher qualifications. A robust, stable and authoritative national "strategic plan for data collection/compilation" can support the focus on the most relevant information for monitoring to feed into policy development and limit the overburden of data reporting and processing. Given the prominent – and the OECD review team would argue, the correct – focus on teaching quality that was part of the previous strategy as well as the current Strategy 2020, this would seem to be a priority area for data collection. Regions could, also benefit from data that would help predict the

number of teachers in different subject and support more strategic planning of the teaching workforce in their school networks (see Chapter 4).

The goal to reduce inequities in the Strategy 2020 redoubles the need to build an information base on children and students' socio-economic background, including data on the Roma minority. The Ministry of Social Affairs may have some information available that could be compiled for analysis.

Particular attention should be paid to better supporting the information needs of regions and municipalities. The availability of geographically disaggregated data can be an important tool for local empowerment and decentralisation (European Union, 2012). It can help schools, community organisations and government at all levels to engage in evidence-based planning and policy (European Union, 2012).

The Czech regions should lead the development of models to strengthen strategic reporting

Each region currently draws up and publishes its regional development plan. The OECD review team sees a strong role for the Association of Czech Regions, possibly with the collaboration of the ČŠI, the CERMAT and the MŠMT to develop models of how information should be published. There is clearly room here for the Czech regions to take the lead in making this regular reporting requirement a useful – and also authoritative and comparable – strategic instrument to engage their broader community, including all other school organising bodies within the region. Regional development plans include major objectives for the region. Against these objectives, there could be a set of clear goals – in some cases, where feasible, including targets to be achieved – and subsequent reports would present a clear report of progress against each of these goals. Obvious areas that are current strategic challenges for many Czech regions include the need to consolidate the provision of both lower and upper secondary education. For upper secondary education, the Czech regions are directly responsible for many of the schools and also play an important role in agreeing the regular normative funding for private providers (typically vocational education).

The Association of Czech Regions will also be able to draw on collective experience of how to communicate and report on the results of student final examinations (*maturita*) in their regions. Here the CERMAT could offer some technical advice on reporting concerns, caveats and providing enough supporting analysis to allow a responsible and meaningful interpretation of the results. A more proactive role and regular reporting of results by the Czech regions would build trust in the broader community. Regularity, timeliness, transparency and accessibility are important guidelines in the reporting and use of results (OECD, 2013).

Provide models for regional and municipal oversight of school resources

The current distribution of responsibilities for oversight of school principals and school monitoring by the school organising body provide the conditions for stronger local accountability. Oversight at the local level can foster important relationships between school principals and the local government, which would otherwise be impossible in a situation where direct responsibility lies at a higher level. However, in the Czech system there is room to significantly increase the oversight of educational quality at the local level. This can be done by making a more effective use of existing processes and documents that are underpinned by national legislation. Notably, the OECD review team recommends:

- a prominent role for the school strategic development plan (SDP)

- the monitoring of the school principal's work and progress to achieving SDP goals
- adequate follow-up at local level and also by the ČŠI (point below also).

The legal framework exists to support these mechanisms. It is a matter of communicating how to join these up to be used more effectively. Importantly, it will be of utmost importance that regional, municipal and school leaders proactively work toward shaping these instruments to better suit their needs (see also Chapter 4). An important piece of glue to join these elements should be the new set of evaluation criteria being developed by the ČŠI (see below). This should become an authoritative set of quality criteria to underpin regular school self-evaluation (although leaving room for local criteria to be added for specific development goals), feeding into school development planning and in turn school councils and school organising bodies can use these instruments to discuss progress and challenge and recognise achievements of school management where necessary.

Significantly increase the focus on educational quality in monitoring and resource management

A set of clear criteria is of fundamental importance in defining common expectations of "quality" (OECD, 2013). School principals and school councils would benefit from the development of different benchmarks, guidance and goals to monitor the quality of their students' learning progress.

Provide clear guidelines to educators in basic education on learning goals at different stages

As noted above, the Framework Education Programmes remain a strong steering tool for the MŠMT. There are also channels of collaboration and feedback in place to inform the further evolution and refinement of these. The OECD review team understands that these provide a set of core minimum content requirements. A general lesson learned from an international review of evaluation and assessment practices (OECD, 2013) was the importance of providing clear standards as guidelines for schools. These should be aligned with the FEP and serve as supports for educators in assessing the progress of their students' learning and the planning of their teaching approach. A set of key learning expectations (or goals or standards) at different stages (e.g. every three years) helps support more regular and formative feedback to students on their learning progress and can also support more effective self-evaluation processes within schools. The analysis of results in school self-evaluation should feed into future priorities for improvement in the School Development Plan. This should be a core pillar of discussion between school management, the school council and the organising body on where to allocate necessary resources to support identified needs for improvement. In this way, "educational quality", i.e. the learning progress of children within the school is at the heart of resource decisions. For an overview of different approaches implemented in OECD countries and some examples of learning goals or standards see OECD, 2013.

Implement a common component of final examinations in vocational education

At the time of the OECD review, the MŠMT was overseeing the preparation of a single assignment of the final examinations in vocational education. The goal of this is to heighten the focus on the quality of vocational education outcomes. While the OECD review team has no detailed information on the form these examinations would take, it would seem an important initiative in building prestige in the vocational sector. This

would support a stronger focus on quality and efficiency in vocational education provision in the future. With this aim, the OECD review team recommends the piloting and evaluation of this single assignment toward the implementation of a common component in vocational final examinations.

Strengthen and sustain efforts to focus external school evaluation on the quality of teaching and learning

The OECD review team commends the direction of travel set by the chief school inspector and the ČŠI. While the ČŠI has a set of objective criteria for evaluation, at the time of the OECD review the ČŠI was trying to elaborate these into a vision of a high quality school. The main vision is the improvement of educational quality of each child in the school. The aim was for a set of indicators describing four levels with instruments attached to measure each indicator. The ČŠI's ambition is to promote the use of these criteria and instruments by schools for their self-evaluation and by organising bodies to evaluate other areas than just budget and financial compliance. An OECD review of evaluation and assessment found that the use of common set of evaluation indicators and criteria could better align regular self-evaluation efforts with the external evaluation, thereby promoting a common vision of what matters most for student learning and progress (OECD, 2013).

The OECD (2013) also underlined the need for external school evaluators (i.e. the ČŠI in the Czech Republic) to pay adequate attention to building capacity within their own staff to work with quality criteria and to heighten the objectivity of professional evaluation judgements. The evaluation of the quality of teaching and learning should be at the core of the external school evaluation process. These challenges are understood by the ČŠI, especially the importance of getting this right with the roll out of a new set of evaluation criteria. Also, for the past two years, the ČŠI includes recommendation in specific school inspection reports on how to build on strengths identified during inspections and also to address challenges. This aims to provide more helpful feedback to schools for their further development and quality improvement. The OECD review team would also underline the need to pay attention to adequate follow-up mechanisms to see how the school has worked on these, including through a monitoring and short report by the school council in the school annual report. This would give a more prominent and active role to the school council on quality oversight and should not be limited to reaction to comments in ČŠI inspections, but rather a more regular commenting on the school's progress toward goals and objectives specified in its school development plan.

Continue to work toward implementation of common assessment instruments at key stages of schooling

As noted in Santiago et al. (2012), the lack of national information on outcomes is a significant barrier to school self-evaluation. During an interview with the CERMAT, the OECD review team noted progress on the further development of school-leaving (*maturitní zkouška*) examinations to increase the objectivity of these, notably with the planned correction of students' written work external to the school. Given the high stakes nature of these examinations for individual students, increased objectivity should support greater equity and fairness for access to further educational opportunities and to the labour market (OECD, 2013). However, such examinations are not well suited to measuring the school system as a whole (OECD, 2013). This is equally true of the admission tests being piloted for students' access to *gymnasia* (four-, six- and eight-year programmes). In May 2015, the Czech School

Inspectorate conducted a sample survey testing students' knowledge in social studies and natural sciences, as aligned with the national Framework Education Programme for Basic Education (Eurydice, 2016). The results of such tests would be useful feedback for school self-evaluation, if they provide authoritative benchmark data for schools to compare their students' results with. In the interest of increased efficiency, future efforts of the CERMAT and the Czech School Inspectorate should be combined to ensure sustainable central capacity for student assessment development.

Carefully evaluate the implementation of the new approach to classification of special educational needs

As noted above, the OECD review team commends the exercise in establishing five new broad categories of special educational needs, supported by a more detailed listing of different educational needs. This aims to be an authoritative framework to support the provision of more individualised support measures to children with special educational needs. However, paying adequate attention to how this is implemented will be of key importance.

First, it will be necessary to provide sufficient capacity building and familiarisation with the new categories for all professionals working in pedagogical advisory centres. Supporting measures for Categories 2 to 5 would be officially assigned by the centres (Categories 0 and 1 would be managed at the school level). Beyond the implications for the educational welfare of the individual child, there will also be costs assigned to offer support to children in these categories. The OECD review team notes that representatives of inclusive education reported that the MŠMT has commissioned two parallel projects to develop a catalogue of special educational needs. The NÚV was charged with developing a catalogue that would be used by the pedagogical advisory centres, while representatives from the centres had participated in development of the other project. It will of course be essential to ensure the use of an official and authoritative catalogue to support the categorisation judgements. There will also need to be adequate opportunity for professionals across the fourteen centres to collaborate and exchange feedback on their experience with implementing the new categories. These professional exchanges will heighten coherence of judgement throughout the Czech Republic's different regions.

The implementation of the categories will also require adequate professional development at the school level – for school leadership to monitor this and for teachers to diagnose and work with children to address their specific learning needs. The catalogue – whatever its final form – could serve as an important methodological tool for educators. Schools will be responsible for diagnosing children with special educational needs in Category 1. The objective of this is to familiarise educators more with different learning needs and to stimulate earlier intervention to address these needs. There will be a need here to offer professional development support, for example, teacher collaboration across different schools. Notably, the four regional pedagogical advisory centres are based in major towns and there is less support to schools located further away from these centres and especially those in more remote locations.

Third, the OECD review team underlines the need to conduct an independent evaluation of the funding implications. The official agreement with the Ministry of Finance is that this would be introduced on a no-additional-cost basis. At the time of the OECD review work was being completed on compiling estimated cost implications of introducing the new five category classification system. Representatives of inclusive education

informed the OECD review team that they had piloted the assessment tool with the five new categories to around 4 000 educators. The results indicated that there would be a clear increase in the numbers of students included in the categories assigned with specific cost requirements, that is, increased funding would be needed overall. It is of note, that the OECD review team does not have the results of the official evaluation, however.

In the Slovak Republic, there was a significant increase of students categorised as having special educational needs following the introduction of a funding formula with a funding premium for special needs students (Santiago et al., 2016). This raised concerns about the potential limited transparency of the decision processes to determine whether or not a student has special educational needs and underlines the importance of paying adequate attention to all parts of implementation. The OECD review team suggests there could be a stronger role here for the ČŠI – currently it can monitor diagnosis from mainstream to special education and vice versa during school inspections – by giving the ČŠI the legal basis to challenge a diagnosis by the pedagogical advisory centres and to order an independent re-diagnosis where judged appropriate. National statistics use a unique – and then anonymised – student identification number, so there is an initial monitoring that there is no duplication in diagnosis.

Develop guiding principles for school network planning with a focus on educational stages

Every school system has its complexities, including strong traditions, inherited structures, vested interests and differing degrees of overlapping or conflicting governance and responsibilities. The Czech Republic is no exception. However, there exist good channels for policy discussion among the central, regional and municipal levels, as well as representative bodies for private and church schools and employers; objective demographic data and statistical forecasts for the coming years with regional breakdowns; plus a very strong administrative tool (the school registry), which includes a comprehensive listing of different educational fields and capacities. With active collaboration and strong political will, these can collectively form a strong basis to plan a more efficient organisation of the regional education systems (that is, education provided by all schools including those with specialised provision within a region, regardless of the founder).

As a collaborative exercise, the OECD review team recommends that the MŠMT initiate work towards establishing a set of authoritative guiding principles, rules and even target quotas for capacity at different stages for the collective regional school systems. The stages of educational provision facing urgent pressures to further consolidate – and importantly to improve quality – are lower secondary education and upper secondary education. These two major stages implicate the five main founders: the ministry, the regions, the municipalities, private providers and the church. Within the school registry, the OECD review team learned that agreed capacities greatly exceed the current demand (although exact data were not provided).

The focus on educational stage as opposed to school type is important. For example, the fact that basic schools traditionally offer both primary and lower secondary level classes, means that lower secondary education is seen as part of a basic service to be provided as close as possible to where the children live, that is, even in small villages. This structural feature of the system makes it difficult to create school units of appropriate "size efficiency" and some areas with severe demographic pressures may face significant cost-efficiency and organisational problems in a system of per capita funding (an analysis of

how many basic schools only offer the first stage of basic education would be informative here). This shift away from thinking of "basic schools" will also be helpful in optimising the provision of the proposed compulsory pre-primary year for introduction in 2017/18. For example, within existing capacities, there may be ways to combine the offer of pre-primary and primary education, while reorganising the lower secondary education offer.

While it would be up to the collaborative working group to establish specific principles, analysis presented in this chapter leads the OECD review team to suggest a couple of indicators that would highlight initial efficiency and organisational challenges. A leading and objective indicator to guide collective discussion on reorganising a more efficient educational offer would be each region's demographic profile. A first step toward consolidation would be to set actual and forecast (next 1-5 years, next 6-10 years) capacities for each major stage of education, i.e. capacity for lower secondary education in Zlín, capacity for upper secondary education in Zlín, and so on for each region. (It is of note that the existing national normatives take this approach for the upper secondary level, that is, they link directly to the actual number of individuals in the age group 15 to 18, but currently group together primary and lower secondary education [age group 6 to 14], which is mapped to the typical structure of a basic school.)

These regional actual and forecast capacity indicators for lower secondary education and upper secondary education would serve as the basic efficiency comparator for the current legal capacity in the school registry in each region (identified by summing up the capacity of each school offering lower secondary education and so forth). Such information can be used to guide considerations for setting principles or even quotas for reorganisation, including rules for the opening of new schools or new educational programmes.

At the upper secondary level, a second indicator would be the current labour market needs (as measured by the proxy of employment and unemployment of recent graduates). The future labour market needs is a more challenging area and would require the active collaboration of employer representatives, chambers of commerce and industry. However, the OECD review team would strongly recommend that the principle be that to the greatest extent possible the planning of upper secondary education fields would be linked to forecast labour market needs. Ideally, in the future Czech statistics could collect information on individual graduates on their employment and how well this matches their field of study.

Harmonise vocational education fields to support a more strategic consolidation at regional level

The OECD review team has noted a number of challenges in the Czech vocational education sector. The importance of industry in the Czech economy emphasises the need to ensure excellence in the vocational educational offer and to ensure that graduates from vocational education have the necessary skills to transfer successfully to the labour market. Representatives of Czech employers report concerns on the quality of graduates and their need to invest in retraining new recruits. While there will always be a degree of specialisation in any job, the OECD review team notes the demand for more flexibility in graduates and stronger transferable skills.

One major barrier to achieving more flexible graduates is the rigidity of the current vocational offer. The provision of many, disparate and highly specialised fields appear to need a serious overhaul. The OECD review team strongly recommends a thorough review

of the fields of vocational education. These also have major implications for the regional funding mechanisms and hinder the ability for regions to more strategically plan the provision of vocational education. By a more strategic planning, we mean at the very least ensuring to the greatest extent possible that there is a much better match of graduates' skills to jobs on offer in the labour market. The national data appear to present worrying disparities here. As a matter of urgency, the MŠMT, the Association of Czech Regions and employer representatives need to agree on a set of broader vocational fields to be included in the school registry – and of critical importance - on limiting capacity to ensure the necessary consolidation. There are obvious inefficiencies at the macro level, as well as great individual cost (unemployment), in continuing to provide education in fields where there is limited or low demand from employers.

During the OECD review, NÚV reported that in particular, European funding had supported the setting up of "sector councils" bringing together representatives from schools and employers to contribute to development work in different vocational fields. This was to work toward the development of an overall vocational qualifications framework. Such conceptual and development work can feed into the broader grouping of vocational fields, which could be a useful basis for giving a higher degree of flexibility at the regional level. However, this is challenging work and will need to overcome the well-established culture of a high degree of fragmentation and specialisation, with strong lobbying from particular employers.

Note that this revision of vocational education fields will allow the regions to make more strategic use of their funding formula to reshape a more effective and efficient vocational sector. As discussed in Chapter 3, the current need for regions to tie normatives to each field or programme of study is in itself a cumbersome and inefficient exercise.

The World Bank (2006) identified several inefficiencies in the typical Central and Eastern European model of vocational education and skills development: vocational education is relatively isolated from the world of work (especially when compared to work-based or company-based skills development forms); there are often high drop-out rates; and a relatively high proportion of graduates find jobs in areas that are different the profile of their formal vocational qualification. In this context, the Slovak Republic has recently (2015) introduced a new Act on Vocational Education and Training (VET). This new legislation strongly supports work-based learning as schools are now encouraged to establish partnerships with companies for providing practical training in accordance to their needs. According to Cedefop, the new school-company partnerships may gradually change the nature of initial VET, "transforming the traditional school-based supply-driven system to a demand-driven work-based learning system" (Cedefop, 2015). A recent amendment to the School Act is also linking the state funding of VET schools to the labour market relevance of their programmes. Since 2012 the Slovak ministry has also been publishing lists of study fields with a lack of/surplus of graduates compared to the needs on the labour market. See Santiago et al. (2016) for more details.

Notes

1. These data were collected in 2011 on decision making at the lower secondary level of education. This indicator shows where key decisions are made in public institutions at the lower secondary level of education. The indicator does not capture the totality of decisions made within a school system.

2. The four domains of decision-making defined by the OECD (2012) comprise the following areas: **Organisation of instruction**: student admissions; student careers; instruction time; choice of textbooks; choice of software/learningware; grouping of students; additional support for students; teaching methods; day-to-day student assessment. **Personnel management**: hiring and dismissal of principals, teaching and non-teaching staff; duties and conditions of service of staff; salary scales of staff; influence over the careers of staff. **Planning and structures**: opening or closure of schools; creation or abolition of a grade level; design of programmes of study; selection of programmes of study taught in a particular school; choice of subjects taught in a particular school; definition of course content; setting of qualifying examinations for a certificate or diploma; accreditation (examination content, marking and administration). **Resource management**: allocation and use of resources for teaching staff, non-teaching staff, capital and operating expenditure, professional development of principals and teachers.

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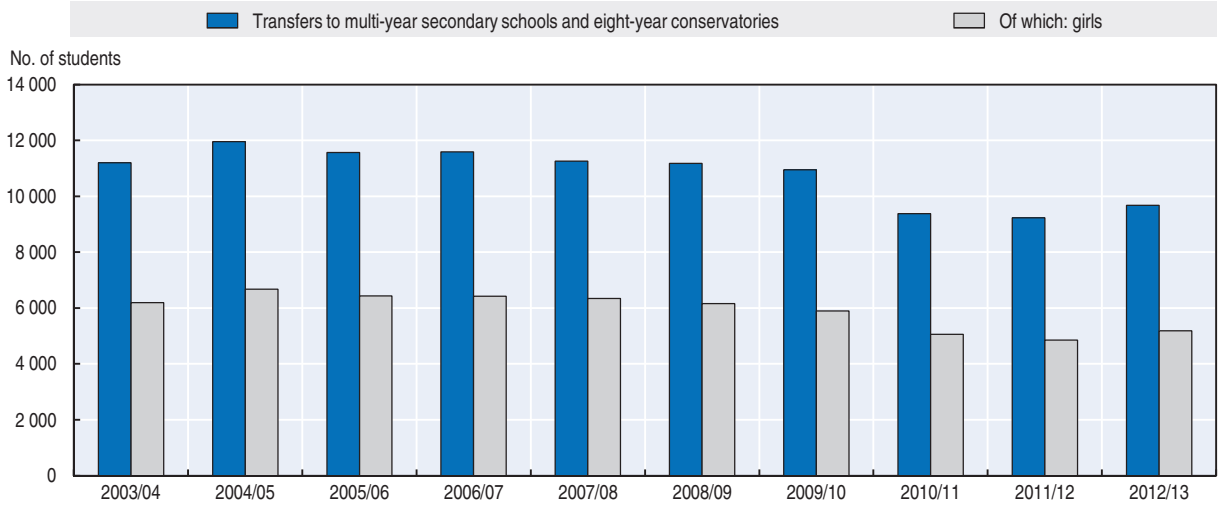
ANNEX 2.A1

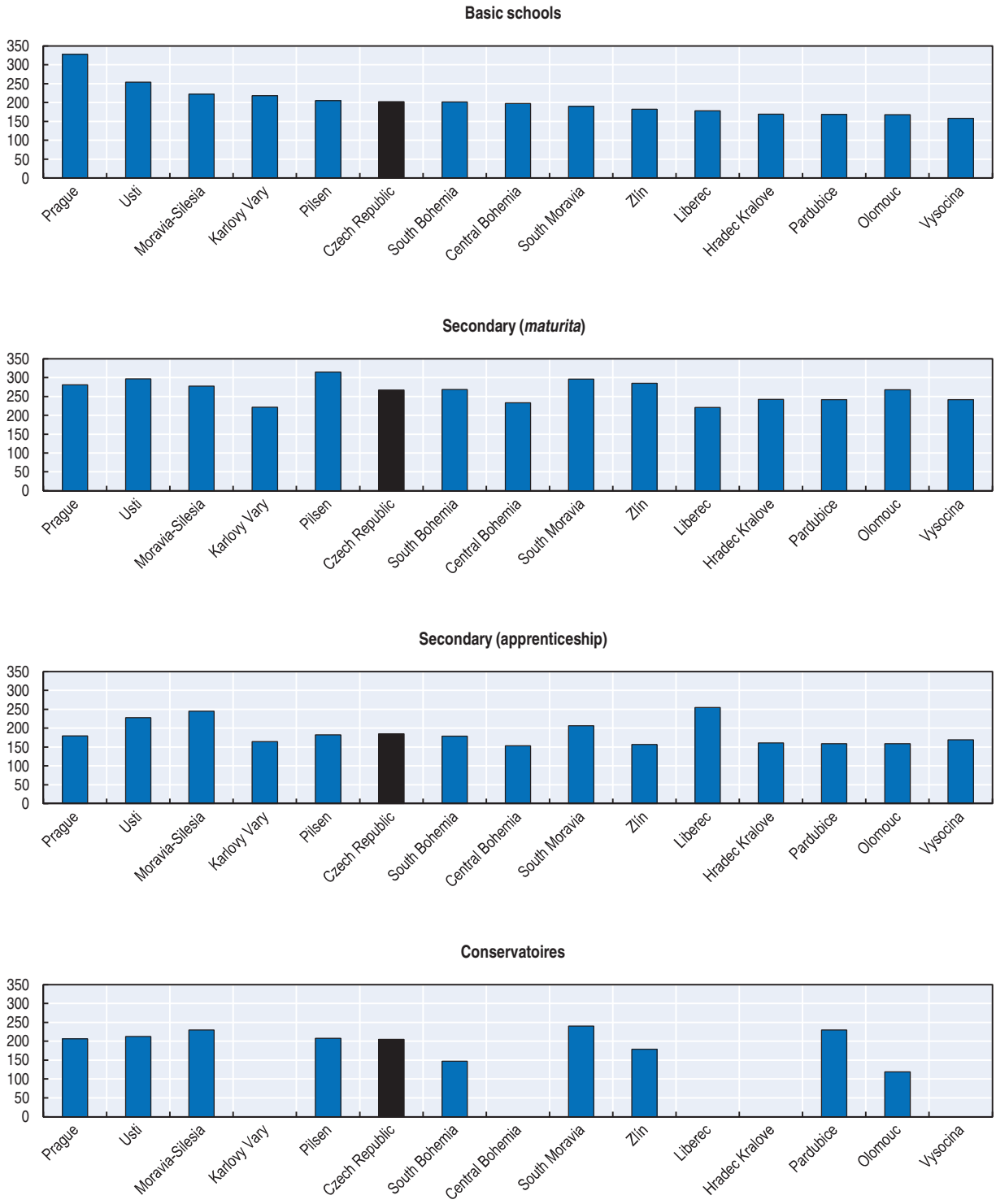
Data for Chapter 2

Figure 2.A1.1. **Transfers of students from basic schools to *gymnasia* or *conservatoires***



Source: Provided to the review team by the Ministry of Education, Youth and Sports.

Figure 2.A1.2. **Regional variations in average school sizes for different educational programmes, 2013**



Note: Karlovy Vary, Central Bohemia, Liberec, Hradec Kralove and Vysocina regions do not have any *conservatoires*.
Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

Table 2.A1.1. **Unemployment rates of new graduates by field of study and educational level**

	Lower upper secondary education – apprenticeship (%)	Upper secondary education – apprenticeship (%)	Upper secondary education – *maturita* + apprenticeship (%)	Upper secondary education with *maturita* (continuing VET) (%)	Upper secondary education with *maturita* (%)
TOTAL ALL FIELDS OF STUDY	**21.7**	**12.6**	**13.2**	**15.2**	**9.6**
Personal and operational services	30.9	16.6	21.6	x	x
Construction engineering, geodesy and cartography	26.4	13.8	x	7.6	8.9
Electrotechnics, telecommunications and ICT	25.8	7.3	10.3	8.9	7.7
Gastronomy, hotel industry and tourism	23.1	15.6	16.2	22.8	13.7
Textile production and clothing	21.7	17.4	16.7	x	21.1
Trade	21.6	15.6	19.7	18.0	7.5
Engineering and machine-building	21.4	9.7	7.4	8.9	6.4
Pedagogy, teaching and social services	21.1	x	x	x	8.1
Polygraphy, paper processing, film, photography	20.0	9.4	16.2	27.3	12.7
Food and food chemistry	19.5	12.5	x	x	16.9
Woodwork and musical instruments making	17.3	11.3	10.1	22.4	10.9
Agriculture and forestry	16.3	12.3	4.5	22.2	12.1
Technical chemistry and chemical silicates	5.3	12.7	11.1	x	9.8
Leatherworks, shoemaking, plastic making and processing	x	x	x	x	66.7
Special and interdisciplinary fields	x	23.8	10.0	8.2	11.2
Healthcare	x	13.2	x	x	6.6
Transportation and logistics	x	12.9	x	26.7	9.9
Arts and applied arts	x	12.8	14.2	10.5	10.8
Mining, metallurgy and foundry	x	2.4	3.8	x	x
Law, legal and public administration	x	x	x	40.0	11.3
Entrepreneurship	x	x	x	15.5	x
Press, libraries and informatics	x	x	x	x	14.3
Ecology and environmental protection	x	x	x	x	12.5
Veterinary and veterinary prevention	x	x	x	x	11.8
Economics and administration	x	x	x	x	10.5
ICT	x	x	x	x	10.2
General vocational training	x	x	x	x	6.9

x: not applicable.

Source: Provided to the review team by the Ministry of Education, Youth and Sports.

Table 2.A1.2. **Population aged 0 to 4 years in Czech regions, 2001-14**

	Number of children aged 0 to 4 years				Absolute change in number of children aged 0 to 4 years between:			Population aged 0 to 4 years in 2014 relative to 2001 (ratio)
	2001	2005	2010	2014	2005 and 2001	2010 and 2005	2014 and 2010	
Czech Republic	**450 118**	**465 611**	**564 545**	**566 262**	**15 493**	**98 934**	**1 717**	**1.26**
Prague	**44 068**	**49 020**	**65 793**	**71 328**	**4 952**	**16 773**	**5 535**	**1.62**
Central Bohemia	**48 967**	**54 146**	**74 938**	**79 130**	**5 179**	**20 792**	**4 192**	**1.62**
Southwest	**51 437**	**53 347**	**64 259**	**63 606**	**1 910**	**10 912**	**-653**	**1.24**
South Bohemia	27 968	28 681	33 812	33 713	713	5 131	-99	1.21
Pilsen	23 469	24 666	30 447	29 893	1 197	5 781	-554	1.27
Northwest	**53 201**	**55 603**	**63 349**	**59 151**	**2 402**	**7 746**	**-4 198**	**1.11**
Karlovy Vary	14 103	14 545	16 518	15 258	442	1 973	-1 260	1.08
Ústi	39 098	41 058	46 831	43 893	1 960	5 773	-2 938	1.12
Northeast	**68 338**	**68 729**	**81 244**	**80 215**	**391**	**12 515**	**-1 029**	**1.17**
Liberec	20 018	20 513	24 289	24 205	495	3 776	-84	1.21
Hradec Kralove	24 814	24 989	29 588	28 679	175	4 599	-909	1.16
Pardubice	23 506	23 227	27 367	27 331	-279	4 140	-36	1.16
Southeast	**72 204**	**73 465**	**87 661**	**89 673**	**1 261**	**14 196**	**2 012**	**1.24**
Vysocina	23 758	23 348	26 627	25 891	-410	3 279	-736	1.09
South Moravia	48 446	50 117	61 034	63 782	1 671	10 917	2 748	1.32
Central Moravia	**54 232**	**54 683**	**63 269**	**61 897**	**451**	**8 586**	**-1 372**	**1.14**
Olomouc	28 244	28 729	33 628	32 966	485	4 899	-662	1.17
Zlín	25 988	25 954	29 641	28 931	-34	3 687	-710	1.11
Moravia-Silesia	**57 671**	**56 618**	**64 032**	**61 262**	**-1 053**	**7 414**	**-2 770**	**1.06**

Source: OECD (2015d), OECD Regional Statistics (database), *http://dx.doi.org/10.1787/region-data-en*.

Chapter 3

School funding in the Czech Republic

This chapter presents an overview of how the school system in the Czech Republic is funded, including a detailed presentation of the central funding formula used to allocate funding for direct costs (primarily staff salaries, but also professional development, textbooks). It also presents analysis of selected regional funding formulas used to allocate this central funding to schools (both managed by regions and municipalities). It considers the strengths and challenges inherent in the current system and makes policy recommendations designed to build on and strengthen the approach to school funding, including a greater focus on equity.

Context and features

Education in the Czech Republic is decentralised. Two levels of local governments are responsible for various levels of education. Municipalities (*obec*) manage and finance basic schools, while regions (*kraj*) manage and finance secondary schools. The two levels of local governments are very different.

There are 14 regions in the Czech Republic, including the capital city Prague. With total national population equal to 10.54 million inhabitants and Prague accounting for 1.15 million (11.9%), the average population of the remaining regions is 714 thousand, ranging from 300 thousand in the Karlovy Vary region to 1.32 million in the Central Bohemian region (the region surrounding the capital city, with its offices located in Prague). Thus regions are very large local governments, and their networks of secondary schools are similarly extended, both general academic and vocational. There is ample room for co-ordination work of school profiles and for improving school efficiency (such as maintaining large class sizes). Education responsibilities of regions are complex and require serious strategic planning and oversight of many quite different institutions. Apart from financing secondary schools, regions are also responsible for the distribution of education grants for basic schools in all municipalities located on their territory.

In contrast, there are 6 253 municipalities, of which Prague is one. The average size of a Czech municipality (not including Prague) is 1 484 inhabitants, and about 70% of municipalities have less than a thousand inhabitants. As a result, there are many municipalities which do not manage a single basic school at all, and most have just one school. The result is that in many cases considerations of efficiency are less important to the municipality than the survival of the school, and efforts are made to keep it open despite small classes. Education responsibilities of municipalities are thus typically reduced to managing and financing a single school, with the main ambition of ensuring its continued operation.

Prague is, of course, a special case, as are capital cities across central Europe. It manages and finances both basic and vocational schools. Moreover, it is divided into a number of quite independent city districts with their own education responsibilities.

Main funding sources for Czech schools

Education finance in the Czech Republic includes both central (state) and local funding.

Recurrent (non-investment) education expenditures

All recurrent (non-investment) education expenditures of schools and education institutions in the Czech Republic are divided into two categories: the "direct costs" (central component) and the "operational costs" (local component). Direct costs come from the central (state) budget, and operational costs are covered from the local budgets.

A central grant covers the direct costs which are regulated by the state. These include primarily salaries for teachers and other staff, textbooks, teaching aids, further professional development of teachers and other expenditures resulting from labour laws. Funds for the

central component are put into per student normative amounts (see below) and allocated to regions through education grants. In this way the State takes responsibility for the financing of those educational functions, such as teaching and textbooks, which are centrally regulated. Thus, for example, if the State decides to increase teacher salaries or to strengthen curriculum, it will adequately raise the national normative amounts to compensate local governments for the increased expenditures.

The operational costs of schools are included in the second, local component. These are education expenditures which cannot be clearly regulated in financial terms because they depend on many diverse factors and on local prices of inputs. This component includes maintenance of schools, energy expenditures (heating, electricity, gas), communal services (provision of water, utilisation of garbage), and small repairs. Operational costs of schools are financed from regional and municipal general revenues, including shared taxes, local fees and charges, or equalization grants. It is assumed that these revenues will rise together with inflation, which is the major factor contributing to the increase of operational costs.

Investment expenditures

A separate financial stream concerns investments in schools. This is the responsibility of school founders, that is, municipalities for basic schools and regions for secondary schools. Similar to school operational costs, investment funds are not included in national or regional normatives.

The grants for direct costs and alignment with the governance structure

The uneven decentralisation of basic and secondary schools in the Czech Republic, described above, requires quite different approaches to how these two levels of education should be financed. Two features of the grants for direct costs within the Czech education finance system are designed to achieve this purpose.

A national funding formula (the national normative amounts)

The first feature is that the education grant from the central budget to regional budgets uses a very simple allocation formula based on five normative amounts: four normative amounts for groups of students of different ages and a separate normative amount for KZÚV (*Krajská zařízení ústavní výchovy* - Regional institutional care facilities), that is for students in correctional facilities (these facilities include boarding, so the normative is much higher). The four age groups correspond to pre-school education, basic education (ISCED [International Standard Classification of Education] 1 and 2), secondary education (ISCED 3) and higher vocational education (ISCED 5B). Table 3.1 provides the values of the national normative amounts in recent years (in CZK) and Figure 3.1 shows how these have evolved.

The use of a simple allocation formula is justified by the fact that these grants are calculated for very large groups of schools, each of which includes many urban schools, many rural schools, and many schools teaching different vocational profiles. Thus average class sizes across the regions are rather uniform, and this allows for using a very simple formulaic approach. As we show below, this is to some extent, though not entirely, justified in the Czech context.

Regional funding formulas (regional normative amounts)

The second specific feature of the grants for direct costs within the Czech education finance system concerns the allocation of grants from regional budgets to individual basic

Table 3.1. **National normative amounts per student in CZK, 2005-15**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
3 to 5 years	33 284	34 478	36 183	37 096	37 496	39 858	36 136	38 833	38 833	39 235	39 235
6 to 14 years	35 641	37 907	41 542	43 199	44 126	46 747	46 110	49 825	49 825	50 423	50 423
15 to 18 years	46 650	48 414	50 775	52 512	52 131	54 495	53 538	57 718	57 718	58 313	58 313
19 to 21 years	39 880	41 848	43 905	44 954	45 435	47 651	45 919	49 245	49 245	49 755	49 755
KZÚV	177 592	177 592	186 905	210 262	212 526	222 527	221 809	236 720	236 720	239 179	239 179

Note: KZÚV (*Krajská zařízení ústavní výchovy* - Regional institutional care facilities) comprises students in correctional facilities.
Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

schools (managed by local governments) and to individual secondary schools (managed by the regions). As most local governments finance only one basic school (if any), and as these grants are conditional (can be used only for education), one can say that in fact there is no difference between allocating the grant to the basic school or to the municipality which manages it (the difference becomes relevant only if a municipality manages at least two schools). In order to achieve this, the regional allocation formulas are very complicated, requiring complex formulas for basic schools and over 200 different normative amounts for secondary schools. All these normatives need to be adjusted every year by the regional education authorities.

Regarding the funding of basic schools, we thus see that there is a multitude of sources: normative allocation for direct costs from the regional budget, additional funding for direct costs (as negotiated between municipality and the region), add-ons to direct costs from the municipal budget (allowed under the law, and used in cases when the regional allocation falls short of the needs of the school, as assessed by the municipality), and finally operational costs, fully financed from the municipal budget. In contrast, secondary schools receive their all funding from one source, namely the regional budget (part of it through normatives for direct costs, part through budget allocation for operational costs).

The dual role for regions is a specific feature of the Czech education financing system

As mentioned above, the Czech regions have two separate roles in the education financing system. The first is receiving an education grant from the central budget to finance the schools under its managerial control (secondary schools), and allocating these funds to individual schools. In this respect, the Czech regions are just like any local governments among the post-communist countries. The second role is receiving education grant from the central budget for schools managed by the municipalities (basic schools), and then redistributing these funds among the municipal schools according to an allocation formula set by each region. In this regard, the Czech regions act like extensions of the national government and have much power over the municipal budgeting process. In part this is the result of a slow process of decentralisation of the Czech education system: the ministry used to have offices located in each region that had administrative responsibilities and these gradually gave up powers to the Czech regions. Regional self-governing authorities have "inherited" the responsibility to allocate funds to municipalities from the former ministry offices in each region, presumably with their staff and with their accumulated capacity and knowledge about basic education on their territory.

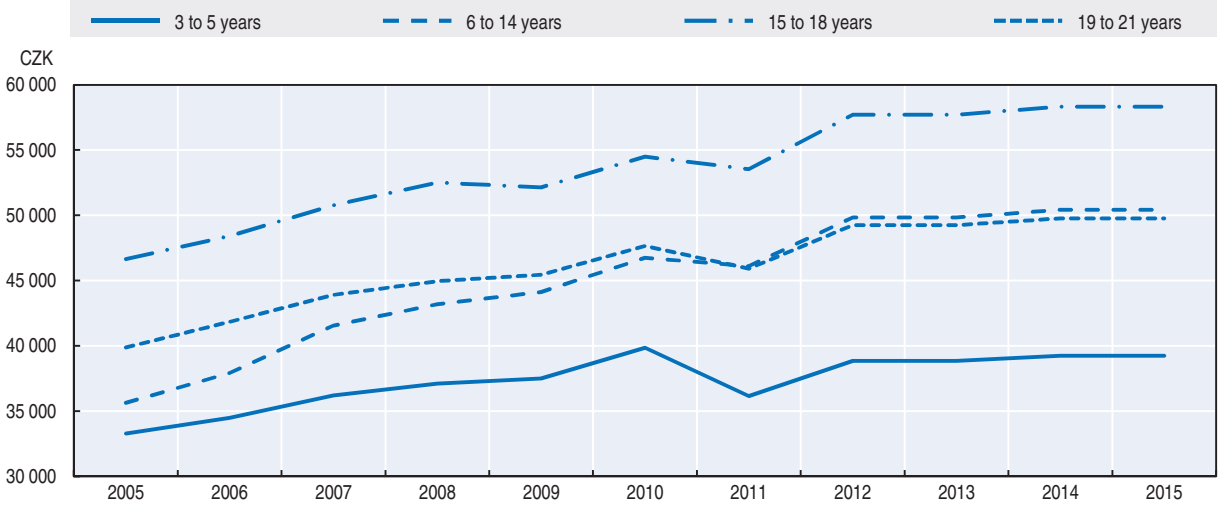
This double role of regions in the financing of the Czech education system is quite unusual among the post-communist countries. It creates a dependency of municipalities

on regions, thus making the first tier of local government (municipalities) partially subordinate to the second tier (regions). Although this is allowed under the European Charter of Local Self-Government (which does not mention different tiers and their relationship), most countries in the region treat local government of different levels in a similar manner, ensure their budgetary autonomy from each other, and create direct grants from the central budget to the local budgets, without intermediaries.

The evolution of the central grant for each age group (the normative amounts)

Since 2005, the normative amount in the central grant for direct costs has increased for each of the five groups (Table 3.A1.1). Figure 3.1 presents the evolution of the four normative amounts by age group (it excludes the normative amount for students in correctional facilities as this is much higher). This shows a steady increase in the normative amount for each age group until 2010. However, the normative for each age group grew at a different rate, with the biggest increases for the age groups 6 to 14 years (31%) and 3 to 5 years (20%) (Table 3.A1.1). In 2011, there was a marked decrease in each of the normative amounts, especially for the normative for the age group 3 to 5 years, which has not since recovered to its 2010 level. In 2012, each normative was increased between 8% to 10% and since then (2012-15), the normative amounts have been held constant for a two-year period (Table 3.1 and Table 3.A1.1). Cumulatively, over the period 2005 to 2015, the normative amount for the age group 3 to 5 years grew by 18%, while the normative amount for the age group 6 to 14 years grew by over 41% (Table 3.A1.1).

Figure 3.1. **Evolution of the central normative amount for each age group, 2005-15**



Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

As a result of this uneven growth, the relative allocation of the central grant to each age group changed over the period 2005 to 2011 (Table 3.A1.2). Since 2012 an annual rate of change has been applied uniformly to the normative amounts and the relative amount of the central grant allocated to each age group has been held constant. Relative to the age group 3 to 5 years, the normative is equal to: 129% for the age group 6 to 14 years, 149% for the age group 15 to 18 years, 127% for the age group 19 to 21 years and 610% for students in correctional facilities (Table 3.A1.2).

Strengths

Stable and publicly known system to allocate public funding to schools

The allocation of central funds for direct costs in education is designed through a system of per student normative amounts. This system is in operation since 2001 and covers both the central level, namely the distribution of funds from the national to regional budgets, and the regional level, namely the distribution of funds to local governments (for basic schools) and to secondary schools managed by the region itself. Since the majority of local governments in the Czech Republic own just one school, the regional allocation is in fact an allocation to individual schools, except for the cities and for districts in the capital. There is common knowledge of this system and in general Czech education officials at all levels of governance accept the current system as fair and objective.

The value of a publicly known and strictly adhered to allocation system in education is significant for the stable functioning of schools. The most important benefit is the stability and predictability of financing, which allows all schools to plan their development in the coming years. In particular, since 2012 there has been greater stability in the principles and technical details of the national normative amounts, namely the relative amount of the central grant for direct costs allocated to each age group has been held constant (Table 3.A1.2). Further, parents can monitor education spending and in this way exercise social control over the functioning of the education system.

It is worth adding that the allocation system based on per student normative amounts is extremely simple at the national level, with just five age-based normative amounts, and extremely complex at the regional level. This reflects the fact that allocation to regions allows the use of averaging effects of large jurisdictions (containing a huge variety of municipalities and schools), while allocation at the regional level is mostly to individual schools and therefore needs to reflect their specific conditions.

Transparent division of education finance into national and local components

Responsibilities for financing of education are clearly divided between different levels of government. The direct costs are financed through grants from the state budget to regional budgets. The operational costs are financed from the school owner's own revenues, that is, from municipalities for basic schools and from regional authorities for secondary schools. This transparent division of education finance into direct and operational costs creates clarity of who is responsible for what function in the sector. In particular, it ensures that the main costs of the school, namely teacher salaries, will be adequately adjusted whenever the State decides to increase them, and it allows municipal and regional authorities to plan the operational component of school budgets in a relatively simple manner. This transparent division may, however, carry risks of inflexibility, which is discussed below.

In-built mechanisms allowing for some local flexibility in funding allocation for direct education costs

Importantly, the funding allocation for direct costs includes in-built mechanisms allowing for local flexibility in the application of the per student normative amounts. These consist of negotiations between schools and municipal authorities, and negotiations between municipalities and the regional authorities. These provisions for negotiations are legally set. This means that some degree of deviation from the strict allocation according to per student normative amounts is allowed in the system. These in-built mechanisms are

particularly important as they recognise the risk that comes from the allocation of budget funds for direct costs (notably for teacher salaries) to individual schools on a pure per student basis. This voucher-type allocation is made for almost all schools; the only exceptions are the few municipalities which operate more than one school. Such a system creates a risk of inflexibility, when even a small decrease in number of students may result in a corresponding decrease of funds for salaries, which may make funds insufficient for teacher salaries which remain fixed.

An additional in-built mechanism, aiming to counteract possible inefficiencies due to the mechanical application of national and regional normative amounts, is the right of municipalities to provide additional funds for direct costs above the received allocation from the regional budget (operational costs are not covered by this as they are fully borne by the school owner). This is typically negotiated between the municipalities and the schools. In small municipalities with just one school this may be necessary to ensure the stable operation of the school.

School budgets can accommodate small fluctuations in allocated funds for direct education costs

There is also a degree of flexibility at the school level to accommodate small fluctuations in funding for direct education costs. As noted, the Czech system of financing schools is essentially a voucher system, with its inherent fluctuation of allocation as student numbers change. It is therefore important to ensure that there is a sort of "cushion" at the school level, to absorb the impact of inevitable small changes in student numbers (especially decreases, of course). The cushion comes from the fact that teacher salaries consist of two components. The fixed component, stated in the national teacher salary scale, is nationally negotiated each year, and sets the minimum which must be paid to teachers according to their employment contract. The personal component, in contrast, is decided each year by the school principal, and reflects, among other things, changing teacher responsibilities within the school. This adjustable second component of the salary gives flexibility at the school level. It may be used – and in fact the OECD review team learned that it is being used – to adjust the total pool of salaries to the funds for direct costs available through normative financing of schools. This provides yet another mechanism for flexibility in the Czech system of education funding, by allowing schools to accommodate small fluctuations of allocated budget for direct education costs as student numbers fluctuate.

Functioning additional financial instruments to support students with special educational needs

The Czech Republic recognises the need for specific regulation and additional funding for the teaching of students with special educational needs. This is currently provided through the allocation of additional teaching assistance on the basis of recognised and certified needs, and through the provision of specific funds for this assistance, above and beyond the funding for direct education costs. The need for this teaching assistance, in the form of allowed additional teacher positions, is negotiated between the school and the school owner, and then submitted for consideration by the regional education authorities, who take the final decision whether to fund these assistant teacher positions.

The funds for additional teaching assistance are assumed to come from the regional reserve of education per student normative funds, legally set to be equal to at least 2.5% of the total sum of normative funds.

Proposed new approach to finance education for children with special educational needs

Financing of additional education services for students with special educational needs is not considered as very successful in the Czech education community. In particular, it has not led towards an increased integration of students with special educational needs in mainstream schools. This may be due to the fact that this financing is limited to the additional positions of teaching assistants.

In response to this criticism, the ministry is preparing a radical reform, aiming at a complete overhaul of today's system of financing special needs education. The new approach will be based on a catalogue of certified pedagogical measures, which must be undertaken by schools whenever a student is certified as in need of such a measure, irrespective of in which school she or he is enrolled. The catalogue includes also the specific established costs (prices) for each item on the catalogue. This allows, on the basis of available statistics regarding students with special educational needs, to make prognosis of the future necessary additional allocation of the required budget funds.

The introduction of such a catalogue with a list of measures and associated prices is an innovative procedure, without much precedent in other OECD countries. It may break the current unwillingness of mainstream schools to accept students with special educational needs. During the OECD review, the ministry was still in the process of reflecting on ways to operationalise this catalogue, so that it becomes an efficient administrative tool supporting more effective targeted funding. This is an extremely important exercise. There will need to be adequate mechanisms to ensure that the associated costs do not unduly accelerate and grow as a result of growth in the number of students being certified (see below).

New education strategy plans for more effective use of EU funding

In recognition of some difficulties in relation to the use of structural funds from the EU in the previous financial period, the Czech Republic, supported by the European Commission, has taken this into account in the design and implementation of the new generation of European Structural and Investment Funds programmes in education (i.e. Operational Programmes [OP] Research, Development and Education; OP Prague Pole of Growth; Integrated Regional OP). Several measures are expected to contribute to better targeting and improved absorption of the available funds. Notably, there are safeguards for the implementation of a smaller number of systemic projects that will be more policy relevant. Also, the implementation structure has been simplified. The OP will continue to use simplified cost options which have proved to support a better administration of EU funding. These programmes are based on the 2014 EU Country Specific Recommendations (CSR) for education – 80% of the OP Research, Development and Education is directly related to these CSRs, that is, inclusive education with a focus on the Roma minority, support to early childhood education and care, support to teachers, and increasing the quality and labour market relevance of higher education (European Commission, 2014). These points are mirrored in the Strategy for Education Policy of the Czech Republic until 2020 (MŠMT, n.d.).

National government uses specific education grants for development programmes in Czech education

In addition to the basic financing of recurrent direct costs of providing education through a system of national per student normative funding, the Czech Republic uses a number of specific education grants. The aim of these targeted grants is to fund development programmes, that is, specific experimental or piloting programmes and new educational

initiatives. These initiatives are often developed or proposed by some groups of teachers or by locally active and not well resourced non-governmental organisations, so require financial support from the state to be really tested. It is assumed that these development programmes either show their usefulness and documented positive outcomes, in which case they may be expanded and eventually integrated into mainstream financing scheme, or they will prove to be less effective than initially hoped, and accordingly will be discontinued. In this way, the use of targeted funding supports policy experimentation and by supporting localised, innovative projects can be a fruitful way to test out different approaches to address identified challenges in the education system.

As one of the key challenges facing the Czech education system is the integration of Roma children into schools and maintaining them there (see Chapters 1 and 2), it is not surprising that presently most of the specific education grants discussed here are directed towards addressing this challenge. Due to cultural differences and in particular to lower parental expectations those students are at a higher risk of dropping out of school. For this vulnerable group of students in secondary schools and higher vocational schools a specific national programme has been introduced through Government Resolutions No. 386/2000 and No. 607/2004. The grants for these students are capped, differentially for consecutive years of the secondary school; on a per student basis in each of two periods of the school year (January to June; September to December) they can be no more than CZK 4 000 (1st year of secondary school), CZK 5 000 (2nd year), CZK 6 000 (3rd year), and CZK 7 000 (4th year). However, the number of students enrolled in these programmes is extremely small, as shown in Table 3.2.

Table 3.2. **Additional funding to support socially disadvantaged Roma student at secondary schools**

	Total expenditure (CZK)	No. of students (ISCED 2 and 3)	No. of students (ISCED 4)	Additional funds per student (CZK)
2012 (Jan-June)	3 282 000	692	7	4 695
2012 (Sep-Dec)	4 695 300	1 040	12	4 463
2013 (Jan-June)	2 447 000	532	8	4 531
2013 (Sep-Dec)	3 160 000	740	11	4 208
2014 (Jan-June)	2 538 800	546	15	4 525

Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

Challenges

National allocation system for direct costs does not support equity

The national allocation system for direct costs is rigid, with an excessively simplified formula (only five different normative amounts) and it does not take into account regional differentiation of the Czech education system. With one per student normative for basic education (6 to 14 years age group), for example, relatively more funds are transferred to urbanised regions and Prague than to more rural regions with smaller average class sizes. In this way, the national allocation system does not include the instruments to support the equity of education finance. Here, the OECD review team examines the extent of regional variation on some basic indicators for basic education, suggests that this underlines the need for a more in-depth review and exposes the weakness of an over-simplified national allocation system.

Regional variations in average class size and student to teacher ratios

Allocative inequity can be reviewed in two different ways, under the assumption that teacher salaries are broadly uniform across the country. The first approach is to assess average class sizes in basic education. Indeed, certainly the first stage of basic education (Years 1 to 5) is the most uniform stage of education, with a broadly similar teaching programme and curriculum load across the Czech Republic. Thus, we can assume that direct cost expenditures per class should be also rather uniform. Since the allocation for direct costs from the national to regional budgets is based only on the number of students, regions with on average larger classes would receive a relatively higher per class allocation than regions with smaller classes. The second is to assess the number of students per full-time equivalent (FTE) teacher in each region (an indicator related to the first one, but reflecting possible deviations in teaching load). As teacher salaries comprise the major part of school expenditures (of direct costs), differences in the number of students per FTE teacher will indicate allocative inequity. Table 3.3 provides the average values of both indicators for basic education in all the Czech regions, separately for the first (Years 1 to 5) and second stage (Years 6 to 9) of basic education and overall.

Table 3.3. **Class sizes and students per full-time equivalent teacher in basic education in the Czech regions**

Region	Class sizes			Students per FTE teacher		
	1st stage (Years 1 to 5)	2nd stage (Years 6 to 9)	Total (Years 1 to 9)	1st stage (Years 1 to 5)	2nd stage (Years 6 to 9)	Total (Years 1 to 9)
Czech Republic	19.64	19.41	19.55	17.72	11.10	14.45
Prague	20.73	20.31	20.58	18.85	10.77	15.03
Central Bohemia	20.29	19.45	19.97	18.27	11.47	15.06
South Bohemia	20.05	19.16	19.69	18.18	11.02	14.54
Pilsen	19.40	19.14	19.30	17.58	11.26	14.50
Karlovy Vary	19.97	18.76	19.47	18.34	11.23	14.74
Usti	20.07	18.77	19.53	18.43	10.83	14.46
Liberec	18.88	19.19	19.00	17.47	11.10	14.25
Hradec Kralove	18.91	19.07	18.98	16.88	10.92	13.94
Pardubice	19.44	19.36	19.41	17.35	11.19	14.29
Vysocina	19.47	19.06	19.31	17.18	10.92	14.00
South Moravia	19.26	19.77	19.45	17.46	11.09	14.34
Olomouc	19.12	18.99	19.07	17.01	10.89	13.99
Zlin	18.45	19.55	18.89	16.53	11.34	13.95
Moravia-Silesia	19.53	19.89	19.67	17.41	11.26	14.31

Source: Provided to the review team by the Ministry of Education, Youth and Sports.

Table 3.3 provides some useful information regarding regional variation of basic education in the Czech Republic. First, it is useful to note some basic facts. While there is relatively little difference in class sizes between the first and second stages in basic education, in all regions there is a considerably lower student-teacher ratio at the second stage of basic education. This reflects the increased number of subjects taught in the second stage and a corresponding increase in number of teachers teaching them (per class).

The importance of the average class size is related to the strict per student allocation at the national level, namely larger classes imply higher per class allocation. Prague is exceptional, as it is the only entity in Table 3.3 consisting entirely of urban schools. The per class allocation in Prague is 5.6% and 4.6% higher than the national average at the first and

second stages of basic education respectively. Among the other Czech regions, with a mixture of rural and urban areas, the per class allocation varies from 2.1% higher than the national average in the Central Bohemian region to 3.4% lower than the national average in the Zlin region. This is not a very large variation, due to the large scale of regions, but it does show that more rural regions are at a disadvantage. However, there is markedly higher variation in class sizes at the first stage of basic education, with a difference of 9.4% of the national average between the regions with largest and smallest classes, than in the second stage (difference of 5.8%). The higher variation of class sizes in the first stage of basic education may indicate that across the regions there is a non-uniform distribution of small rural schools providing only initial education.

A different picture emerges when we review the number of students per FTE teacher. Again, Prague is the exception, but in a different way: it has the highest number of students per FTE teacher among all the regions in the first stage and the lowest in the second stage (recall that its class size is highest in both stages). The high value of this parameter for the first stage is simply due to large classes. However, the extremely low value of the student-teacher ratio for the second stage indicates a clear policy preference of the Prague authorities to provide significantly more teaching to students of higher years. It seems education officials in Prague consider that investment in higher years of basic schools is best for their students. This is borne out by Table 3.5 below, which shows that FTE teachers per class in the second stage of basic schools in Prague is 7% higher than the national average. Among the other regions the coefficient of variation (equal to standard deviation divided by the mean value) of students per FTE teacher is 0.034 for first stage and 0.018 for second stage. This shows that overall variation is small, but for the first stage it is almost double that of the second stage. Variation of number of students per FTE teacher in the first year is almost entirely due to class size (coefficient of correlation of these variables R=0.91). Education policies for the first stage of education are therefore quite similar across the regions. However, variation of students per FTE teacher in the second stage of education is only partially explained by class sizes (R=0.53), which means that different regions provide quite different amount of teaching to their students.

Regional variations in the use of special classes in mainstream schools

No less important than class size, the national allocation for direct costs should reflect student characteristics which strongly influence the costs of providing education. The key of these is related to students with special educational needs. In the Czech Republic, in all regions there are special classes in mainstream basic education. These have to be distinguished from inclusive education, where students with special educational needs attend regular classes together with other students. Special classes in mainstream schools are quite small compared to mainstream classes, and their prevalence across regions varies (see Table 3.4).

The share of special classes in mainstream basic education varies across the regions between 7% and 13%, while the share of students with special educational needs in those classes varies between 4% and 10% (Table 3.4). Since the share of students with special educational needs in the student population is probably quite uniform, this variation almost certainly reflects the different availability of special schools maintained by the regions in different areas of the country, and by differentiated access to and operations of school advisory facilities (inclusive education is not widespread in the Czech Republic and correspondingly the special school sector is quite large, see Chapter 2). To the extent that

Table 3.4. **Proportion of special classes in mainstream schools and average size of special classes, by region**

Region	Share (%) in mainstream schools of:		Class size (no. of students) in mainstream schools of:	
	Special classes	Students of special classes	Mainstream classes	Special classes
Czech Republic	9.2	6.2	20.72	8.03
Prague	10.4	6.4	22.01	8.25
Central Bohemia	7.8	4.8	21.00	7.82
South Bohemia	7.0	4.3	20.61	7.38
Pilsen	9.9	6.5	20.56	7.79
Karlovy Vary	11.0	8.2	20.80	8.76
Usti	13.1	10.1	21.11	9.08
Liberec	11.7	8.2	20.46	7.98
Hradec Kralove	10.5	7.1	20.29	7.73
Pardubice	8.2	5.3	20.47	7.51
Vysocina	7.4	4.9	20.23	7.72
South Moravia	7.7	5.2	20.40	8.13
Olomouc	10.0	6.9	20.31	7.93
Zlin	7.7	4.9	19.89	6.98
Moravia-Silesia	9.0	6.1	20.82	8.03

Source: Provided to the review team by the Ministry of Education, Youth and Sports.

special classes also cater for students from socio-economically disadvantaged groups, this variation may be the result of economic disparities between the regions. Thus we see that average class sizes in basic education are driven not only by the relative degree of rurality, but also by differentiated use of special classes in mainstream schools. In some cases these two factors may influence basic education in opposite directions (for example, with special classes more prevalent in urban schools).

The very simple allocation process used at the national level does not reflect the number of students in special classes, so the documented variation shows that Usti and Karlovy Vary regions are at a distinct disadvantage, compared for example with South Bohemian and Central Bohemian regions. In order to provide support to their SEN students enrolled in special classes in mainstream schools, these regions have to mobilise additional resources.

Regional variations in the number of full-time equivalent teachers per class

We now move to review the impact of the financing system on the volume of education offered to students. This is measured by the number of FTE teachers per class (obtained as the simple division of two indicators analysed above, namely average class size divided by the number of students per FTE teacher). This indicator is quite flexible, because it includes additional teaching time for some groups of students or division of classes into smaller groups for some subjects (such as foreign languages or sports). The value of the indicator comes from the fact that the curriculum is uniform for all basic schools. Table 3.5 provides this indicator, together with its value expressed as the percentage of the national average, again for the first and second stages of basic education.

We note first that the number of full-time equivalent teachers in the first stage of basic education is quite uniform across regions (as noted above, these are aggregated data, so this uniformity does not preclude greater variation at the municipal level). However, variation at the second stage of basic education is much more pronounced, with the difference between Prague and the Karlovy Vary region equal to more than 12% of the national average. Table 3.5

Table 3.5. **Full-time equivalent teachers per class in basic education, by region**

Region	FTE teachers per class			Percentage of the national average		
	1st stage (Years 1 to 5)	2nd stage (Years 6 to 9)	Total (Years 1 to 9)	1st stage (Years 1 to 5)	2nd stage (Years 6 to 9)	Total (Years 1 to 9)
Czech Republic	1.108	1.749	1.353	100.0	100.0	100.0
Prague	1.100	1.886	1.370	99.2	107.8	101.2
Central Bohemia	1.111	1.697	1.326	100.2	97.0	98.0
South Bohemia	1.103	1.739	1.354	99.5	99.4	100.0
Pilsen	1.104	1.700	1.331	99.6	97.2	98.3
Karlovy Vary	1.089	1.671	1.321	98.2	95.5	97.6
Usti	1.089	1.734	1.351	98.2	99.1	99.8
Liberec	1.080	1.729	1.333	97.5	98.8	98.5
Hradec Kralove	1.120	1.747	1.362	101.1	99.9	100.6
Pardubice	1.120	1.730	1.358	101.1	98.9	100.4
Vysocina	1.133	1.745	1.379	102.3	99.8	101.9
South Moravia	1.103	1.783	1.357	99.5	102.0	100.2
Olomouc	1.124	1.743	1.363	101.4	99.7	100.7
Zlin	1.116	1.724	1.354	100.7	98.6	100.0
Moravia-Silesia	1.121	1.765	1.374	101.2	100.9	101.6

Source: Provided to the review team by the Ministry of Education, Youth and Sports.

suggests that schools providing basic education in Prague offer, on average, significantly more teaching than other schools in the country, while Karlovy Vary offers less, which is worrying. If average teaching load of a teacher is equal to 18 lessons per week, we can assess that second stage students in Prague schools receive on average about 3.8 hours of teaching per week more than students of the same age in Karlovy Vary.

On the other hand, if the relative wealth of the region does influence the average number of FTE teachers per class, these indicators for the first and second stages of basic education should be positively correlated (because a richer jurisdiction will tend to provide more funds for Years 1 to 9 of basic education, that is, for both stages). However, they are not correlated with each other, which indicates that there are other causes for this variation. Indeed, in some regions, such as Prague and the South Moravian region, FTE teacher per class for the first stage of basic education is below the national average and for the second stage is above the national average, while in others, such as the Central Bohemian or Pardubice regions, this is the other way round. Therefore, we conclude that more in-depth analysis is required to confirm whether this represents real educational inequities between regions. Such analysis should also include teaching outcomes.

Our final remark regarding Table 3.5 concerns its relation to class sizes and number of students per FTE teacher (Table 3.3). We have already noted that in the first stage of education, class size and students per FTE teacher are very closely correlated, while this correlation decreases markedly for the second stage. In Table 3.5, the coefficient of variation of number of FTE teachers per class is equal to 0.014 in the first stage and to 0.029 – or more than double – in the second stage. This can be interpreted in the following way. While the amount of teaching provided to basic schools is quite uniform across the country (very low coefficient of variation), it is much less uniform in the second stage than in the first stage. Different regions have somewhat different education policies, including the exceptional case of Prague that heavily invests in the second stage of basic education.

Conflict of interest inherent in regional allocation to municipalities

As discussed above, the Czech regions perform a double function in the education finance system. As owners of the secondary schools and special schools, they receive funds for those schools and allocate them to individual schools, although legal regulations heavily constrain their freedom in this process. At the same time, the regions are responsible for the reallocation of the received funds for basic education to municipal basic schools located on their territory, which are managed by the municipality.

This creates a systemic conflict of interests, in that the regions may have the tendency to provide preferential treatment to supporting secondary and special education. Of special interest in this respect are the eight-year and six-year long programmes in *gymnasia*, because the initial four years of the first, and the initial two years of the second, provide teaching to the age groups which typically would attend municipal schools offering basic education.

To clarify this better, recall that the national allocation system for direct costs includes the normative for students aged 6-14, who typically attend municipal schools to follow basic education, and for students aged 15-18, who typically attend secondary schools run by the regions (although there is a higher percentage of private providers at this level – see Chapter 2). The first years of long *gymnasium* programmes are students who are in the age group 6-14 and attend secondary schools: students would leave basic school at the end of Year 5 to join an eight-year programme (i.e. the second stage of basic education) and at the end of Year 7 to join a six-year programme (i.e. ages 13 and 14). Note that the biggest proportion leaving basic schools follow the full second stage of basic education in a *gymnasium* (see Chapter 2). Thus, even if the regions are obliged to maintain strict division of the use of grants received according to different normatives, which does not seem to be the case, they have to split the funds received under the 6-14 normatives between their own and municipal schools. This division of funds is the source of conflict of interests. Moreover, since secondary schools are generally more expensive than basic schools, the regional normative amounts for *gymnasia* are higher than those for basic schools for this age group. In this way *gymnasia* take funds away from municipal schools offering basic education, and this effect is stronger whenever longer programmes in *gymnasia* are opened. It is important to note that the decision to open these long programmes rests with the region.

In Table 3.6, for two Czech regions, we provide comparisons of the regional normative amounts for basic schools, for standard (four-year) *gymnasia*, and for upper and lower age groups for long *gymnasium* programmes. Because for basic schools the per student normative amount depends on the number of students in the schools, we calculate an average normative for students of second stage of basic schools (Years 5 to 8), when there are between 100 and 200 students in the second stage. For verification we also provide the national normative amounts for the relevant age groups.

We note that indeed, both in the Moravian-Silesian region and in the Pilsen region, the regional normative amounts for the first stage of long programmes in *gymnasia* are higher than the average normative amounts for basic schools (average for schools between 100 and 200 students, normative amounts for schools with more students are smaller). The differences in the two regions are quite similar (between 6% and 9%). Although higher allocation for long programmes in *gymnasia* may be based on extended curricula in those schools, and thus may be due to objectively higher per student expenditures, it nevertheless shows that in their allocation procedures the regions need to take into account the differentiated needs of both their own schools and of the schools managed by municipalities. In this respect, at the very

Table 3.6. **Regional normative amounts by school type in the Moravian-Silesian and Pilsen regions**

Region and age group	National normative amount (CZK)	Regional normative amount (CZK)			
		Basic school	*Gymnasium* (4 years)	*Gymnasium* (6 years)	*Gymnasium* (8 years)
Moravia-Silesia					
6 to 14 years	50 423	35 219	x	38 713	37 322
15 to 18 years	58 313	x	41 883	40 910	43 309
Pilsen					
6 to 14 years	50 423	34 745	x	36 894	36 894
15 to 18 years	58 313	x	43 840	42 545	42 545

x: not applicable.
Source: Odbor školství, mládeže a sportu Moravskoslezského kraje (2015), *Krajská metodika rozpisu přímých výdajů právnických osob vykonávajících činnost škol a školských zařízení zřizovaných obcemi a krajem na rok 2015* [*Regional Methodology for Direct Expenditures of Legal Persons Carrying Out Activities of Schools and School Facilities Established by Municipalities and Regions for 2015*], *www.msk.cz/-44772*.

least annual conversations between the regions and the municipalities about the relative allocation of education funds would be necessary to soften this situation. During the OECD review, no such discussions were mentioned to the review team.

Interestingly, regional normative amounts are significantly smaller than the national normative amounts for respective age groups. The reasons are certainly different for the age groups 6 to 14 and 15 to 18. For the first of these, the saved amounts are used for small schools, in which per student normative is much higher, and for special classes in mainstream schools (additional positions in basic schools, allocated by regions in response to specific requests from the schools themselves). For the second age group, the saved amounts are used for various normative amounts for professional and special education, again higher. In both cases, funds have to be found also for additional education services provided by the region, and for regional reserve.

Excessively complicated regional allocation formulas

The regional allocation systems are excessively complicated, in stark contrast to the national allocation formula. There are two dimensions of this complexity, one related to pre-schools and basic schools, the other to secondary schools.

Pre-schools and basic schools

With respect to pre-schools and basic schools, some regional allocation formulas are based strictly on the number of students in the municipality. Since in most cases there is one basic school there, this really means that the allocation formula is based only on the number of students in that school. In other words, the per student regional normative amount is the result of a specific formula applied to the number of students, using some supporting parameters (such as average salaries of teachers and non-teachers working in pre-schools and in basic schools).

The formulas used to calculate the per student normative amount include quite complicated mathematical functions of the number of students (see Annex 3.2 for two examples). Among these functions are logarithms, fractional powers, and polynomials of third degree of the number of students. These are not advanced calculus functions for mathematicians or statisticians, of course, but it is likely that they cannot be readily

understood by the majority of people without a specialised background, including, it could be argued, the staff of regional or municipal education departments.

The OECD review team notes that the use of such functions for allocation of education funding is quite unique. Whatever the original intention was behind the design of these functions, they have introduced a level of obscurity that effectively prevents those who use them from fully understanding and applying them. In recognition of this fact, the regional ordinances specifying the allocation formulas for pre-schools and for basic schools actually provide very large Excel tables with the calculated values of the relevant regional normative amounts for consecutive natural numbers, for example from 10 to over 600 (the larger the number of students, the smaller the normative per student amount). The provision of these Excel tables, typically containing only the values of the regional normative amounts and not the actual functions used to calculate them, suggests to the OECD review team that the experts who originally proposed the formulas did not expect people to understand or be able to use them. The application of the formula is thus reduced to entering the additional parameters mentioned above (salaries). The OECD review team argues that in this mechanical process, there is no place to assess and respond to the differentiated needs of pre-schools and basic schools, or to take into account such crucial factors as the existence of a special class in mainstream basic schools.

Secondary schools

For secondary education, the complexity is of a quite different nature. Instead of providing very complex formulas based on the number of students, there are simple regional normative amounts for every educational programme provided in the region's schools (see Annex 3.2 for two examples). These include:

- normative amounts for *gymnasia*, separately for regular programme (four years) and for upper and lower years in long programmes (six and eight years)
- normative amounts for various artistic and sport schools
- normative amounts for all professional and vocational profiles offered in the region's schools.

Altogether, the number of normative amounts maintained and used by each region ranges between 300 and 400, depending mainly on the range of professional and vocational profiles offered in the region's schools. Moreover, the regions cannot simply decide on the values of these normative amounts. Instead, national regulation provides a strict and unambiguous methodology to calculate them from year to year, leaving regions very little room for manoeuvre in this respect (see Annex 3.2 for details).

Each school managed by the region will then receive the allocation based on the number of education programmes offered in the school and on the number of students in each programme. For example, a typical *gymnasium* would receive the allocation taking into account the number of students in each of the following six programmes: regular *gymnasium* students, upper and lower stages of six-year long and eight-year long programmes, and sports programme, each number multiplied by the respective normative amount and all summed up. For vocational schools, the number of programmes, of course, may be much larger. Thus, although the actual formula may be quite simple, the complexity arises from the sheer number of educational profiles and corresponding normative amounts.

The OECD review team underlines the need to recognise that using a large number of different normative amounts makes the regional allocation process rather difficult. It is

almost certain that nobody, either in regional offices or in the schools, can remember all these normative amounts, correctly calculate them and then apply them to individual schools. In order to allow regions to perform their duties, the ministry provides regions with software that supports the calculation of the normative amounts (from year to year), and to actually allocate funds to individual schools. This software requires the entry of only basic parameters, such as student numbers for each education programme and the average teacher and non-teacher salary for these programmes (see Annex 3.2). The OECD review team contends that the use of a computer programme reduces further any interest the regional education officials may have in understanding the formula and using it strategically to address differentiated needs of schools.

In both cases, a mechanical application of allocation formulas impedes dialogue about priorities

Thus we see that regional allocation formulas, both for basic and secondary education, are designed in a way which makes their understanding very difficult. Both are very rigid, albeit in quite different ways, and both promote a mechanical application through the use of some computer programmes with the manual entry of some simple parameters.

The main problem with such over complicated formulas is that they prevent discussion and dialogue and do not allow analysis of specific school needs, to prioritise these needs, to discuss these priorities with all education stakeholders and in this way to formulate and implement a regional education strategy. The tough political decisions to prioritise the allocation of limited funds to very different schools facing their unique challenges is replaced with, the OECD review team would argue, the illusion of an objective, impartial methodology. In a fundamental way, this approach makes it very difficult for regions to take real long-term responsibility for the evolution of their school networks.

Furthermore, this approach makes policy discussions with the municipalities (for basic education) and with the school principals (for secondary education) very difficult if not impossible. Instead, all the decisions are taken by a small number of staff, characterised not so much by the deep knowledge of the allocation formula as by the technical capacity to use the appropriate computer tools. In particular, this double system of regional normative amounts, each complex in its own way, makes it almost impossible to assess whether the relative financial treatment of schools managed by regions and schools run by municipalities is fair (see section above).

Of course, it must be recognised that the current approach to regional allocation formulas, with all its consequences, is underpinned by national regulations.

Regional allocation system supports the perpetuation of historical spending patterns

The OECD review team has argued above that the complexity of regional allocation formulas, underpinned in large measure by national regulation, prohibits discussion between education stakeholders and makes adjustments to the evolving needs of schools very difficult. There is, however, one further technical issue with the current regional allocation formulas, which needs to be discussed in detail: they support the perpetuation of historical spending patterns and inhibit changes. In particular, they make it quite difficult to phase out old education programmes, no longer in tune with the expectations of parents and the demands of the labour market, and to phase in new ones, that are more in demand and relevant.

This technical issue concerns how the regional normative amounts for secondary education have to be formulated. These are based on the four main parameters, which need to be assessed for each education programme (for details see Annex 3.A2), namely average salaries of teaching and non-teaching staff and average number of students per FTE teaching and non-teaching staff (for the purposes of this discussion the two other parameters, namely social security and employment contributions and other non-investment expenditure, see Annex 3.A2, are not relevant).

Suppose that from one academic year to another there is no change in either the salaries or the number of staff (teaching and non-teaching) associated with a given education programme (for example, in a vocational programme), but the number of students decreases by a certain percentage. All the parameters remain constant, with the exception of the number of students per FTE staff, which decreases by the same percentage. Since the average number of students per FTE staff in the formula to calculate the normative amount enters in the denominator, and then the resulting amount (the new normative amount) is multiplied by the number of students (enters in the numerator), the two effects of this change in student numbers cancel out and the allocation amount for this education programme remains constant from year to year. In the opposite case, when the number of students increases, the same cancelling out effect ensures the same result – no change in the allocation for that education programme (the calculations supporting this analysis are provided in Annex 3.A2).

This perpetuation effect has a number of consequences. One is that the allocation is not decreased despite the decrease of the student numbers, so the funds for the salaries are maintained and the school has no need to adjust its operations and planning. This provides welcome stability, but reduces any incentive to respond to decreased student numbers. If the decrease is continuing in successive academic years and the school does not want to lay off its staff, the funding becomes much less efficient.

A very opposite effect arises if over time there is a repeated increase in the number of students in a given education programme from year to year. Since the allocation for that programme does not change, the schools will find it ever more difficult to adjust.

Suppose now that the region decides to phase out an outdated vocational programme and replace it with some more in line with the labour market. Typically such a change is done through closure of new enrolment in first year in the old education programme, allowing all students already enrolled to continue and complete their education, and instead enrolling first year students in the new profile. Now unless the school changes the number of staff working for the old education programme, the allocation for that will not be decreased, of course, so that the funds for the new programme will have to be provided over and in addition to the funds for the old programme. The only way to adjust funding is to make employment decisions within the school, that is, to assign some teachers to the new programme and relieve some teachers from the working obligation for the old programme. Thus, somewhat strangely, we deduce that the system of regional normative amounts is as much a per student system as a per teacher system.

Another way of seeing the effects of this very specific regulation of regional normative amounts is to assume that a particular education programme, for example a vocational profile, is offered in only one school in the region, and with the student numbers remaining constant that school decides to employ a new teacher for that programme. This would lead to the decrease of the number of students per teaching staff and a corresponding increase of

the appropriate normative amount. Hence in effect by employing additional staff the school automatically receives additional funding to cover the new salary, even if the number of students does not change. Again, this provides some stability whenever a new teaching or non-teaching position is required in the school, which is helpful, but at the same time the OECD review team notes that the automated nature of the regional calculation of the regional normative amounts means that school employment has to be very strictly controlled by the region. Indeed, if schools were allowed to employ as many teachers as they wanted to, within the available funds for direct costs, simply by employing more staff they would receive an increased allocation form the regional budget, a clearly perverse situation.

Finally, let us assume that a specific education programme is being offered in a few schools, and one of them is allowed to increase the FTE teaching staff for that programme, due for example to the increase of student numbers enrolled. The effect is to increase the regional normative amount for this education programme, which would, therefore, apply to all schools offering that programme. In this way, the decision to employ additional staff in one school leads to an increase in all schools offering that programme, even if in the other schools there is no need for new teachers. Such a flat increase in the regional allocation for all schools offering a given education programme is inefficient.

The discussion above indicates that the Czech education allocation system at the local level is not a truly per student approach, because changes in student numbers or staff numbers in one school can unpredictably affect the allocation for another school. This conclusion is supported by an evaluation of the mathematical form of the formula presented in Annex 3.A2, where we show that in fact student numbers cancel out (except for the other non-investment expenditure parameter).

For non-teaching staff, mismatch between funding allocation responsibility and national regulation

The current division of education finance into direct education costs (state component) and operational costs (local component) does not distinguish between human resources responsible for education services, such as teachers, school leadership, teaching assistants, psychologists, librarians and similar, and technical and operational staff, such as clerical and accounting employees, kitchen staff, cleaners and similar. This has significant consequences, because it may prevent various trade-offs, potentially of great benefit to increase efficiency.

For example, modern heating systems typically require less staff, and more technical maintenance and material input. Investment in the heating system will typically be the role of the municipality (for basic schools) or region (for secondary schools). This means that if the school owner invests in a modern heating system, not only will it incur the investment costs, but it will not be able to use the associated savings (a reduction in labour costs) to cover increased operational costs. Instead, the savings will have to be spent on other salaries, for example of additional teachers.

Complexity of sources of school funds makes it difficult to monitor equity of school finance

In the Czech Republic, there is a large number of different sources of funds for school budgets, especially for basic schools. These include the state budget (coming through the regional budget), additional funding from the regional budget, additional funding from the municipality budget, funds earned by the school, donations and parental contributions.

This makes it very hard to assess the relative role of all these sources of funds in the financing of schools, and thus in particular to assess the overall equity of school finance. A good budget reporting system should clearly identify these different sources of funds.

One specific difficulty concerns the use of the central education grant received by the region. This grant is calculated through the composition of five different national normative amounts and its beneficiaries include all municipalities located within the region as well as all secondary and special schools managed by the region (through quite different formulas). This makes it extremely difficult to account for how the funds are being used and to compare the use of these funds from year to year and between different regions. As shown above, many regional normative amounts are smaller than the national normative amounts. It is difficult to monitor how the funding is allocated, for example, how the remaining funds are used.

A very important variable to assess the equity and efficiency of education finance in the Czech Republic would be how much regional or municipal authorities add to received funds. First, do regions add to received national normative amounts from their own resources, how much, how uniformly across the regions, and if there are variations, which regions add more than others? Or maybe they spend less than they receive on direct costs of their own schools and on transfers to municipalities, and in that case, what do they do with the savings? Of similar interest are any contributions that municipalities make to direct costs of basic schools above the transfers from the regions. Are these contributions dependent on local conditions, such as rurality, prevalence of special classes in mainstream schools, or particular conditions in schools, or are they the result of regional policies? Overall, the present lack of clarity of education finance makes it hard to objectively assess how committed and consistent the municipalities and regions are in their support for education, and to assess the true costs of education. Thus, the system is rather opaque, without comprehensible, accessible information of who contributed and how much to the schools. This lack of clear knowledge of how funds for education are in fact used makes it also difficult to plan any corrections to the current system.

Cautions on the proposed new funding model for students with special educational needs

The new system of financing the needs of students with SEN, presently under discussion in the Czech Republic, is based on a catalogue of specific intervention measures, each associated with a price (fixed assessed costs, to be covered through the new system and spent by the school). The new system is based on the principle of rights of students, with a focus on students with special educational needs, to receive adequate and timely professional support as deemed necessary by pedagogical and psychological professionals. However, it does not include any limitations on the potential claims by the schools for financial support to provide these services. Unfortunately, this rights-based system creates in this way an open liability for the central government, because it places complete trust in the individual decisions to be taken by pedagogical counselling services across the country.

The OECD review team notes that there are perverse incentives inherent in a system with fixed prices. The system divorces the professional responsibility for assessing the needs of students, performed in pedagogical services, from the financial responsibility to provide assistance for their needs. In all cases, the persons providing the services for SEN students will be professional colleagues and collaborators of the specialists assessing students' needs. In some cases, they may even be the same people in both roles. The

system promotes a liberal approach to assessment criteria, because those who assess will not bear the financial consequences of their decisions. Moreover, a fixed price system reduces the incentives to provide joint services to a group of students even in cases where it would make sense (for example, providing teaching to hearing impaired students put together in the same class or school).

One cannot rule out different strategies among counselling services in different regions and cities, in other words that they will apply the nationally mandated criteria more or less strictly. In all pedagogical counselling services, such flexibility to tailor the criteria to the needs of the specific child, and also to the capacities of the parents to help her/him, are very important. Indeed, sometimes also the capacity of the school (such as availability of trained teachers) should be taken into account. However, this flexibility may be beneficial for the child in the therapeutic setting, but at the same time may have significant unintended budgetary consequences.

It is also important to point out that the current estimates of how much the new system will cost are of necessity based on the current numbers of students diagnosed as having special educational needs. However, as mentioned above, the new system will change the incentives inherent in the assessment process, and therefore the numbers may increase very quickly. In recent years this has happened, for example, with the number of students with dyslexia in many countries. This incentive structure is especially relevant because by design the system lacks any instruments for the central authorities to limit diagnosis. Thus, the ministry will be rather helpless in the face of increasing number of assessments, other than the politically and socially difficult path of actually strengthening the assessment criteria, or the even more difficult prospect of decreasing the available treatment. Thus, the current estimates of the number of assessment – and of the associated expenditures – may become completely unrealistic in two to three years. It is especially worrying that the new system is being discussed and implemented purely with pedagogical experts, without any limited practical pilots.

Although the issue of labelling goes beyond the questions of use of resources, it is an important issue whether the new system will increase tendency to label students in schools, especially if they are assessed to need a number of different intervention measures from the catalogue. Indeed, in pedagogical practice labelling a child has both advantages (focusing the education system on the individual needs) and disadvantages (making the child stand out in her/his peer group). So the consequences of the new system should be reviewed also from this perspective.

Absence of public funding to support transportation costs to basic schools

In the Czech Republic there is no legal obligation for schools or local governments to organise and finance transport for students to and from basic schools. In particular, there is no legally defined maximal distance from a student's home to school, for example three or four kilometres, above which appropriate transportation with adequate (and monitored) conditions should be provided. It is most likely justified by a dense network of existing basic schools, providing universal access without the need for transportation. It is simply assumed that the basic schools are – and will remain – located closely enough to where students live.

Nevertheless, it is clear that students live at differing distances from their schools, and that as student numbers decrease and the school network is adjusted, these distances may grow above tolerance levels. With no legal requirement for free student transportation to

schools, there is likewise no need to collect and analyse corresponding statistics, so that the issue is largely hidden from local or national authorities.

At the same time, the unstated but factual assumption that a dense network of basic schools provides universal access to education has far reaching consequences. First, it means that school network optimisation is not considered as a potential solution to problems of small schools. The options for maintaining school efficiency are thus reduced. Second, it may reduce the willingness to monitor education quality and to act on potentially negative findings. Indeed, relative costs of implementing rigorous school improvement plans in a fragmented school network may be prohibitively high, and for small schools such plans may be abandoned. An earlier OECD review (Santiago et al., 2012) had noted, for example, that the follow-up after school inspection needed strengthening, as there was little incentive to improve for even schools identified as "underperforming".

Policy recommendations

Transfer the grants for financing pre-schools and basic schools directly to municipal budgets (not via regions)

The current system of education finance, in which the regions have allocation responsibilities for pre-schools and basic schools, managed by municipalities, is not functioning well. It creates an additional layer of decision making between the state and the municipality, making the proper assessment of the equity and effectiveness of Czech education finance very difficult. It is also highly non-transparent to Czech citizens and Czech authorities at different levels. Therefore, the OECD review team recommends introducing direct transfers for education of every level to those local authorities who are directly responsible for managing and financing that education level.

For pre-schools, this means removing the regions from the financing of pre-school education and introducing grants for direct costs of pre-schools from the national budget to the municipal budgets. The national allocation formula for these grants will most likely be more complicated than the current one, based on one pre-school normative, but hopefully will be infinitely simpler and more transparent than the current formulas for pre-school education adopted and used by the regions.

For basic schools, this means removing the regions from the financing of basic education and introducing grants for direct costs of basic schools from the national budget to municipal budgets. The main difficulty confronting this approach is the extremely small size of the Czech municipalities and the fact that most of them have one school, if any at all. If it is considered that municipalities are too small to manage and finance basic schools, they should be entrusted only to municipalities with extended powers, as is already the case with the number of locally delivered public services in the Czech Republic. In this way not all municipalities will be the recipients of the grant. Again, this will require more complicated formulas than the current one, simply based on one national normative amount, to reflect the variation actually found across the Czech municipalities. Recall, indeed, that the main reason why the present national allocation system may be so simple is that funds are allocated to very large units, the regions, where the mixture of cities and villages allows for a large degree of averaging. Transfers for example to municipalities with extended powers, completely bypassing the regions, will have to use more complex and flexible formulas. Nevertheless, there is no doubt that they can be designed to be far more simple and comprehensible than the current formulas for basic education used by the regions.

However, the main benefit of implementing this recommendation is not just a simplification of allocation formulas to municipalities (or municipalities with extended powers), but clarification of the overall education finance system and providing direct links between the ministry and the municipalities. The ministry needs these direct links, and the necessary policy dialogue they will promote, to better understand the problems of the Czech education system and to better plan its development.

Make the national normative system more flexible

As we have noted, the national allocation system, based on five national normative amounts, is very rigid and does not reflect the complexity and the variation of the Czech education system. Indeed, as we have seen even at the large level of aggregation, namely the regions, many important education indicators exhibit noticeable variation. It is therefore very important to make it more flexible, by increasing the number of parameters for example, to reflect different factors which have impact on class sizes and on per student costs of providing education. Whether these factors should include for example rurality, population density or presence of special classes in mainstream schools, to give just a few examples, is a matter of research and analysis. The OECD review team recommends, nevertheless, to go beyond the pure number of students and to consider other relevant factors in the allocation process.

This will become even more important if the first recommendation formulated above is adopted, namely to provide direct grants for education from the national government to municipal budgets (budgets of municipalities with extended powers) for pre-school and basic education. Indeed, due to the significant variation of class sizes and of costs of many education inputs, the simple voucher-like national formula certainly will not be a workable solution. Thus, some additional flexibility will be required.

In deciding which factors to adopt in the more flexible allocation formula, at least for pre-schools and for basic schools, two considerations must be borne in mind. The first is that these factors need to be objective, that is, they cannot be changed or manipulated by decisions of local governments. For example, the average class size or school size are not objective factors, because they depend on institutional decisions. On the other hand, elevation above the sea level or population density are objective factors, as are whether or not students belong to a national minority, are assessed as having special educational needs, attend a specific vocational profiles and similar. The range of available objective factors which can be used is quite large.

The second important consideration is that the factors used should have real impact on the class size and on the unit costs of providing education. This can only be ascertained through analysis (typically, one uses econometric analysis, especially various forms of regressions, to perform this work). The value of basing the allocation process on results of econometric regressions is that they provide also some initial suggestions regarding the possible values of the parameters.

Nevertheless, parameters cannot be determined solely by econometric analysis, because allocation formulas should always reflect the education priorities and education policies of the governance level which adopts them. Here lies one of the key deficiencies of the current Czech approach to allocation formulas: by making them seem almost automatic, the ministry effectively gives up its responsibility for using financial flows to steer the development of Czech education. Similarly, by hiding the allocation formulas

behind incomprehensible and complicated functions, the regions abandon the goal of actually using the allocation system to satisfy the very differentiated needs of schools. Instead, they mechanically apply the formulas which, arguably, they do not fully understand, and make no attempt to review the consequences of their decisions. The difficult and strategic responsibility for managing very substantial flows of funds for a very important social function – education – is replaced with entering a number of parameters into a computer programme.

In order to adopt proper values for parameters used in the allocation formulas, it is necessary to engage in dialogue with all interested and relevant education stakeholders. For the national level of allocation process, this includes primarily representatives of local governments, of trade unions, and of school principals. Their experience and their expectations should be the mirror in which the ministry views the different allocation scenarios (meaning a proposed formula with a determined set of parameters) and analyses their consequences. For the stakeholders to meaningfully participate in these discussions, it is necessary that for each allocation scenario they are able to review the impact on each region, municipality and if needs be – on each school. In other words, each allocation scenario should come with nation-wide simulations.

By reviewing the results of the simulations, stakeholders together with the ministry experts may decide to use parameters that are different – or even very different – from the initial values suggested through econometric regressions. Indeed, the impact of the formula on the functioning of the whole national education system is a far more important issue than econometric models. Here we see the key to the most constructive use of national allocation formulas: subjecting them to rigorous review, through simulations, to ensure that their impact is consistent with national education policies.

Give regions more flexibility in the allocation formula

Presently, the regions are legally obliged to define and implement a very large number of normative amounts for secondary schools according to a very detailed methodology (see Annex 3.A2 for clarification). In particular, since the methodology for defining regional normative amounts uses historical values (that is values assessed on the basis of data from previous school year) of the number of students per one FTE teaching and non-teaching staff as well as their average salaries, this effectively locks regional schools into maintaining historical, inherited spending patterns. The OECD review team recommends that this legal obligation be either altogether removed or significantly weakened, because it leaves very little room for a flexible budgeting process at the regional level.

By a flexible budgeting process we mean a process of establishing budgets of all secondary and special schools managed by the region, to try to satisfy their different needs within the context of limited available budget funds. In other words, a flexible budgeting process assumes: i) comparative review of the needs of all schools managed by the region; ii) comparison of characteristics of their students (including students with special educational needs, academically outstanding and academically non-motivated students, students engaged in sport and arts activities, immigrant students); iii) comparison of characteristics of their teachers (including new or experienced teachers, needs for in-service training, need for additional positions of pedagogues or psychologists); together with iv) their current and historical budget allocation; v) plans for future development; vi) historical and forecast demographic trends; as well as vii) changing requirements of the regional labour market. Such a review allows regional authorities to determine how their

local school system should develop and what should be the corresponding recurrent allocation for a number of consecutive budget years. The same review, it is worth adding, is necessary to adequately assess the investment needs of schools.

This may sound like a very complex exercise, but it really concerns important management decisions. To give a simple example, given the changing expectations of students, the region must plan which new education programmes to introduce in its schools, and which education programmes to phase out. At an even more fundamental level, which schools should be closed and which should be maintained. Clearly, these strategic long-term plans should influence decisions on recurrent allocations in no lesser way than the present number of students per FTE staff.

Another way to highlight the inflexibility inherent in the current allocative system at the regional level, and to point out possible ways of improving it, is to note that in a typical region the task of the budgeting process is to define budgets of between 30 and 50 secondary schools maintained by that region. Instead of defining the number of budget limits for each school for direct costs, the region is forced to define hundreds of separate normative amounts for each education profile and programme. Even more importantly, the budget of each school is an easily understood amount, comparable to historical costs of the school or to its staffing levels for all categories of school staff. Thus they can be analysed, discussed, and adjusted on the basis of common understanding of key education officials in the region.

In contrast, among the hundreds of regional per student normative amounts many will apply to very small groups of students, so their significance for regional school finance will be relatively small, while a few of the normative amounts, applying to large groups of students, will be the ones which really determine (in statistically significant way) overall allocation. However, few among the region's school administration or school principal would be able to assess which normative falls into which category; instead, they will all be seen as a part of a complex, forbidding machinery, inhibiting any meaningful discussion of the needs of schools. To oversimplify this point, we can say that it is much easier to discuss 50 budget limits of individual schools than 400 separate normatives for individual education programmes.

As a separate degree of inflexibility inherent in the current system, it is important to note that it distinguishes two categories of school staff, teaching staff and non-teaching staff. For both of these categories, actual number of students per FTE staff and average salaries need to be assessed for each education programme in region's schools. This is a lot of administrative effort, requiring collection and review of a lot of data. In fact, in many cases it may be very difficult or even impossible to do, since many teachers and other school staff contribute to the teaching in many education programmes, so there is no sound methodology to allocate parts of FTE staff to different programme. At the same time, this approach dramatically oversimplifies actual employment situation in schools, because there are more than just two distinct categories of school staff. We can mention, apart from teacher conducting classes or conducting practical workshops (these are already quite different groups of school staff), the following: school leadership (principals and deputy principals), school administration (office staff, accountants and similar), support pedagogical staff (psychologists, pedagogues, librarians, curriculum advisors), technical staff (maintenance of equipment and machinery, gardeners, drivers), cleaning staff. Of course, all these categories of staff work in Czech schools, fulfilling their different roles. However, from the point of view of school finance, they are also quite different, in terms of employment

levels or salaries. A flexible budgeting process should recognise this variety and not lump them all into two inflexible categories.

This book is no place to propose specific rules and procedures for a more flexible budgeting process, since it should be developed in close co-operation of education stakeholders in the Czech Republic, taking into account many specific features of overall public budget system (such as budget classification and accounting procedures). But the key recommendation is that the object of the budgeting process should be shifted from an educational programme to the school itself as an institution. At a minimum, this would mean serious reduction of the number of regional normatives (for example, using only one normative for *gymnasia*).

Finally, we note that we started with a strong recommendation to remove the regions from the financing of pre-school and basic education. This will by itself simplify the regional normatives, because this part of the regional allocation formula will not be needed any more.

Introduce a measure to limit liabilities over new SEN funding approach

As we have discussed above, the proposed new system of supporting and financing special needs students is based strongly on human rights approach, but at the same time creates serious risks of unlimited liability of the central budget. It seems very important for the Czech Republic to protect and promote the strong positive elements of the new system while at the same time safeguarding the budget and limiting the future liabilities.

The first simple recommendation in this area is to start implementation very slowly, through a limited, well designed pilot project. A two-year long pilot, for example in two quite distinct regions (such as the capital city and a poor, rural region), would allow the reformers to understand better the impact of the new system on the practices of pedagogical counselling services and on the budget liabilities. Part of the preparation of the pilot will be introduction of temporary new budgeting procedures for SEN students in the pilot regions. Therefore the pilot projects needs to be carefully monitored, and its effects openly and publicly analysed. The pilot would also provide time to review and refine the catalogue of intervention measures, both regarding its content (list of measures) and the price list, as well as the new budgeting procedures. Of course, the pilot project must cover all special needs students in all schools in selected regions, including special schools, special classes in mainstream schools, and individual SEN students in mainstream classes at all levels of education.

A more challenging task would be to design some in-built control mechanisms into the new system. These control mechanisms should give the central authorities some degree of influence over how the system actually works. Such a potential system may include, for example, a new national body, charged with oversight and professional monitoring of the work of the counselling centres. In fact, subsequent to the OECD review visit, a new body has been established (by law): the Revision Centre under the National Institute of Education. This is an appeal body for parents in the case that they disagree with the recommendation given by the counselling centre or school. The OECD review team is advised that this new body has the authority to revise a recommendation and to investigate individual cases. While it is difficult to foresee that such a new institution could challenge or overturn individual assessment decisions of pedagogical professionals across the country, it should have the capacity to review the work of individual counselling centres and to impose on them stricter procedures for assessment and advice to the students and to their parents.

An altogether different approach may consist of a budgetary decision to fix overall funds for the financing of special needs students under the new system. This would mean specifying in the national budget a separate budget category, with fixed budget limits for each region and for the whole country. Such limits could be exceeded only through amendments to the budget laws. In a proper multi-year budgeting framework, it is possible to forecast these limits for a number of coming budget years. Of course, a budget reserve for these expenditures would be needed, but if some regions will need to start using the reserve, it would send very strong message to all experts involved that the system is being financially stretched. Presently, no such warning feedback information system is being planned.

Consider reviewing the division of education finance for staff costs into state and local components

Current education finance system is based on the division of all education expenditures into direct costs (state component) and operating costs (local component). This is a flexible system, clearly aligning managerial responsibilities with financing responsibilities, and it serves the Czech education system well.

The one point in this this system which represents some difficulty and inflexibility regards salaries for school staff. All salaries are included in the direct cost and are paid for from the national budget through grants based on national normatives. However, as argued above, only a part – although a very significant part, typically above 70% – of the school staff is directly involved in teaching, with employment nationally regulated. Indeed, administrative, technical and cleaning staff really corresponds to operating costs of schools and could be included in the local component of education finance.

There are two major benefits of implementing this recommendation. The first is that this will increase the flexibility of education expenditures at the school and municipal or regional level, by allowing school owners to decide on different trade-offs in management of school facilities. This argument has been provided above.

The second, no less relevant benefits concerns education finance efficiency. While teacher salaries are nationally regulated and are rather uniform across the country, salaries of technical staff are much more varied across the regions and municipalities. In the capital city and in richer cities, both the salaries of the technical staff and the own revenues of local governments are higher than in poorer, rural areas. So it makes good sense to allow school owners more flexibility and more autonomy in employment and remuneration of the technical staff. By fully adapting the expenditures on the salaries of the technical staff to local labour market conditions, education finance becomes much more efficient. This is the case both in rich and in poor jurisdiction. In rich municipalities, such as the capital city, allocation for technical staff based on national normatives (national average salaries) may be insufficient, so due to higher local salaries either the number of this staff may be below the optimal, or the selection process to technical positions in schools may be inadequate. In poorer jurisdiction, in contrast, excess national allocation may lead to wasteful expenditures (too many positions, too high salaries compared to local conditions).

Implementation of such a change in the definition of state and local component faces some difficulties. Indeed, since technical school salaries are today covered in national normatives, while technical and maintenance expenditures of school are financed from own revenues of municipalities and regions, simply assigning responsibility of paying technical staff salaries to local governments amounts to an unfunded mandate. What is surely needed

is a reduction of national normatives by a negotiated amount and corresponding increase of other revenues of local governments (for example, local shares in some national taxes) by the same amount. Moreover, the share of technical staff salaries at different stages of education is surely different, so it may be necessary to adopt different reduction rates for each of the national normatives. This course of action may become a difficult political process.

The proposed reform may be somewhat easier to implement if it is conducted together with the overhaul of the national system of normatives, as recommended above to increase flexibility of the national allocation system. In such a more comprehensive reform, there will be more ways and means to adjust overall education finance system in a way satisfying the requirements and concerns of all stakeholders, including different levels of local governments.

Such a division of salary expenditures into the state and local components, based on breaking not only material expenditures, but also salaries into two parts is not typical in the region, but has been successfully implemented in Lithuania and Estonia (Herczyński, 2011; Santiago et al., 2016; Shewbridge et al., 2016). There are good reasons for the Czech Republic to review Lithuanian and Estonian experiences and assess to what extent this is applicable in the Czech context.

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ANNEX 3.A1

Evolution and structure of the national normatives

Table 3.A1.1. **Index of growth in national normative (2005 = 100)**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
3 to 5 years	100	104	109	111	113	120	109	117	117	118	118
6 to 14 years	100	106	117	121	124	131	129	140	140	141	141
15 to 18 years	100	104	109	113	112	117	115	124	124	125	125
19 to 21 years	100	105	110	113	114	119	115	123	123	125	125
KZÚV	100	100	105	118	120	125	125	133	133	135	135

Note: KZÚV (Krajská zařízení ústavní výchovy – Regional institutional care facilities) comprises students in correctional facilities.
Source: Author calculations based on data in MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

Table 3.A1.2. **Normative amount for each group relative to the normative amount for the 3 to 5 years group, 2005-15**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
3 to 5 years	100	100	100	100	100	100	100	100	100	100	100
6 to 14 years	107	110	115	116	118	117	128	128	128	129	129
15 to 18 years	140	140	140	142	139	137	148	149	149	149	149
19 to 21 years	120	121	121	121	121	120	127	127	127	127	127
KZÚV	534	515	517	567	567	558	614	610	610	610	610

Note: KZÚV (Krajská zařízení ústavní výchovy – Regional institutional care facilities) comprises students in correctional facilities.
Source: Author calculations based on data in MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

ANNEX 3.A2

Regional allocation formulas for direct costs

We provide a general description of the regional normatives (based on MŠMT, 2005), but due to their complexity for the details we limit ourselves to just two examples from two specific regions: the Moravian-Silesian region (Odbor školství, mládeže a sportu Moravskoslezského kraje, 2015) and the Pilsen region (Odbor školství, mládeže a sportu Plzenskeho kraje, 2015). The specific examples provided are for the fiscal year 2015, although the formulas are not changed from year to year (values of average salaries and of other non-investment expenditure are changed from year to year).

We first discuss the general structure of regional normative amounts (section 3.A2A), then discuss separately normative amounts for pre-school and basic education, that is for pre-schools and schools managed by municipalities (3.A2B), and finally the normative amounts for upper secondary education, that is for schools that are managed by the regions themselves (3.A2C).

In the present discussion we focus on pre-schools, basic and secondary schools. We do not cover other education functions (psychological services, sports activities and similar), which are also financed through the system of regional normative amounts.

3.A2A. General structure of regional normative amounts used in the Czech Republic

The Decision 492/2055 (MŠMT, 2005) of 8 May regarding regional normative amounts sets up the numerical approach to their calculation. Namely, regional normative amounts are based on the following parameters:

- average number of accounting units (students) per pedagogical staff (N_p)
- average number of accounting units per non-pedagogical staff (N_o)
- average monthly salary of pedagogical staff (P_p)
- average monthly salary of non-pedagogical staff (P_p)
- average yearly "other non-investment expenditures" per accounting unit (ONIV)
- legal percentage of salaries for social security and employment contributions (Proc).

With the above parameters, the per student amount is calculated as:

$$\frac{1}{N_p} * P_P * 12 * 1,Proc + \frac{1}{N_o} * P_o * 12 * 1,Proc + ONIV$$

Under this formula, regional differences are taken into account in the following manner:

- Average monthly salaries of pedagogical staff (P_p) and of non-pedagogical staff (P_o) are based on empirical averages assessed separately for each region and for each education profile. Variation of salaries within the region, for example between the regional capital and small villages, are not taken into account.
- "Other non-investment expenditures" (ONIV) include funds for textbooks and other education aids. It is determined separately for each education profile by regional authorities.
- The value of social contributions (Proc) is regulated by national labour legislation (taxes and social contributions related to salaries). In 2015 in the Czech Republic Proc was 35%.
- In each region, different average class sizes in different schools (and education profiles) lead to different numbers of full-time equivalent teaching and non-teaching staff, so also the parameters N_p and N_o are regionally differentiated.

The formula to calculate the per student amount is very important and deserves comment. First, the formula very clearly differentiates between the salary and non-salary components of the allocation. This is in line with the design of the Czech system, under which transfers from the central budget cover salaries and quite minimal non-salary expenditures. Thus, it is not surprising that – for example – with 276 vocational normative amounts in the Moravian-Silesian region, ONIV covers between 0.3% to 5.8% of the allocation. Second, and maybe more importantly, the formula does not distinguish between different groups of students, who may need additional education services. Such potentially relevant groups of students are national minorities (requiring some teaching of additional languages), students with special educational needs in mainstream schools (requiring additional time from teachers), gifted students (provision of in-depth studies or after-school activities). Thus regions cannot use allocation formulas to pursue specific education policies, aimed for example at integrating Roma students into mainstream schools. Finally, we note that the formula leaves very little room for adjustment at the regional level, introducing a systemic inflexibility. There may be many situations when the region may desire to use higher per student normatives than dictated by the formula above, but is unable to, for example, while introducing a new educational profile or to support the development of some successful schools with low student numbers.

It is worth reviewing some consequences of the normative amount determined by the above formula. Let us assume for simplicity that a specific education profile is taught in only one school in the region, and that this school teaches only this profile. If we take the number of students (U), pedagogical staff (S_p) and non-pedagogical staff (S_o) in that school, then

$$N_p = \frac{U}{S_P} \text{ and } N_o = \frac{U}{S_o}$$

Similarly, let W_p, and W_o be the total monthly wages of pedagogical and non-pedagogical staff in that school, then

$$P_p = \frac{W_p}{S_P} \text{ and } P_o = \frac{W_0}{S_o}$$

With this notation, the overall allocation A of direct costs to this school will be equal to

$$A = U * \left(\frac{1}{N_p} * P_P * 12 * 1, Proc + \frac{1}{N_o} * P_o * 12 * 1, Proc + ONIV \right)$$

or, inserting the definitions of the parameters N_p, N_o, P_p, P_o,

$$A = U * \left(\frac{S_p}{U} * \frac{W_p}{S_p} * 12 * 1, Proc + \frac{S_0}{U} * \frac{W_o}{S_o} * 12 * 1, Proc + ONIV \right)$$

and we note that U, S_p and S_o cancel out, we are left with the formula:

$$A = \left(W_p + W_o \right) * 12 * 1, Proc + U * ONIV$$

In other words, the allocation is equal to the total salaries of pedagogical and non-pedagogical staff (for the whole year and with social contributions), plus the amount for teaching aids ONIV multiplied by the number of students U. We thus see that the allocation for salaries does not depend on the number of students at all. This rather curious result shows that Czech education finance system only in some part is a genuine per student allocation system. Allocation to the school does not change when student numbers change (except for the ONIV part), but it will change if salaries paid to school staff change, even if the number of students remains the same.

Of course, this is a simplified example (one school in the region teaching one education profile, with no other school in that region teaching it). Different schools offer overlapping education profiles (most schools offer more than one education profile) and regional normatives of number of students per pedagogical and non-pedagogical staff or of their salaries may be averages of significantly differentiated schools. Nevertheless, we need to note that basing the allocation on actual values of salaries and student-staff ratio, according to a rigidly applied formula, locks it into inherited spending patterns and limits room for innovation. Moreover, since the parameters are calculated in the regions, this approach may also perpetuate regional differences in education spending in the Czech Republic, despite uniform application of national normatives.

3.A2B. Normatives for pre-schools and for basic schools

According to the general definition of the regional per student normatives discussed above, the key to determine allocation to municipal pre-schools and basic schools is how to set the five parameters involved. Of these, only numbers of students per school staff N_p and N_o depend on school and class size. The remaining three parameters, average monthly salaries of pedagogical and non-pedagogical staff and ONIV, may be defined uniformly for all schools in the region.

The following tables provide the values of P_p, P_o and of ONIV for pre-schools and basic schools in the Moravian-Silesian and Pilsen regions in 2015.

Table 3.A2.1. **Values of average teacher and non-teacher salaries and ONIV in the Moravian-Silesian and Pilsen regions**

Index (3 to 5 years = 100)

	Moravia-Silesia			Pilsen		
Education programme	P_p	P_o	ONIV	P_p	P_o	ONIV
Pre-school, full day	23 470	11 370	370	23 340	12 040	346
Pre-school, half day	23 470	11 370	185	23 340	12 040	174
Basic school, only initial years	27 080	12 640	1 355	26 380	12 780	1 177
Full basic school, initial years	27 080	12 640	1 060	26 280	12 780	887
Full basic school, upper years	27 080	12 640	1 060	26 280	12 780	829

These values are set according to national regulations, taking into account relatively small regional differences in salaries. Interestingly, teacher salaries are significantly higher in schools than in pre-schools (by 15% in the Moravian-Silesian region and by 13% in Pilsen), but less so for non-pedagogical salaries. Non-teacher salaries are on average about half the salaries of pedagogical staff. It is also very interesting that other non-investment expenditures (ONIV) are much lower in pre-schools than in basic schools (in both regions). This is probably due to the fact that there are fewer textbooks used in pre-schools (recall that ONIV covers textbooks and teaching materials). Lower ONIV in full basic schools compared to schools with only initial years probably reflects their larger size (and resulting economies of scale).

However, the two parameters setting number of students per pedagogical and non-pedagogical staff, N_p and N_o, clearly depend on school size and have to be adequately determined. The approach chosen is to make both N_p and N_o functions of the number of students (they depend directly only on this number). This approach is justified by the fact that most Czech municipalities manage one basic school, if at all (typically, problems may arise if a municipality manages both a large school and a few small schools, as is the case in many other countries with larger average size of municipality). The functions used to determine N_p and N_o are defined differently in different intervals of student numbers. It is useful to review these functions in some detail.

For full-time pre-schools in the Moravian-Silesian region the following functions defining N_p and N_o are used. In the formulas in Table 3.A2.2, x denotes the number of pre-school students.

Table 3.A2.2. **Number of students per pedagogical and non-pedagogical staff in pre-schools, Moravian-Silesian region**

Number of students x	N_p	N_o
Less than 12	9.42	30
Between 13 and 18	$6.4028 * x^{0.1506}$	$-0.0007 * x^2 + 0.1662 * x + 27.96$
Between 19 and 24	$1.8307 * x^{0.5885}$	$-0.0007 * x^2 + 0.1662 * x + 27.96$
Between 25 and 106	0.8425 * Ln(x) + 9.185	$-0.0007 * x^2 + 0.1662 * x + 27.96$
Above 107	13.15	37.71

In the Pilsen region the functions for these parameters for full-time pre-schools take the form as shown in Table 3.A2.3.

Table 3.A2.3. **Number of students per pedagogical and non-pedagogical staff in pre-schools, Pilsen region**

Number of students x	N_p	N_o
Less than 12	9	35
Between 13 and 18	$2.4962 * x^{0.5}$	$-0.0005 * x^2 + 0.1103 * x + 35$
Between 19 and 24	$3.89 * x^{0.355}$	$-0.0005 * x^2 + 0.1103 * x + 35$
Between 25 and 56	Ln(x) + 8.803	$-0.0005 * x^2 + 0.1103 * x + 35$
Between 57 and 106	0.0015 * x + 12.74285	$-0.0005 * x^2 + 0.1103 * x + 35$
Above 107	0.0015 * x + 12.74285	41

These functions are so striking that they require a few comments:

- The functions are exceedingly complicated. The use of logarithms and of fractional powers makes them incomprehensible to most education experts. This means that the formulas are either left unchanged from year to year, or are being adjusted by outside experts.
- The parameters used in the functions are stated with excessive numerical precision, up to five decimal points. In fact, one decimal point, for example 12.7 in place of 12.74285, would be clearly sufficient and would make no difference at all to the allocation of funds for pre-schools. Similarly, fractional powers of the number of students are stated with up to four decimal points, a degree of precision which is obviously unnecessary (rounding the fractional powers to one decimal point would have negligible effect on allocation of funds).
- In recognition of this complexity, the regional authorities provide Excel tables with the values for both N_p and N_o for all relevant possible number of students. It is not assumed that staff working on education finance in the regions would be able to calculate the N_p and N_o on their own. To put this difficulty into perspective, in-built Excel functions allow the calculation of fractional powers $x^{0.355}$, but not without the use of exponentials and logarithms. In practice, this means that very few people working for either the ministry or the regional offices can in fact calculate these parameters, check whether the calculation is correct, or recalculate them if for policy reasons it is decided to change the allocation formula.
- The structure of formulas in the two regions is similar, suggesting a common point of departure, with however different parameters. Also, the functions used in the two regions are very similar. The one important difference is that in the Moravian-Silesian region the number of students per pedagogical staff (coefficient N_p) for pre-schools is capped at 13.15 for large pre-schools, while in the Pilsen region it grows indefinitely as the number of pre-school students x increases. The growth is linear, albeit very slow. The number of students per non-pedagogical staff is capped in both regions, at about 40 (about 2.5 full-time equivalent per one hundred students).
- For pre-schools with 12 students, the formula assumes about 1.3 FTE pedagogical staff and 0.4 FTE non-pedagogical staff. It is very difficult to imagine that this level of staffing is sufficient to run a reasonably good pre-school. On the other hand, for a pre-school with 110 students, the formulas would allocate about 8.5 FTE pedagogical staff and 2.8 FTE non-pedagogical staff.
- Replacing the logarithms and other functions by linear functions for each interval would have negligible impact on the actual allocation, but would greatly simplify the calculations (at the very least, it would make it possible to check that the calculations of regional authorities are arithmetically correct, a task which is now beyond the reach of most education experts in the country). A further simplification may be achieved by reducing the number of intervals used in the tables above.

We now turn to the functions defining N_p and N_o for basic schools. For simplicity we limit ourselves to basic schools with just initial years. Again, we use x to denote the number of students. The definitions used in the Moravian-Silesian region are presented in Table 3.A2.4.

Table 3.A2.5 presents the functions for these parameters for such basic schools used in the Pilsen region.

Table 3.A2.4. **Number of students per pedagogical and non-pedagogical staff in basic schools, Moravian-Silesian region**

Number of students x	N_p	N_o
Less than 9	7.49	18
Between 10 and 25	4.25 * Ln(x) - 2,3	-0.0009 * x^2 + 0.4065 * x + 14.2
Between 26 and 109	2.38 * Ln(x) + 3.627	-0.0009 * x^2 + 0.4065 * x + 14.2
Above 110	4.6 * Ln(x) – 6.8286	47.82

Table 3.A2.5. **Number of students per pedagogical and non-pedagogical staff in basic schools, Pilsen region**

Number of students x	N_p	N_o
Less than 9	7.57	21.56
Between 10 and 15	4.83 * Ln(x) – 3.5	-0.00628 * x^2 + 0.5855 * x + 16.447
Between 16 and 21	3.95 * Ln(x * 0.51) + 1.3	-0.00628 * x^2 + 0.5855 * x + 16.447
Between 22 and 44	2.98 * Ln(x * 0.86) + 2	-0.00628 * x^2 + 0.5855 * x + 16.447
Between 45 and 99	0.04 * x + 11.14	-0.00628 * x^2 + 0.5855 * x + 16.447
Above 100	15.20	48.2

Again, similar to pre-schools, we note that the structure of these functions in the two regions is very similar. The main difference is that in the Moravian-Silesian region, the number of students per pedagogical staff grows indefinitely as the number of students grows, while in the Pilsen region it stops at the value of 15.2 for large schools (interestingly, this is the reverse of what we have observed for pre-schools, for which the formulas used in the Pilsen region are not capped). On the other hand, the Pilsen region formulas introduce an additional and unnecessary level of complexity by using logarithms not just of the number of students, but also of a fraction of this number (according to the standard product rule of logarithm: Ln[x*0.51] = Ln[x] – 0.673).

The functions for full basic schools in both regions are similar to formulas for basic schools with just initial years, though slightly more cumbersome to present, because the intervals in which N_p and N_o are defined by different functions are not only different in the two regions, but also different for N_p and for N_o. Nevertheless, the reader has by now understood how these regional allocation formulas are defined.

All the comments made above with respect to pre-school formulas apply equally to formulas for basic schools. Let us just reiterate that the level of complexity of these formulas far exceeds what is required for careful and equitable allocation of funds for direct costs for pre-schools and for basic schools. At the same time, it prevents their verification or adjustment. The use of such complex formulas does not serve any useful purpose for Czech education.

3.A2C. Normatives for secondary schools

Certainly, the regional normative amounts for secondary schools are much simpler than the normative amounts for basic schools, because they do not depend on the school size (no need to define complex functions which determine N_p and for N_o). However, the law requires that they be defined separately for each education profile (*gymnasium* profile or vocational and professional profile) offered in schools managed by the regions. For example, for general academic secondary schools (*gymnasium*) the following five education programmes are defined: standard four-year programme; lower and upper years in six-year

long programme; lower and upper years in eight-year long programme; programme teaching in a foreign language; and sports programme. Depending on the region, the need to provide a normative for each educational programme may require the determination, every year, of between 200 and 400 normative amounts.

The determination of all parameters for each programme is a major bureaucratic task. As for pre-schools and basic schools, the normative amounts are defined using the five parameters discussed above in section 3.A2A, namely average salaries of pedagogical and non-pedagogical staff (P_p and P_o), average number of students per pedagogical staff and non-pedagogical staff (N_p and N_o), and yearly per student "other non-investment expenditures" (ONIV). Thus, for example, to establish the number of students per FTE staff (N_o) requires not only the identification of how many students attend that particular profile in the region's schools (which should be easy), but also the identification of how many FTE teachers are involved (more complex task) and also how many FTE non-teaching pedagogical staff, such as psychologists and pedagogues, is assigned to the profile (this is in practice very difficult to do). Analogously, to determine N_o for each profile requires assigning a share of all technical staff (such as school cleaners or kitchen staff) to that profile. The same needs to be done with their salaries.

Interestingly, the distribution of these five parameters among the education profiles is quite different. We provide, as an example, this analysis for the Moravian-Silesian region in 2015 (see Tables 3.A2.6, 3.A2.7, 3.A2.8 and 3.A2.8). The regional system of normative amounts includes 222 profiles (excluding special schools). We may observe that:

- Average salaries are dictated by national regulations, and there is some link between the salaries of pedagogical and non-pedagogical staff. For almost all profiles (more than 89%), the average salary of pedagogical staff and of non-pedagogical staff (P_p and P_o), assume one of three pairs of values: P_p=24.84 and P_o=14.77; P_p=26.67 and P_o=14.77; or P_p=26.81 and P_o=13.42 (in thousand CZK).
- Number of students per pedagogical staff (N_p) is based on empirical values for each profile. Most of the values of this parameter appear in the regional table only once.
- However, the number of students per non-pedagogical staff (N_o) is based on some policy recommendations. For most educational profiles (more than 95%) this parameter has one of the following four values: 39.77; 53.1; 54.1; or 70.9.
- Similarly, the values of ONIV are based on the policy perspective. For almost all profiles (more than 96%), ONIV is either CZK 325 or CZK 650.

The following tables provide the distribution of different values of all five parameters for the 222 education profiles used in the Moravian-Silesian region.

Table 3.A2.6. **Distribution of average pedagogical and non-pedagogical salaries by education profile in secondary schools, Moravian-Silesian region**

Value of P_p (CZK)	Value of P_o (CZK)	Number of profiles
24 840	14 770	71
26 670	14 770	72
26 810	13 420	11
26 999	14 410	3
27 050	13 940	10
	14 410	55
Total		222

Table 3.A2.7. **Distribution of number of students per pedagogical staff by education profile in secondary schools, Moravian-Silesian region**

Value of N_p	Number of profiles
Between 5 and 10	22
Between 10 and 15	82
Between 15 and 20	50
Between 20 and 25	33
Between 25 and 30	14
Between 30 and 35	10
Between 35 and 40	5
More than 40	6
Total	222

Table 3.A2.8. **Distribution of number of students per non-pedagogical staff by education profile in secondary schools, Moravian-Silesian region**

Value of N_0	Number of profiles
19.23	6
37	3
39.77	46
53.1	24
54.1	70
70.9	71
More than 71	2
Total	222

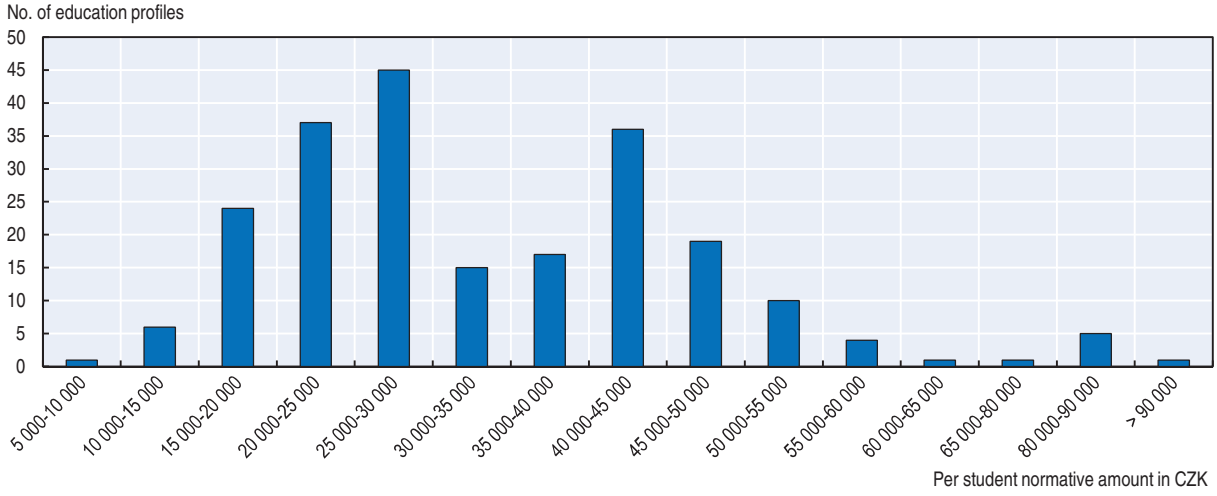
Table 3.A2.9. **Distribution of ONIV by education profile in secondary schools, Moravian-Silesian region**

Value of ONIV (CZK)	Number of profiles
325	143
650	72
685	3
1 060	4
Total	222

As a result, the distribution of secondary school normative amounts by education programme (profile) has a clear bipolar character, as illustrated in Figure 3.A2.1.

We note that two normative amounts have particularly high frequency: between 25 and 30 thousand CZK and between 40 and 45 thousand CZK. The first comprises mainly different vocational and technical programmes, while the second comprises almost all *gymnasia* and profiled *lyceum* programmes, as well as some more advanced professional programmes. The different financial treatment of vocational and general academic education profiles is the reason for bipolar distribution noticed in the graph above. Significantly higher allocation for *lyceum* and *gymnasium* programmes is an important element of education policy, hidden in the hundreds of individual per student normatives.

Figure 3.A2.1. **Histogram of per student normatives by education profile in secondary schools, Moravian-Silesian region**



Chapter 4

The teaching workforce in the Czech Republic

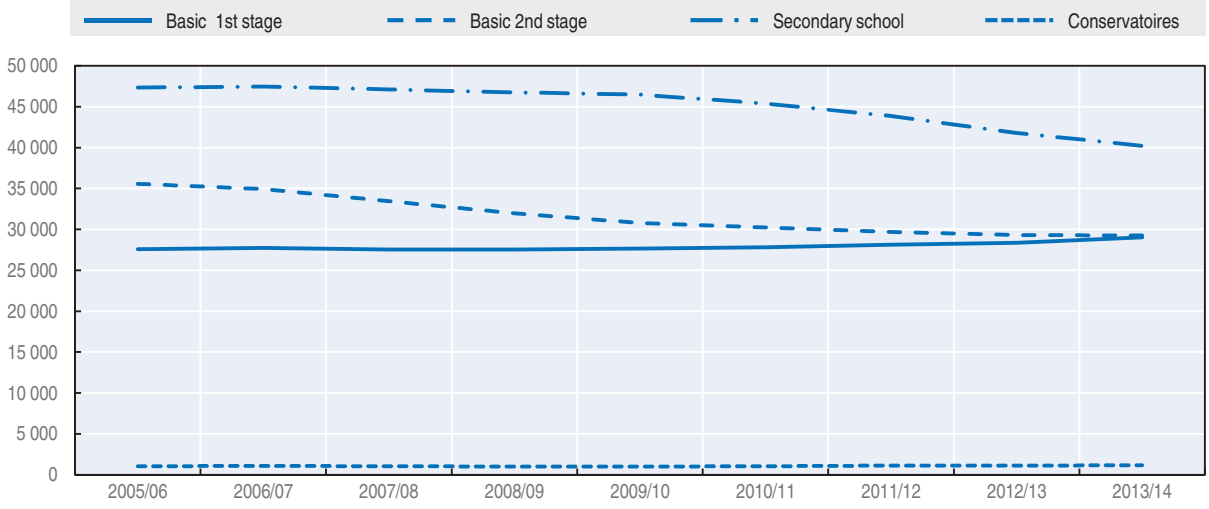
This chapter presents a profile of the teaching workforce in the Czech Republic and describes current approaches to teacher initial education, recruitment, qualification requirements, work load, professional development and career structure. It considers the strengths and challenges inherent in the current system and makes policy recommendations designed to improve the management and development of the teaching workforce, including creating a more coherent teacher career pathway.

Context and features

Profile of the teaching workforce

An estimated 100 000 teachers work in basic and secondary schools across the Czech Republic (see Figure 4.1).[1] The size of this workforce has declined over the past decade, dropping by 11% between 2005/06 and 2013/14. The greatest decline is seen in upper basic schools and secondary schools, with a decrease of 18% and 15% respectively between 2005/06 and 2013/14 as seen in Figure 4.1. A contraction was not experienced in all areas: the size of the teaching workforce in lower basic education actually expanded by 5% over the same period. Changes in the size of the teaching workforce generally follow trends in student enrolments over this period (see Figure 4.A1.1, Annex 4.A1).

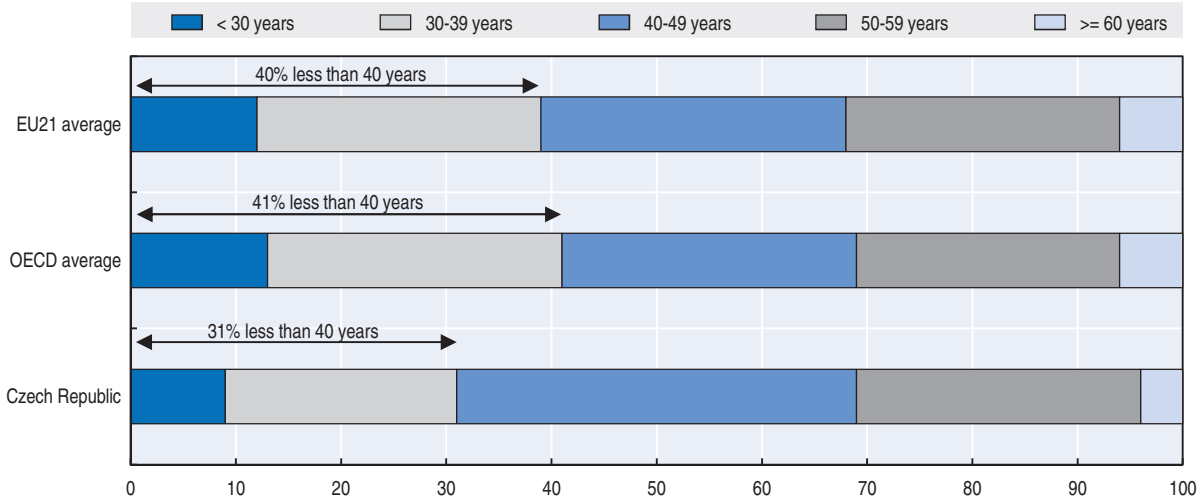
Figure 4.1. **Trend in number of teachers in basic schools, secondary schools and *conservatoires*, 2005/06-2013/14**



Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague. Further data available in Table 4.A1.1, Annex 4.A1.

While the ageing of the teaching workforce is an issue around the world, it is comparatively worse at primary level in the Czech Republic than in other countries. Figure 4.2 shows there are substantively fewer Czech primary teachers under the age of 40 (31%) compared to the OECD average (41%). The issue in primary education has also worsened with time. The proportion of young primary teachers under 40 years old dropped by 18% in the Czech Republic between 2007 and 2012, much higher than the 2% drop in the OECD average over the same period (further data available in Table 4.A1.5 and Figure 4.A1.2, Annex 4.A1). The ageing workforce at primary level is a concern given the increasing number of teachers needed at lower basic schools over the past decade, discussed above. This issue is not as pronounced in secondary education.

Figure 4.2. **Percentage of teachers under age of 40 years in primary education, 2012**

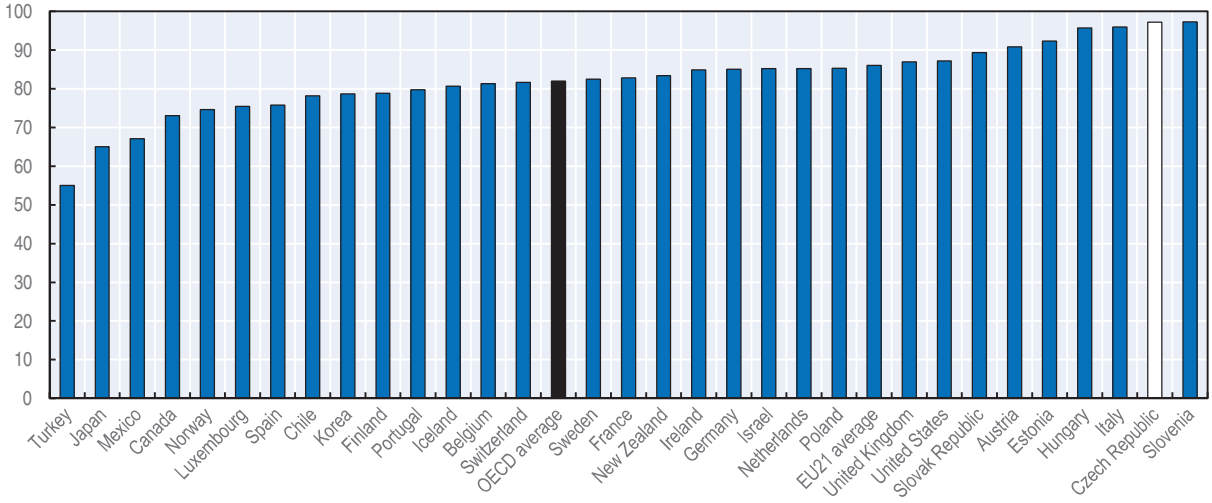


Source: OECD (2014a), *Education at a Glance: OECD Indicators 2014*, *http://dx.doi.org/10.1787/eag-2014-en*, Table D5.1.

Gender

Feminisation of the teaching workforce is significant in the Czech Republic. The proportion of Czech female teachers is well above the OECD and EU21 averages (Figure 4.3). Male teachers make up only 3% of primary teachers and 26% of teaching staff at secondary school.

Figure 4.3. **Percentage of female teaching staff in primary education, 2012**



Source: OECD (2014a), *Education at a Glance: OECD Indicators 2014*, *http://dx.doi.org/10.1787/eag-2014-en*, Table D5.3.

There is little pay difference between female and male teachers in basic education and secondary education (MŠMT, forthcoming). However the lowest earning segment of the education sector is nursery teachers who earn 16% less than basic education teachers on average, and these positions are held by women only (see data in Table 4.A1.4, Annex 4.A1).

Qualifications of teachers

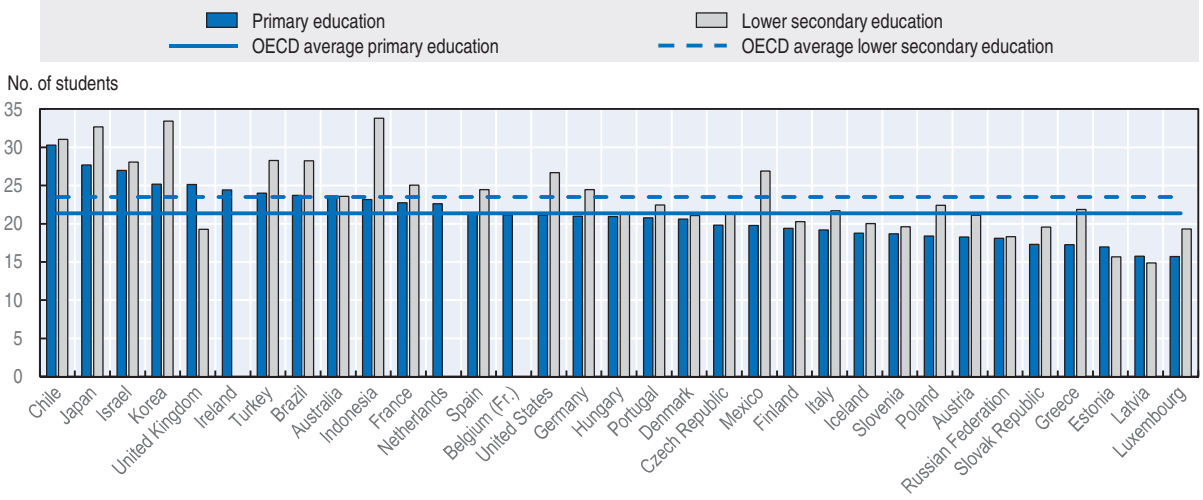
There is a mixed picture on the extent of qualified teaching staff in the Czech Republic. School leaders report relatively low levels of shortages of qualified and/or well performing teachers (27%) compared to the OECD average (38%) (OECD, 2014b, Table 2.19). However, the number of Czech teachers who have completed a teacher education training programme is 77%, well below the OECD average of 90% (OECD, 2014b, Table 2.3).

The Czech Republic has some instances of out of field teaching in mathematics, science, ICT and foreign languages, although it is relatively low compared to the OECD average. For example in literacy it is 3% compared to 6%, and in modern languages 8% versus 11% respectively. This issue is most prominent in science where 10% of science teachers report not being qualified in the Czech Republic (OECD, 2014b, Table 2.5).

Class size and student-teacher ratio

Research shows that systems prioritising teacher quality over smaller class sizes tend to perform better (Barber and Mourshed, 2007; OECD, 2012). A number of high performing systems such as Shanghai and Singapore choose to have larger class sizes to free up teacher time to review and improve teaching and learning in their everyday practice (Jensen, Hunter, Sonnemann and Burns, 2012). The average class size in the Czech Republic is slightly below the OECD average in primary education (19.8 versus 21.3 students) and well below in lower secondary education (21.3 versus 23.5 students) (Figure 4.4). Class sizes have not always been so small at lower secondary level in the Czech Republic – this has happened in more recent times (OECD, 2014a).

Figure 4.4. **Average class size in educational institutions, by level of education, 2012**



Source: OECD (2014a), *Education at a Glance: OECD Indicators 2014*, *http://dx.doi.org/10.1787/eag-2014-en*, Chart D2.2. Average class size in educational institutions, by level of education (2012).

The student-teacher ratio measure gives another perspective on the use of teacher resources and shows the number of students (full-time equivalent, FTE) to the number of teachers (full-time equivalent, FTE). It has little direct relationship to class size explained further in Box 4.1. The student-teacher ratio at secondary level is smaller (i.e. more teacher resource intensive) in the Czech Republic than the average OECD country (11 students per

Box 4.1. **The relationship between class size and the ratio of students to teaching staff**

There is little direct relationship between class size and the student-teacher ratio across countries. Countries with similar class sizes may have different student-teacher ratios. This is because of differences in definitions in the two measures. The **class size** measure is calculated from a number of different elements: the ratio of students to teaching staff, the number of classes or students for which a teacher is responsible, the amount of instruction time compared to the length of teachers' working days, the proportion of time teachers spend teaching, and how students are grouped within classes and team teaching. The **student-teacher ratio** simply compares the number of students (full-time equivalent) to the number of teachers (full-time equivalent). This means that countries with similar student-teacher ratios may have different class sizes, because of differences in teaching hours required or in student instruction time.

Source: OECD (2014a), *Education at a Glance: OECD Indicators 2014*, *http://dx.doi.org/10.1787/eag-2014-en*.

secondary teacher compared to 13 students respectively). This ratio at secondary level has declined since 2004.[2]

By contrast, the student-teacher ratio at primary level is higher than the OECD average (19 students compared to 15 students per primary teacher respectively). The primary level ratio has increased over time, contrary to the general OECD trend. For further data see Figure 4.A1.3, Annex 4.A1.

Becoming a qualified teacher

Most teachers are required to attain a master's degree over five years to teach in the Czech Republic.[3] Teachers at upper primary and secondary levels tend to undertake a bachelor's degree and a follow-up master's degree, whereas primary teachers who teach at the first stage of basic education usually undertake a five-year continuous master's degree (MŠMT, forthcoming).[4]

Primary teachers at the first stage of basic education are qualified for teaching all subjects at primary level. Teachers at higher levels of education may have both multi-subject teaching qualifications (most commonly for two subjects) and single-subject teaching qualifications (most often for languages, physical education, special subjects or industrial arts).[5]

Teachers in vocational education who teach practical courses do not need a masters-level university degree and professional education at a lower level is sufficient.[6] Teachers of students with special educational needs must have special pedagogical qualifications. They are required to complete a master's study programme in pedagogical sciences focussing on special pedagogy (MŠMT, forthcoming).[7]

Initial teacher education

Universities operate autonomously and are responsible for each programme's content and organisation. This includes entrance examination requirements, the study programmes and assessment. Faculties of education commonly deliver teacher education for general subjects. Other university faculties also help to prepare teachers for specialised study at upper primary and secondary levels, for example faculties of arts, natural sciences,

and mathematics. All teacher education courses must obtain accreditation at the outset to ensure they are of sufficient quality.

Initial teacher education programmes integrate both academic and practical components. Students are required to undertake practical experience as part of their education, which is around two weeks on average or 4% of the time of study (European Agency for Special Needs and Inclusive Education, n.d.). There is no unified compulsory curriculum for teacher training but components usually include: general subject education, psychology, pedagogy, didactics and pedagogical practical training (European Agency for Special Needs and Inclusive Education, n.d.). The Ministry of Education, Youth and Sports formulates the key competences for teachers, but it is up to the universities providing teacher training to give their graduates the expected skills level.

Prospective candidates seeking to enter initial teacher education must pass the secondary school-leaving examination as well as any entrance examinations set by the institution (Santiago et al., 2012). Institution procedures for enrolment vary and may include a general test, an examination (written and/or oral) in the relevant subjects and/or an interview regarding students' motivation and suitability. The number of places for teacher education is generally limited by the capacity of each institution.

Recruitment into schools

Once initial teacher education is complete, teachers are eligible for recruitment to schools. At present there is no system of teacher certification or an on-the-job qualification phase.

School principals have the autonomy to recruit teachers directly independent of municipal or regional authorities.[8] The process involves an open recruitment procedure at the school level. Teachers are selected based on the best fit of their skills to the local school context.

Teacher career structures

The Act on Education Staff defines the following categories of education staff in school settings (MŠMT, forthcoming):

1. Teacher
2. Teacher in a facility for the in-service training of pedagogical staff
3. Educator
4. Special education teacher
5. Psychologist
6. Teacher responsible for leisure activities
7. Teaching assistant
8. Coach
9. Education manager

Within each of the above categories, there are five to six different career levels. For example, there are generally six career levels for teachers in schools.[9] To place teachers on the relevant career level, the school principal takes into account the extent of responsibilities the job involves and the relevant qualification requirements. For example, a teacher at Level 2 is required, in addition to teaching, to develop and update pedagogical documentation

or individual student learning plans for his/her teaching activities. A teacher at Level 3 must, in addition, provide methodological and specialised advice on teaching to other teachers (MŠMT, forthcoming). Current salary rates for educational staff are included in Table 4.A1.6 in Annex 4.A1.

While the current career structure allows for scope in differentiation of teacher roles, in practice most teachers are paid based on years of practical experience.

New career structure

The Ministry of Education, Youth and Sports (MŠMT) has worked on the development of a new career system for teachers since 2010 with the support of EU funding. The proposal was still being considered by policy makers and legislators at the time of the OECD review. If approved, the new system will aim to better link career development with teacher appraisal, professional learning opportunities and better remuneration. A key feature will be that school leaders can differentiate teachers across career levels – at the time of the OECD review visit there were four levels, but the review team is advised that the final proposal includes three career levels (the fourth level that was dropped was conceived for teachers primarily serving as mentors and consultants to other teachers). Within the parameters of central rules, school leaders can progress high performing teachers up the career ladder to pay them more as well as give them leading roles in developing others. They can offer teachers various career paths, including management positions.

The three career levels in the new system are:

- Level 1 – for beginning teachers
- Level 2 – a qualification threshold for regular teachers
- Level 3 – teachers can take on additional duties and specialisation such as become a mentor, chairperson, subject commissions.

Beginning teachers will be assessed at the end of Level 1 in order to move to the threshold qualification for a regular teacher at Level 2. The novice teacher will need to meet the competencies set out in the new teacher standards. At present there is no test or assessment of this kind for teachers transitioning to the classroom. High performing and specialist teachers will be progressed from Level 2 to Level 3, where they will take on extra roles in mentoring and developing others in their school. This differentiation in expert teacher roles helps to create a more systematic approach to mentoring support and pedagogical guidance for teachers across the system.

Teachers' salaries

Teachers' salaries are based on the new Labour Code in public schools service. There is collective agreement between the government and teacher unions over the basic salary amounts. Teacher compensation includes: the basic salary, plus allowances for additional duties (such as counselling, administrative tasks), and a bonus based on teacher performance (often referred to as a "personal part"). These additional allowances are generally 2.9% of the statutory salary across the Czech Republic (Eurydice, 2014, p. 24).

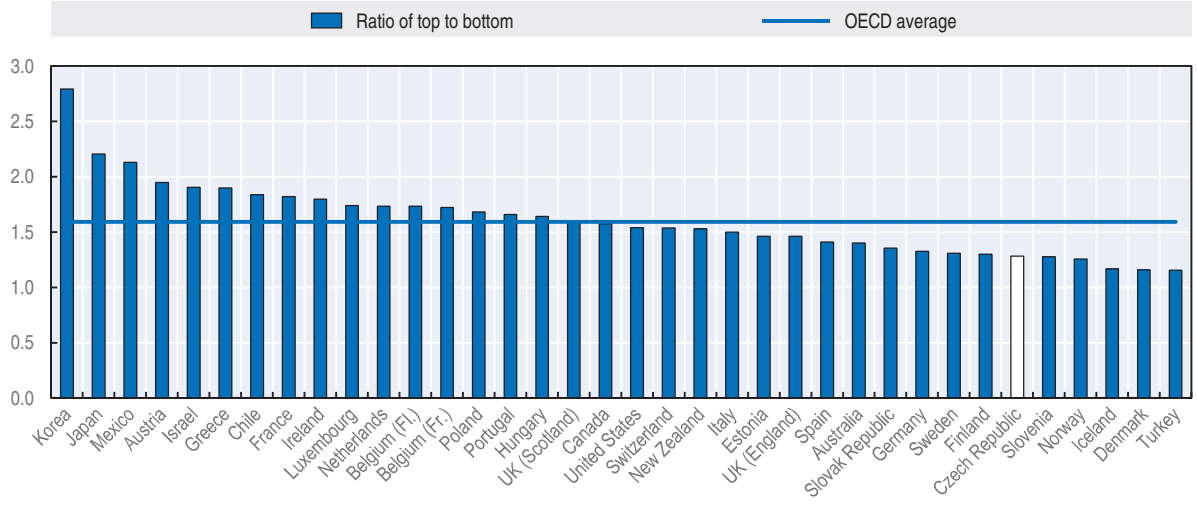
There are 16 basic salary categories that apply to pedagogical workers. Within each of the salary categories, teacher pay varies depending on previous years of service in teaching. Teacher pay generally ranges from the 8th to the 13th salary categories depending on the type of work they perform. Only in exceptional circumstances are teachers paid at the 13th salary category, for example where they act as education advisors, mentors and head teachers.

Practical experience in other settings can also count toward higher salaries but at the discretion of the school leader. Professional learning and other qualifications do not impact teacher pay. This helps avoid incentives for teachers to undertake courses or qualifications simply to increase salary.

Since 2012, school leaders can remunerate teachers not just on years of practical experience but on performance. The head teacher awards an amount above the set salary as well as personal bonuses (MŠMT, forthcoming). Teachers showing very good long-term performance or undertaking a range of extra tasks may receive pay increments up to 50% of basic pay (or, in exceptional cases, up to 100%). However groups interviewed by the review team indicated a low take-up of this policy, with many school leaders reverting to the former system of compensating teachers based on years of service only. Funding for bonuses tends to be re-allocated at school level to cover budget shortfalls as needed. For example, to cover an unexpected drop in student enrolments negatively impacting the budget.

Relative attractiveness of teachers' salaries

Figure 4.5. **Ratio of salary at top of scale to starting salary in lower secondary education, 2012**



Note: Data refer to statutory salaries for teachers with minimum qualifications in public institutions. For Hungary, Sweden and the United States, data refer to actual salaries. For Sweden, reference year is 2011.
Source: OECD (2014a), *Education at a Glance: OECD Indicators 2014*, *http://dx.doi.org/10.1787/eag-2014-en*, Table D3.1. Teachers' statutory salaries at different points in their careers (2012).

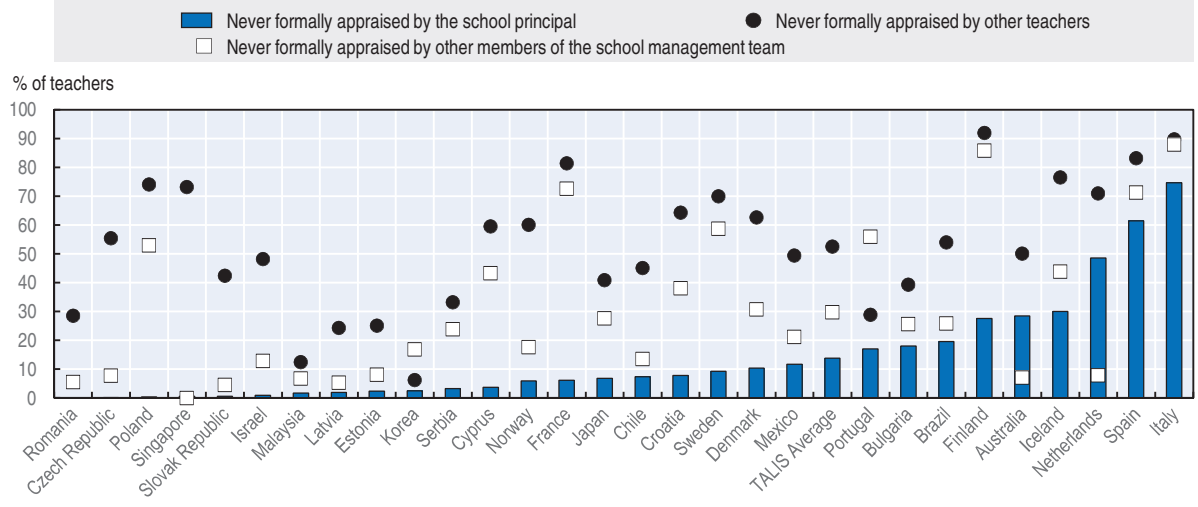
Teachers' salaries are especially low compared to other professions within the Czech Republic as well as other teachers internationally (discussed further in the Challenges section). In addition, the salary trajectory for teachers is relatively flat. As can be seen in Figure 4.5, the ratio of salary at the top of scale to starting salary is modest relative to other countries (1.28 against an OECD average of 1.61 in 2012). This means that teachers will earn just 28% more between the beginning and end of their career. This is in addition to the fact that reaching the top of the scale takes 27 years (longer than the OECD average of 24 years) (OECD, 2014a).

Teacher appraisal

In the Czech Republic teacher appraisal is typically conducted by school principals in approaches defined locally by the schools. Formal appraisal is prevalent across schools, with virtually all teachers reporting being appraised by their school principal.

There are no national requirements for teacher appraisal and no formal procedures exist to periodically evaluate the performance of teachers. There is little information available on the procedures and criteria used by schools in appraisal processes. However the process appears to typically involve interviews and observation undertaken by the school principal at least once a year (Santiago et al., 2012). In some schools a peer review system exists, which means that teachers observe the classes of their colleagues and subsequently work together on possible improvements (MŠMT, forthcoming). On the whole, a large number of teachers report never being appraised by peers (55%), as seen in Figure 4.6 (OECD, 2014b, Table 5.2).

Figure 4.6. **Teacher appraisal by the school principal, school management team and other teachers**



Note by Turkey:
The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union:
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Table 5.2.

The new career system outlined in Strategy 2020 intends to pilot the use of professional teaching portfolios in teacher appraisal and evaluation in future. Based on the pilot, the new system will gradually be implemented (MŠMT, forthcoming).

Staff development and professional learning

The school principal is primarily responsible for staff development. While all teachers are expected to have individual teacher development plans created within appraisal processes, only 60% of teachers report having them in place (OECD, 2014b, Table 5.8). The new career system under consideration includes a more systematic approach to developing teacher capacity at the school level. School leaders will be responsible for a school-wide teacher development plan as well as the creation of individual plans for each teacher linked to further professional learning. The new structure is based on a uniform

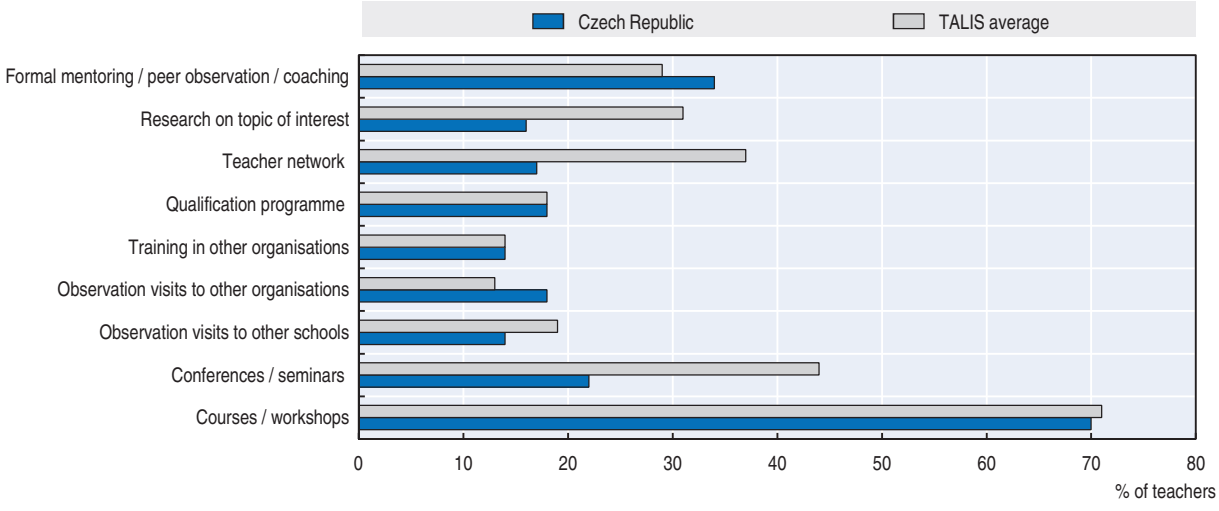
framework of defined teacher professional standards that describes the quality of the teacher's work, the scope of his/her activity and his/her professional development at these four career stages (MŠMT, forthcoming).

At present, all education staff is obligated to regularly undertake in-service professional learning over the course of their careers. Teachers are entitled to 12 days of leave for self-study purposes per year (Santiago et al., 2012). The cost of professional development may be covered by the school (fully or partly) or by the participating teachers themselves.

Many Czech teachers (over 80%) report regularly participating in professional development activities.[10] Teachers most frequently take part in short courses and workshops. Around one-third of teachers participate in a combination of formal mentoring, peer observation and/or coaching, which is just above the TALIS average. Less than 20% participate in a teacher network or research on a topic of interest, and few teachers (15%) undertake classroom observations at a different school each year (OECD, 2014b).

Specific indicators on formal mentoring (alone) show a bleak picture. Only 3% of teachers report having an assigned mentor, far below the 30% of school principals reporting that mentoring is for all teachers in the school (OECD, 2014b, Table 4.3).

Figure 4.7. **Type of professional development recently undertaken by teachers, TALIS 2013**



Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Table 4.9.

Mentoring is more prevalent for beginning teachers with less than five years of experience, however only 17% of such teachers report having a mentor (OECD, 2014b, Table 4.4). Less than half (45%) of new teachers report having taken part in a formal induction programme, and slightly more (56%) report participating in formal induction activities (OECD, 2014b, Table 4.1). These low levels of formal induction are line with the general trends for induction across TALIS countries.

A culture of collaborative communities varies even among the few schools the OECD review team visited. In particular, some schools had subject commission meetings where groups of teachers in the same subject meet between 4 to 10 times each year.

External training providers

Schools can draw on the services of many accredited public and private further education training providers to help build the capacity of their staff.[11] The ministry sets national education priorities which guide providers in the courses and services offered to schools. Regional authorities are responsible for overseeing the provision of teacher professional development and ensuring that teacher needs are adequately met by the services on offer.

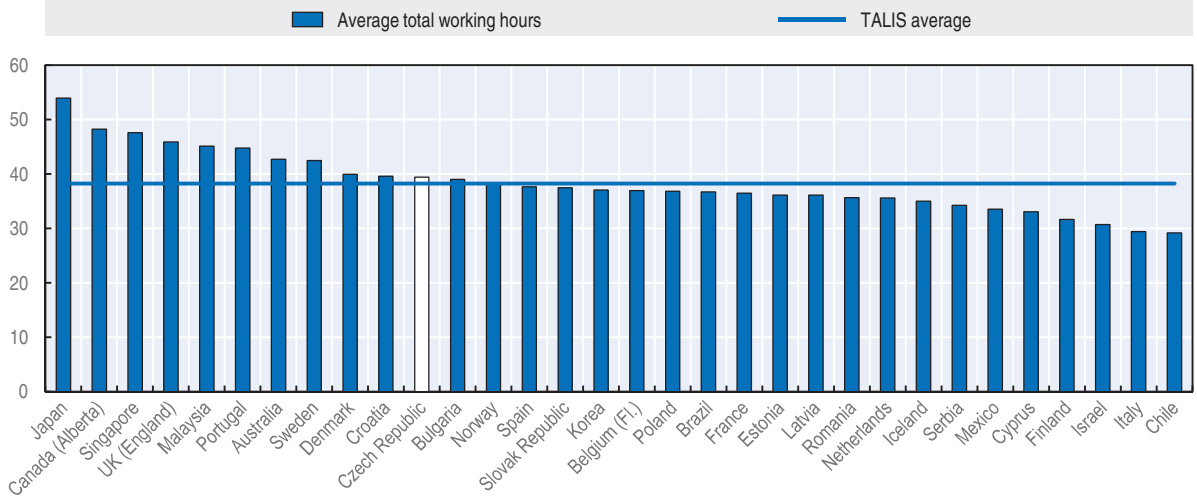
The largest public training provider is the National Institute for Further Education (NIDV) which has 14 regional centres. It is funded by the ministry budget and the European Social Fund, and many courses are provided to teachers at a low cost or free of charge.[12] It provides professional development opportunities for teachers related to national priorities, as well as additional qualifications for school principals, teachers and teaching assistants.

Courses and programmes are credited by the ministry. This occurs through the NIDV and a special Accreditation committee that provides recommendations for approval. There are very few rejected applications each year.

Workload and use of teachers' time

The weekly working time of teachers is 40 hours, set by the Labour Code. This includes time spent teaching as well as other related activities such as preparation and planning for class (MŠMT, forthcoming). Teacher self-reports of actual working hours are 39.4 hours per week, similar to the TALIS average 38.3 hours per week (Figure 4.8).[13] The number of hours spent on teaching in the classroom (17.8 hours) is slightly below the TALIS average (19.3 hours). The profile of a Czech working day is relatively similar to the TALIS average for other tasks such as the planning and preparation for lessons, correcting student work, and participating in school management.[14]

Figure 4.8. **Average number of hours that lower secondary education teachers report having worked during the most recent complete calendar week, 2013**



Note: A "complete" calendar week is one that was not shortened by breaks, public holidays, sick leave, etc. Also includes hours worked during weekends, evenings or other off-classroom hours. The sum of hours spent on different tasks (shown in Figure 4.3) may not be equal to the number of total working hours because teachers were asked about these elements separately. It is also important to note that data presented represent the averages from all the teachers surveyed, including part-time teachers.
Please see Figure 4.6. for notes on Cyprus.
Source: OECD (2014b), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*.

Support staff for teachers

Czech teachers can draw on a range of support staff to assist with specific pedagogical issues in their daily roles. For example, teachers can ask for advice from a group of expert specialists employed at a regional level to help with specific educational issues.[15] Teachers can also access guidance from school-based education advisors. Advisors hold roles as teachers but have lower workloads each week (by 1 to 5 hours) to advise and help develop other teachers' practice. Advisors are appointed by the school leader and must undertake specific professional learning to perform this role (including 250 hours of study with written work and an examination) (MŠMT, forthcoming).

Teachers are also entitled to request the support of teaching assistants. Schools must apply to the relevant regional authority for assistant staff, which may be granted depending on the strength of the case put forward and resource availability. There are two categories of teaching assistants in the Act on Education Staff, in particular those who: i) support students with special education or integration needs in class; or ii) support auxiliary educational work at the school (MŠMT, forthcoming).

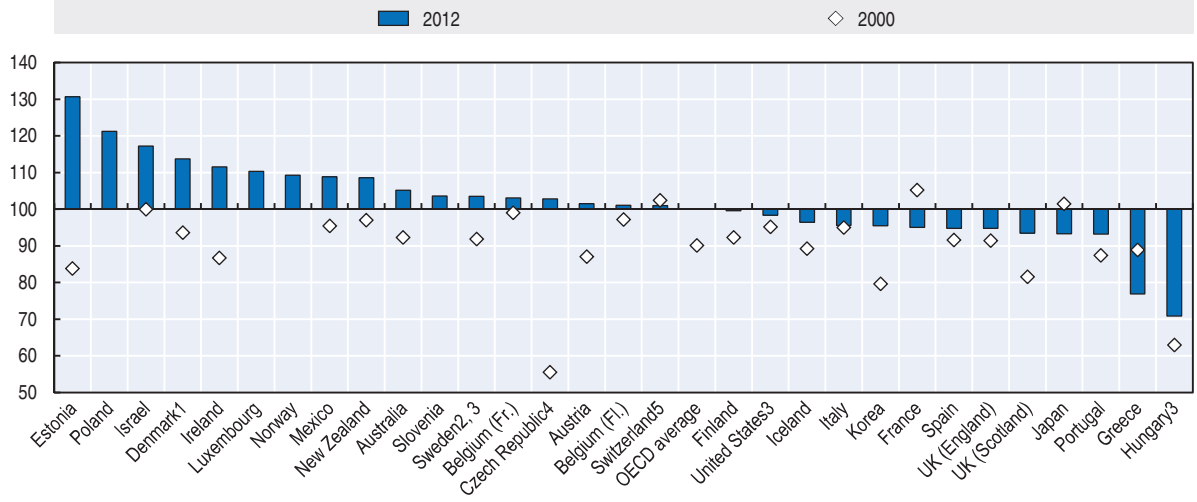
Strengths

Recognition of the need to improve teacher pay

A clear priority of the ministry in Strategy 2020 is to secure more resources for teacher salaries. Sustained efforts have been made over the last decade to increase pay which remains low in international comparison. The Czech Republic ranks higher than the OECD average in terms of the index of change in teacher salaries between 2000 and 2012 (Figure 4.9). The Czech Republic registered one of the largest increases in teacher salaries

Figure 4.9. **Change in lower secondary teachers' salaries, 2000, 2005 and 2012**

Index of change between 2000 and 2012 (2005 = 100, constant prices), for teachers with 15 years of experience and minimum training



Note: Countries are ranked in descending order of the index of change between 2005 and 2012 in the salaries of lower secondary teachers with 15 years of experience. No 2000 data available for Luxembourg, Norway, Poland and Slovenia.

1. Break in time series following methodological changes in 2009.
2. Year of reference 2011 instead of 2012.
3. Actual base salaries.
4. Break in time series following methodological changes in 2012.
5. Salaries after 11 years of experience.

Source: OECD (2014a), *Education at a Glance: OECD Indicators 2014*, *http://dx.doi.org/10.1787/eag-2014-en*.

across Europe between 2009 and 2014 with the annual gross salary increasing by 22% in real terms for teachers in primary, lower secondary and upper secondary general education (ICSED 1, 2 and 3) (Eurydice, 2014, p. 20). In addition, there has been a sharp increase in teacher pay by 3.5% in 2015 and the aim is to continue this trend. The OECD review team underlines how necessary these increases in teacher salaries have been as a core factor to ensure a minimum attractiveness for the profession.

Teaching standards have been developed and used to inform the design of the proposed career system

An earlier OECD review supported the completion and implementation of teaching standards (Santiago et al., 2012). The development of a set of Professional Teaching Standards in 2012 has helped in designing the proposed career system, although these have yet to be officially introduced. If the proposed career system is approved, these professional teaching standards will be adopted. Their strength is that they can clarify what is expected of quality teaching. The standards outline the expectations of teacher qualities, professional capabilities and development over the course of their career. They outline the scope of a teacher's work and the professional development to be undertaken at each of the career stages. Such standards help articulate professional roles and responsibilities, and are a vital source of information for teachers in making judgements. It provides a credible, calibrated reference for the teacher appraisal processes in which to judge teacher competence. Further, the new career structure (if approved) will better link teaching standards and teacher appraisal with teacher professional development.

Schools and teachers are empowered with high levels of autonomy

Schools have high levels of autonomy over their staffing. This is a strength given greater ownership of resource allocation decisions at a school level can have positive effects on student outcomes (Hanushek, Link and Wöβmann, 2011). According to PISA 2012 data, 95% of 15-year-olds attended schools whose principals reported that only principals and/or teachers have a considerable responsibility for selecting teachers for hire, against an OECD average of 49% (OECD, 2013b, Figure IV.4.2). The equivalent figure for responsibility for dismissing teachers is 94% (the highest of any PISA country), against an OECD average of 36% (OECD, 2012b, Figure IV.4.2). Additionally, 74% of Czech principals report that only principals and or/teachers have a considerable responsibility for establishing teachers starting salaries and 72% for determining teachers' salaries increases (the highest of any PISA country).

Teachers also enjoy high levels of autonomy in the classroom. The Framework Education Programmes represents a significant shift to give schools and teachers more flexibility in interpreting broad education objectives into local curricula. While there were some concerns raised during the OECD review about varying teacher capacity to develop and implement School Educational Programmes, this general approach supports greater teacher professionalism. Teachers also have high levels of autonomy to decide which pedagogical methods and educational materials to use. Teacher professional judgements are relied on to design the best approach to teaching and learning for their students and continuously improving it on the ground. This provides the conditions for teachers to tailor teaching to students' needs. Teacher autonomy is complemented by support from teaching assistants to help with students with special needs as well as non-teaching tasks.

Efforts are underway to introduce new career system to better recognise effective teaching

Recognising and rewarding effective teaching practice is important for teacher attraction, development and retention. Since 2010, the Czech Republic has undertaken active steps to develop a new and enhanced career structure which is currently under consideration. The new career structure, if approved, will include four new levels of teaching positions to better screen beginning candidates at the end of their first year, as well as ensure that the best teachers progress to Levels 3 and 4 (as discussed earlier).

The proposed new arrangements give the best teachers extra roles in mentoring and developing others in their school is a key benefit. This is in line with the approach of high performing systems which tend to give the best teachers more responsibilities in developing others (Barber and Mourshed, 2007; Jensen et al., 2012).

Teacher appraisal is prominent in schools

A key strength of the Czech system is the wide acceptance of the principle that teachers should be evaluated and appraised within their regular work. A previous OECD review found that Czech school principals generally use the results of teacher appraisal in defining professional development plans of individual teachers (Santiago et al., 2012). Meaningful appraisal is geared to teacher development and improvements in learning. It helps teachers improve their teaching skills by identifying and developing specific aspects of their teaching. It improves the way they relate to students and colleagues and their job satisfaction, and can have a large impact on student outcomes. Internal teacher appraisal also helps teachers identify how they need to develop and the professional development required to get there.

Virtually all teachers report being appraised in their school in the Czech Republic, well above the TALIS average of 90%. Within formal appraisal, almost 100% of teachers reported they are directly observed in their classroom, again above the TALIS average of 92% (OECD, 2014b).

Challenges

Teacher status is low and attracting and retaining high calibre candidates is difficult

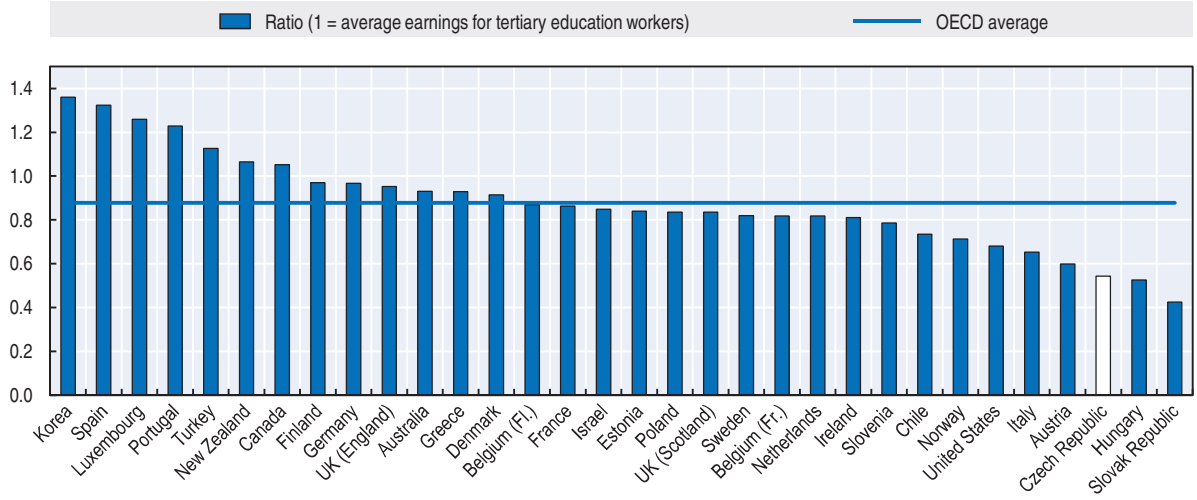
Czech teachers have a very low perception of their social status in society. An estimated 12% of Czech teachers think the teaching profession is valued, compared to an EU average of 19% (OECD, 2014b). Just over half (53%) of lower secondary teachers believe that the advantages of being a teacher clearly outweigh the disadvantages, the lowest figure among TALIS countries (OECD, 2014b).

With low teacher salaries, poor working conditions and low levels of teacher morale, it is no doubt difficult to attract high calibre candidates to the profession. While efforts have been made to improve the salaries of teachers in recent years, pay is still very low. The ratio of primary and secondary teachers' salaries to earnings for full-time, full-year workers with tertiary education is one of the lowest among OECD countries (Figure 4.10). Further, the slow rate of salary progression over the course of a teacher's career is found to be one of the least rewarding across OECD countries (OECD, 2014a, Table D3.3) (This is discussed further below).

Teacher morale appears to be an issue. TALIS results show that only 30% of teachers in the Czech Republic believe they can motivate students who show low interest in school work, while only 39% think they can help students value learning (OECD, 2014b). These low levels of self-efficacy may be exacerbated by few opportunities for teachers to work together and collaborate to improve what they do on a daily basis.

Figure 4.10. **Teachers' salaries relative to earnings for tertiary-educated workers aged 25 to 64, 2012**

Lower secondary teachers in public institutions



Note: Data refer to actual salaries except for the following countries, for which statutory salaries were used: Austria, Canada, Ireland, Korea, Portugal, Slovak Republic, Slovenia, Spain and Turkey. The "Actual" method refers to the ratio of average actual salary, including bonuses and allowances, for teachers aged 25-64 to earnings for full-time, full-year workers with tertiary education aged 25-64. The "Statutory" method refers to the ratio of teachers' statutory salary after 15 years of experience and minimum training (regardless of age) to earnings for full-time, full-year workers with tertiary education aged 25-64. For Belgium (French Community), Belgium (Flemish Community), England and Scotland (UK), data on earnings for full-time, full-year workers with tertiary education refer to Belgium and the United Kingdom respectively. Scotland includes all teachers, irrespective of their age. For Sweden, average actual teachers' salaries do not include bonuses and allowances.

Source: OECD (2014a), *Education at a Glance: OECD Indicators 2014*, *http://dx.doi.org/10.1787/eag-2014-en*.

Weak links between teacher performance, pay and recognition

While there is currently scope to promote teachers to a higher career level if teachers take on additional responsibilities or demonstrate high performance, in practice, salary is still largely determined by teachers' length of service. Whether or not teachers receive their "personal pay" often depends on factors outside of their performance. Such funding may be re-allocated at the school level at the end of the year to cushion and absorb losses in other areas, such as a drop in school enrolments. The personal pay component to reward outstanding teaching is very low in practice, averaging only 2.9% per annum.

Sanctions are only applied in exceptional cases where teachers violate legal obligations. Less than half of teachers (45%) in the Czech Republic believe that if a teacher is consistently underperforming that he/she would be dismissed. Only 55% of teachers believe that the best performing teachers in the school receive the greatest recognition (OECD, 2014b, Table 5.8).

The proposed new career system (under consideration) may help to bring teacher performance, appraisal and salary closer together. However, a key consideration is whether the new structures will actually result in greater differentiation of teacher roles given some of this flexibility already exists and is not fully utilised. The barriers to actively promoting and advancing teachers need to be fully understood to ensure the new career system can have positive effects.

At the time of the OECD review there was some uncertainty about securing additional funds for the new career structures. Many interviewees expressed the view that additional funding for implementation of the new career system will be critical to its success in enabling greater differentiation among teachers and promoting the best to the top teaching levels.

The consistency in quality of initial teacher education needs to be improved

OECD review team consultations found that preparation of graduate teachers in practical skills for teaching is a key issue. School practicums are of relatively short duration (average two weeks). The ability to connect with schools and co-ordinate placements, as well as level of school commitment to the teacher students, appears to vary greatly among different initial teacher education providers and schools. In recognition of this, the MŠMT (*Ministerstvo školství, mládeže a tělovýchovy* – Ministry of Education, Youth and Sports) has recently approved new guidelines for accreditation standards of the university pedagogical programmes – although the OECD review team has not seen these. There are limited mechanisms and feedback loops on the quality of initial teacher education programmes, and few consequences for poor quality training. A large issue appears to be the significant numbers of graduates completing initial teacher education who do not go into teaching on completion of their studies. Unfortunately, the OECD review team was not able to acquire data on this.

Professional learning and collaboration can be improved

The OECD review team gained the impression that there is a lot of emphasis on training by external providers, and less on teacher learning that occurs in the school in the daily work of teachers. The most powerful form of professional learning occurs close to the classroom; where teachers evaluate practice, analyse how to improve student learning in classroom, and adapt teaching to improve student outcomes. Teachers learn best working collaboratively with others to evaluate practice, so that tacit assumptions on teaching can be directly engaged and challenged. They also need to have opportunities to see evidence of the impact they are having over time. Integrating these opportunities for this form of learning into teaching work is key to professional growth in the Czech Republic.

School visits show few examples of teachers working collaboratively together to intensively analyse student learning and how it can be improved. While subject commissions are one form of collaboration, it is not clear how much they deeply explore issues of learning and teaching versus more routine and administrative subject-related matters.

Mentoring in schools is occurring at low rates and could also be increased to boost collaboration and open dialogue on how to improve teaching in the classroom. There are plans to increase mentoring under the new career system (if approved). In order for the new mentoring arrangements to be effective, mentors may require upskilling in how to effectively mentor others, along with adequate time to do so.

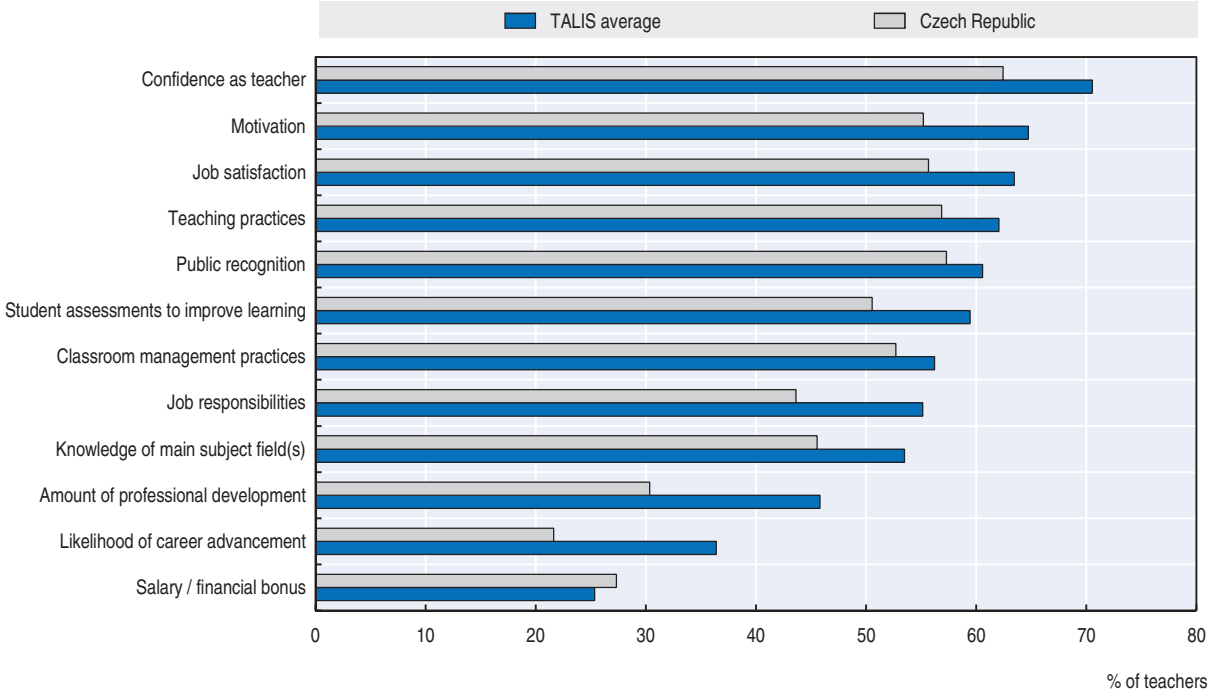
While the open market for external training providers allows for schools to select from a competitive range of training courses, there appears few mechanisms at the regional level to monitor if teacher development needs are adequately being met. OECD review team interviews revealed few structured or co-ordinated approaches by regional authorities to monitoring an adequate supply of high quality training in these areas. The autonomy that schools have to upskill their teachers has its merits, but requires monitoring in the event that information asymmetries may exist (i.e. there may be few indicators of course quality to schools and few avenues for providing feedback if teachers and schools are not satisfied). It was the OECD review team's impression that there were limited feedback loops between providers, schools, teachers and regional officials on the quality of training received.

Appraisal and feedback could better strengthen teacher development

Teacher appraisal in the Czech Republic appears to have greater emphasis on accountability than teacher development and growth. It appears to be used by schools mostly as a summative tool to check teacher performance and assess eligibility for a pay rise or promotion (Santiago et al., 2012, p. 70). TALIS 2013 (OECD Teaching and Learning International Survey 2013) data shows that almost 50% of teachers either agree or strongly agree that teacher appraisal and feedback have limited influence on the way teachers teach in the classroom (OECD, 2014b, Table 5.8). Only half of teachers believe that feedback is provided based on a thorough assessment of their teaching.

Czech teachers report low levels of positive outcomes resulting from either formal or informal feedback, sitting below the TALIS average on most measures (Figure 4.11). In particular, after receiving feedback, only 60% of teachers report "moderate" or "large" positive changes to their teaching practice, and less than 55% report changes to their confidence and motivation. Around 50% report positive changes to use of formative assessment, and less than 30% to career advancement and amount of professional development.

Figure 4.11. **Percentage of lower secondary education teachers who report a "moderate" or "large" positive change after they received feedback**



Note: "Feedback" here refers to both informal and formal feedback. It covers any communication of the results of a review of an individual's work, often with the purpose of noting good performance or identifying areas for development.
Source: OECD (2014b) *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Table 5.7. and outcomes of teacher feedback.

The monitoring, planning and distribution of teachers is not adequately addressed

Given the significant ageing of the teacher workforce in the Czech Republic, the ministry's monitoring and planning role will become more critical as supply pressures intensify. The OECD review team gained the impression the ministry's data systems could be strengthened to better monitor teacher supply and demand, in particular around

current and future projections of teacher supply. While out-of-field teaching does not appear to be significant issue in the Czech Republic, shortages in subject areas such as especially science need to be closely monitored and proactively managed (discussed earlier under "context").

A key issue in the planning and distribution of teachers is whether the best teachers are working where they are needed most, especially in disadvantaged schools from an equity perspective. Students who are struggling arguably need access to the best teachers in order to improve their performance. Research shows that schools with higher proportions of disadvantaged students are known to be least favoured by teachers (OECD, 2012a). Such schools are more likely to have staff shortages, and their students tend to find themselves in classes with the least experienced teachers. This is often pronounced in remote and rural settings.

The uneven distribution of quality teachers across schools appears to be a real concern in the Czech Republic. Disadvantaged schools are more likely than advantaged schools to report shortages of qualified or competent teachers. The index of teacher shortage between advantaged and disadvantaged schools is 0.60 in the Czech Republic, well above the OECD index difference of 0.32 (Schleicher, 2014). Other OECD data confirms that disadvantaged schools are less likely to have qualified teachers than advantaged schools (0.37), significantly above the OECD average (0.15) (Schleicher, 2014).[16] At present there are no targeted programmes or incentives to motivate teachers to work in remote or regional areas, or schools with more challenging student populations in the Czech Republic (MŠMT, forthcoming).

The streaming of students into select-entry *gymnasia* may further exacerbate the uneven distribution of quality teachers across schools, although there is little data to confirm this. Anecdotal reports during the OECD review visit expressed that some basic mainstream schools found it harder to attract quality compared to select-entry *gymnasia* at lower secondary level.

An immediate issue in the supply of teacher skills in the Czech Republic is whether teachers in mainstream education schools have the capacity to adequately support expanding numbers of students with special needs in the near term. Major reforms are underway in 2015 to transition the number of special needs students from specialised schools and classes into mainstream education. While research finds that reduced segregation is likely to improve the education outcomes of this cohort,[17] the success of this intervention will depend on whether teachers in mainstream settings are sufficiently equipped to meet additional needs. Such teachers will need to have the right skills, training, tools, materials and aides and other relevant support required.

Teacher resources appear high in secondary schooling by international comparisons

Analysis of class size and student-teacher ratios provides indications that there may be too many teachers at secondary level in the Czech Republic. As discussed earlier, class size and student-teacher ratios are below OECD average at secondary school indicating they are highly resource intensive. Research shows that investing in teacher quality over small class sizes is more effective in raising student outcomes, discussed further in Box 4.2 below.

Box 4.2. **Trade-offs in decisions on use of teacher resources**

Smaller class sizes are more expensive than larger classes as they use teacher resources more intensively, holding other factors constant. Smaller classes are often perceived as allowing teachers to focus more on the needs of individual students, yet there is little evidence to support this (with the exception of positive impacts on specific groups of students, such as those from disadvantaged backgrounds). According to recent findings from the 2013 OECD Teaching and Learning International Survey (TALIS), smaller classes are not necessarily related to greater job satisfaction, except in some cases (OECD, 2014a, Box D2.1). However, there is also evidence that suggests a positive relationship between smaller classes and more innovative teaching practices (Hattie, 2009).

Smaller class sizes and student-teacher ratios often have to be weighed against higher salaries for teachers, investing in their professional development, greater investment in teaching technology, or more widespread use of assistant teachers and other paraprofessionals whose salaries are often considerably lower than those of qualified teachers (OECD, 2014a). Some high performing systems choose to have larger class sizes and instead reduce teacher workloads so that teachers have more time for professional learning, for example in Shanghai and Singapore (Jensen, Hunter, Sonnemann and Burns, 2012).

Source: OECD (2012b), "Indicator B3 How much public and private investment in education is there?", in *Education at a Glance 2012: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2012-18-en*; and Jensen, B. et al. (2012), *Catching Up: Learning from the Best School Systems in East Asia*, Grattan Institute, Melbourne, Victoria.

Policy recommendations

Increase efforts to attract and retain high calibre teachers

Improving the attractiveness of teaching is a key priority given the very low social status of teachers in the Czech Republic. While the ministry has taken steps to steadily increase teacher salaries over the past decade, these efforts should be strengthened. The ministry's plan to introduce a new career structure is a step in the right direction and is commended.

To raise the public profile of teaching, the ministry should consider highly selective entry pathways. Other education systems such as the US and UK have enacted such reforms to strengthen their teaching workforce. "Teach for America" is one initiative that has helped in attracting outstanding college graduates to work in disadvantaged schools. While findings have been mixed, research shows positive effects of the programme on participant teacher beliefs and increasing the likelihood that the high calibre graduates will pursue a career in education (Fryer and Dobbie, forthcoming). In addition, the English government enacted a series of reforms in 2000 to strengthen its teaching workforce, including expanding alternative pathways in teaching, and launched an aggressive marketing campaign. This resulted in a significant reduction in teacher shortages and England now has one of the youngest teaching workforces in the world (OECD, 2014c; OECD, 2011).

To further improve the appeal of the profession, a key policy priority for the ministry is to make the everyday work of teachers less isolating and more motivating. Addressing low teacher morale in the profession is a key issue. It is suggested the ministry increase opportunities that tap into the intrinsic motivation of teachers to improve student learning. Evidence shows that teachers are more motivated to improve where there are learning opportunities that are specific and relevant to their regular work (Stoll, Fink and Earl, 2003; Timperley, Wilson, Barrar and Fung, 2007). The working environment of schools

could be better organised so teachers have collaborative groups and safe forums to discuss and solve specific, concrete problems that occur in daily practice (discussed further below).

The ministry should also consider raising the selectivity of candidates to raise the calibre of those becoming teachers. This should be considered at two stages: firstly, the quality of candidates accepted into initial teacher education, and secondly the standards that must be demonstrated to graduate from beginning teacher to qualified teacher. At the first stage, the ministry should explore approaches that can help better screen candidates into initial teacher education, such as encouraging providers to use more in-depth procedures that assess whether the individuals wanting to become teachers have the necessary motivation, skills, knowledge and personal qualities (specific assessments). Additionally, flexible programme structures can provide student teachers with school experience early in the course, with opportunities to transfer into other courses if their motivation towards teaching changes as a result.[18]

The ministry's plans to establish assessments at the end of the first year of teaching should help to raise teacher selectivity. However assessments on their own will not be effective in changing teaching practice in a sustained way unless there is also a culture of continuous improvement and deep learning in the school (discussed further below). It is also important that the new assessment also avoids overly cumbersome processes that only lead to compliance and not improvement.

The full range of potential policy options to improve teaching attractiveness is outlined in Box 4.3.

Box 4.3. **Policy options for improving the attractiveness of the teaching profession**

A large international study in 2010 found that Singapore, Korea and Finland undertake a mix of the following to improve attractiveness of teaching:

- Make entry into teacher training highly selective.
- Pay for tuition and fees, give students a salary or student stipend while they train.
- Offer competitive compensation and in some cases, performance pay.
- Offer opportunities for advancement and professional growth throughout career.

The mix of initiatives used to boost attraction is important and specific approaches should not be considered in isolation. For example, in Singapore, prospective teachers are selected into initial teacher education by panels that consider strong academic ability and commitment to the profession. But Singapore also places huge emphasis on making the profession attractive. Student teachers receive a tuition waiver and are provided an additional stipend during training in exchange for a commitment of 3 to 5 years of service. The Ministry of Education ensures that starting salaries of teachers are adjusted to be in line with other professions, and teachers have the opportunity to move up career ladders and earn performance pay (Jensen et al., 2012).

The OECD (2005) provides a full range of policy pointers on what systems can do to improve the attractiveness of teaching:

- Improve the image and status of teaching, for example promotional programmes to allow career change both to, and from, teaching, as well as general campaigns and media.
- Improve salary competitiveness and employment conditions, including targeting larger salary increases to key groups in short supply.

Box 4.3. **Policy options for improving the attractiveness of the teaching profession** *(cont.)*

- Make reward mechanisms more flexible – for example expanding incentives with substantial salary allowances for teaching in difficult areas, transportation help for teachers in remote areas or bonuses for teachers with skills in short supply.
- Improve entrance conditions for new teachers, for example provide well-structured and resourced induction programmes for new teachers.
- Expand the supply pool of potential teachers, for example enable suitably qualified candidates from outside teaching to start working and earning before completing teacher training qualifications.
- Capitalise on an oversupply of teachers by being more selective, for example make teacher selection criteria and processes include interviews, aptitude tests, preparation of lesson plans and demonstration of teaching skills.

Source: Auguste, B., P. Kihn and M. Miller (2010), *Closing the Talent Gap: Attracting and Retaining Top-Third Graduates to Careers in Teaching,* McKinsey & Company; OECD (2005), *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, *http://dx.doi.org/10.1787/9789264018044-en*; Roberts-Hull, K., B. Jensen and S. Cooper (2015), *A New Approach: Teacher Education Reform,* Learning First, Melbourne.

Improve the quality of initial teacher education

It is recommended that the ministry take action to help strengthen links to practical experience in initial teacher education. The application of education theory to practical classroom teaching is an essential part of a beginning teacher's development (Barber and Mourshed, 2007). Measures that may help to achieve this include establishing a framework or guidelines for 'quality' practicum placements as an industry benchmark, or providing better incentives for schools to ensure practicums are a valuable learning experience, including sufficient pay, time and support for schools who participate. In addition to raising the quality of practical placements, the duration should be extended. The OECD review team understands practical experience is two weeks on average in the Czech Republic.

High performing systems integrate a substantial practical component within their initial teacher education. In Singapore, pre-service teachers have 22 weeks of practicum in a school over the four years of their degree (Jensen et al., 2012). The practicum includes observation, co-teaching and eventually teaching with the assistance of a mentor. The practical components of the degree start in the first year and increase over the duration of the course. In the one-year postgraduate programme, 40% of the course is devoted to the practicum. Japanese pre-service teachers spend up to two days a week in one-on-one coaching in their classrooms during their first year of initial teacher education (Roberts-Hull et al., 2015).

Greater pressure should also be applied to providers to lift the quality of course provision. One feasible option is to strengthen formal feedback loops between schools, the ministry and both initial teacher education and continuing professional development (in particular the NIDV) providers to make the quality more transparent, with consequences for failure to improve poor provision. In Singapore, there is constant feedback between the National Institute for Education (which provides the theoretical foundation of training in education), the schools (which provide the practical experience), and the ministry (which sets the strategy and direction for the teaching profession.) Constant feedback and evaluation on the programme allows for changes to the curriculum and structure of the

training to better suit school and ministry needs; conversely, the National Institute for Education can inform policy and practice with relevant research (Jensen et al., 2012). Another option is to adopt the approach of high performing systems such as Korea and Taiwan, which regulate the student intake for providers based on their programme quality. The government lowers the number of students that can enter poor quality programmes and raises the number of entrants for high quality programmes (Roberts-Hull et al., 2015). Linking the quality of the course to the number of students that can be enrolled creates an incentive for providers to lift the quality of their programmes.

Embed professional learning within everyday teaching practice, and increase the use of feedback, observation, student data and collaboration in the school

The most powerful form of professional learning occurs when it is integrated in everyday teaching practice (Hattie, 2009; OECD, 2005; Timperley et al., 2007). Currently, this kind of professional learning receives little attention across schools in the Czech Republic, and it is recommended the ministry take steps to encourage it. Research shows the most effective teacher learning involves collecting, evaluating and acting on feedback to modify their own teaching practices. In Hattie's 2009 meta-analysis, intensive observation and analysis, or 'microteaching', is shown to be most effective in lifting student outcomes, along with practices such as formative evaluation (ranked 3rd) and feedback (ranked 10th) in effects.

Research shows it is particularly important for professional learning to make a specific connection to an individual teachers' practice or to a problem within the school (Stoll et al., 2003; Timperley et al., 2007). The most effective learning activities help teachers to examine what they do in the classroom, what works and why. Individuals often need to see evidence of impact before changing practice (Kolb, 1984; Timperley, 2008). Improvement will not occur through only understanding theory and evidence, but through numerous activities such as observation, demonstration, practice, and feedback (Showers and Joyce, 2002).

The ministry can encourage schools and teachers to focus of this kind of effective teacher learning in various ways. For example, by setting clear strategic expectations that teachers continuously assess, review and improve their practices. This can be embedded as a core responsibility of school leaders to help education staff develop in this way. Further, school-level planning processes should be required to focus on this type of teacher learning and development in schools.

Teachers can be encouraged to set own goals for development within their individual development planning processes, known to increase motivation for learning in the workplace. The use of student assessment data should be central to identifying teacher development needs and goals within this process. Further, it is recommended that teacher job descriptions in the new career structures incorporate the use of peer observation, demonstration and feedback. These practices can be embedded within specific programmes such as learning communities and mentoring in the school.

While the new career system will expand mentoring, there should be more of a focus on establishing intensive learning communities in schools (which is currently missing). Given low teacher self-efficacy in the Czech Republic, opportunities for team work can help build confidence to try out improved approaches together. Collaborative learning communities provide safe environments for teachers to challenge existing assumptions. Active, shared discussions force individuals to articulate why they are working in a certain

way, and unpack their tacit assumptions on what works and why (Timperley et al., 2007). High performing systems such as Shanghai, Japan and Singapore use professional learning communities as a key vehicle for teacher growth and development (Barber and Mourshed, 2007; Jensen et al., 2012). Teachers work together to set learning goals, research and try new approaches, observe others, receive feedback, and assess evidence of impact in the school. Such groups tend to have strong leadership to guide others through the continuous improvement process. Teachers promoted to the highest career levels in the new career system in the Czech Republic could promote and lead such communities.

While it is recommended that the ministry increase support for this type of teacher learning in every day practice, there should also be clear incentives and accountabilities for these activities as well. Teacher development and accountability do not need to be separate endeavours, but mutually reinforcing. This is done well in a number of high performing systems such as Shanghai and Singapore, for example where teachers are expected to work together as a key criteria for promotion in the career system (Jensen et al., 2012).

Improve teacher appraisal for development purposes

The ministry should encourage teacher appraisal to have more of a development focus in addition to its accountability function. While rates of teacher appraisal (and feedback within it) are high in the Czech Republic, it appears to have low impact on actual positive changes in teaching practices (discussed above). One step the ministry can take is to promote a wider range of appraisal tools than just school principal observation which may be associated with accountability purposes. For example peer observation and feedback can be very powerful, as well as feedback from student surveys known to have a high correlation with teaching effectiveness (Bill and Melinda Gates Foundation, 2013).

The proposed new career structure should help improve links between teacher appraisal, teacher development plans and school-level objectives, which is commended. Connecting individual needs with school-level objectives and mission is important for whole school improvement and system alignment. Further, the ministry should encourage new teaching standards to be fully utilised within appraisal to better connect teacher development needs and professional development processes.

Improve oversight of external training provision

The ministry should review arrangements at the regional level for overseeing provision of external training. While the open market for the provision of professional development has many players, it was unclear the extent to which regions or providers have a clear picture of the needs of teachers, and if those needs are being met.

Tight strategic direction and increased accountability for professional learning throughout the system should be enacted; so that regions are held accountable for their role in overseeing professional learning in schools. It is also suggested that information flows are improved on whether teacher development needs are being satisfied by external training providers. It is recommended that more information is systematically collected from teachers on the quality of courses undertaken and whether it me their needs.

Improve monitoring of teacher supply and demand, and expand incentives for teachers to work in specific areas

The ministry should improve the monitoring of teacher supply and demand and better plan for future demographic shifts in student enrolments. This includes subject areas of

teacher shortage, especially in science subjects where out-of-field teaching is high by international comparisons. The ministry should consider a range of initiatives to encourage teachers to work in these specialist subject areas such as fee waivers and scholarships for initial teacher education, salary bonuses and recognition of work experience in areas of skill shortage.

Disadvantaged schools are known to experience significant difficulties in attracting qualified teachers in the Czech Republic (discussed earlier), and the ministry should increase incentives for high quality teachers to work in these areas. While there is limited evidence on what motivates effective teachers to work in these challenging settings, a number of studies consistently find that both financial and non-financial factors are important (Mourshed, Chijioke and Barber, 2010; OECD, 2012a; Rice, 2010). Professional factors matter, such as opportunities to take on extra responsibilities and positions of influence, reforms and innovation, and developing strong leadership and collegiality in professional development (OECD, 2012a; Rice, 2010). The ministry should support disadvantaged schools in these areas as a priority to help attract the best teachers where they are needed most.

Develop capacity of teachers in mainstream schools to teach students with special needs

Given new reforms will see many more special need students entering mainstream education in 2016, the ministry must ensure teachers in mainstream schools have the right skills, training, tools, materials and aides and other relevant support in this area. Any legislative restrictions that prevent collaboration or job-sharing arrangements between teachers in special schools and mainstream schools should be removed. Collaboration with (and mentoring from) special need teachers can help upskill the broader teaching workforce.

Notes

1. In 2013/14 there were 99 641 teachers working in basic schools, secondary schools and *conservatoires* (MŠMT, forthcoming). This includes teachers in public, private and church schools.
2. The student-teacher ratio at secondary school level dropped from 13.1 in 2004 to 11 in 2012. This decline does not follow the trend in the OECD average over that period which remained stable across countries (OECD, 2014a, Table D2.2; OECD, 2006, Table D2.2).
3. This applies to teachers in basic, secondary, special education, vocational education (general and vocational courses).
4. Primary teachers (at the first stage of basic schools) and teachers of general and theoretical technical subjects at upper levels are required to have an academic master's degree (Level 7 in ISCED 2011, including either a long first degree of at least 5 years or a second or further degree following successful completion of a bachelor's or equivalent programme) (Eurydice, 2014).
5. Teachers of music, art, foreign languages and physical education, who work at primary and secondary schools, have alternative routes to become qualified (in addition to mainstream avenues). Specialised study options for these teachers are included in the Pedagogical Workers Act (MŠMT, forthcoming).
6. In practical courses, individuals are required to have completed the secondary school *maturita* as well as Czech accredited studies of pedagogy, at least 120 hours (the so called "pedagogical minimum"). In practical training, individuals are required to have completed secondary school with an apprenticeship as well as the Czech accredited studies of pedagogy.
7. Since 2012, the master's programme for a special education teacher need not focus specifically on special pedagogy, however in these cases individuals must also complete follow-up studies to extend their professional qualifications (sourced from MŠMT, forthcoming).

8. The prerequisites for entering the teaching profession detailed in the Act on Educational Staff include: i) having full legal capacity; ii) being qualified for the direct educational activity being performed; iii) not having a criminal record; iv) being in good state of health; and v) proving knowledge of the Czech language (Santiago et al., 2012).
9. This refers to teachers at basic schools (including basic art schools), secondary schools and *conservatoires* (MŠMT, forthcoming).
10. Over 80% report participating in professional learning activities in the previous 12 months (OECD, 2014b, Table 4.7).
11. Providers must seek accreditation from the MŠMT. An 'educational institution' is granted accreditation for a period of six years and an 'educational programme' for third years. The MŠMT checks the activities performed within the framework of accredited programmes and keeps records of all accredited educational institutions and programmes (MŠMT, forthcoming).
12. See the National Institute for Further Education website (*www.nidv.cz/en/*).
13. This is for lower-secondary education teachers (OECD, 2014b, Table 6.12).
14. This is for lower-secondary education teachers (OECD, 2014b, Table 6.12).
15. In more serious cases, teachers and school leaders can draw on the advice of the Czech School Inspectorate as well (MŠMT, forthcoming).
16. These figures represent the simple correlation between the school mean socio-economic background and percentage of teachers with university-level degree among all full-time teachers.
17. An OECD (2012a) report finds that early student selection exacerbates differences in learning between students. It has an impact on educational inequities, as any given pathway and any given school affects learning in two ways. First, the teaching environment can vary, since it depends on the curriculum, the teachers and the resources. Less demanding tracks tend to provide less stimulating learning environments. Second, students' outcomes can also be affected by the students alongside them (Field, Kuczera, and Pont, 2007; OECD, 2012a, p. 58).
18. Raising admission standards to initial teacher education is an option pursued by some high performing systems, however this is not recommended for the Czech Republic at this point given the poor working conditions, pay, and low teacher status. Raising entry requirements without first addressing these issues may have little positive effect.

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ANNEX 4.A1

Data for Chapter 4

Table 4.A1.1. **Number of teachers in mainstream schools, by level of schooling education, 2005, 2009 and 2013**

	2005/06	2009/10	2013/14	Change between 2005 and 2013 (%)
Basic education – first stage	27 586	27 635	29 025	5
Basic education – second stage	35 572	30 782	29 244	-18
General secondary education	47 352	46 489	40 214	-15
Conservatoires	1 020	998	1 158	14
Total	**111 530**	**105 904**	**99 641**	**-11**

Note: This includes teachers in public, private and church schools.
Source: MŠMT (forthcoming), OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic, Czech Ministry of Education, Youth and Sports, Prague.

Table 4.A1.2. **Number of students in mainstream schools, by level of schooling education, 2005, 2009 and 2013**

	2005/06	2009/10	2013/14	Change between 2005 and 2013 (%)
Basic education – first stage	282 183	314 008	363 568	7
Basic education – second stage	473 269	460 754	505 983	-27
General secondary education	443 306	333 705	321 671	-22
Conservatoires	577 605	556 260	448 792	6
Total	**1 497 675**	**1 354 154**	**1 280 136**	**-15**

Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

Table 4.A1.3. **Number of nursery teachers and students in mainstream schools, 2005, 2009 and 2013**

	2005/06	2009/10	2013/14	Change between 2005 and 2013 (%)
Nursery teachers	22 485	24 584	28 583	27
Nursery students	282 183	314 008	363 568	29

Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

Table 4.A1.4. **Teacher average monthly wage in CZK, male and female, 2006, 2010 and 2013**

	Basic school			Secondary school			Nursery		
	2006	2010	2013	2006	2010	2013	2006	2010	2013
Female	21 855	24 044	26 021	23 294	25 894	27 163	17 118	18 893	22 365
Male	22 093	24 100	26 102	23 901	26 506	27 531	x	x	x
Difference (male higher by percentage)	1	0	0	3	2	1	x	x	x

x: not applicable.

Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

Table 4.A1.5. **Change in age distribution of teachers, Czech Republic and OECD, 2007-12**

Czech Republic	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	Percentage under 40 years	Decline in percentage under 40 from 2007-12
Primary							
2007	11.6	26.5	38.9	18.6	4.4	38	-18
2012	9	22	38	27	4	31	
Lower secondary							
2007	16.2	23.9	27.2	25.5	7.1	40	-5
2012	12	27	28	27	6	38	
Upper secondary							
2007	10.0	18.5	32.1	30.3	9.1	28	-2
2012	7	20	28	33	11	28	

OECD	< 30 years	30-39 years	40-49 years	50-59 years	>= 60 years	Percentage under 40 years	Decline in percentage under 40 from 2007-12
Primary							
2007	16	27	29	25	4	42	-2
2012	13	28	28	25	5	41	
Lower secondary							
2007	12.2	26.4	29.4	27.1	4.9	39	-2
2012	12	26	28	31	9	38	
Upper secondary							
2007	10.4	23.9	30.0	29.2	6.5	34	-17
2012	7	22	29	31	11	28	

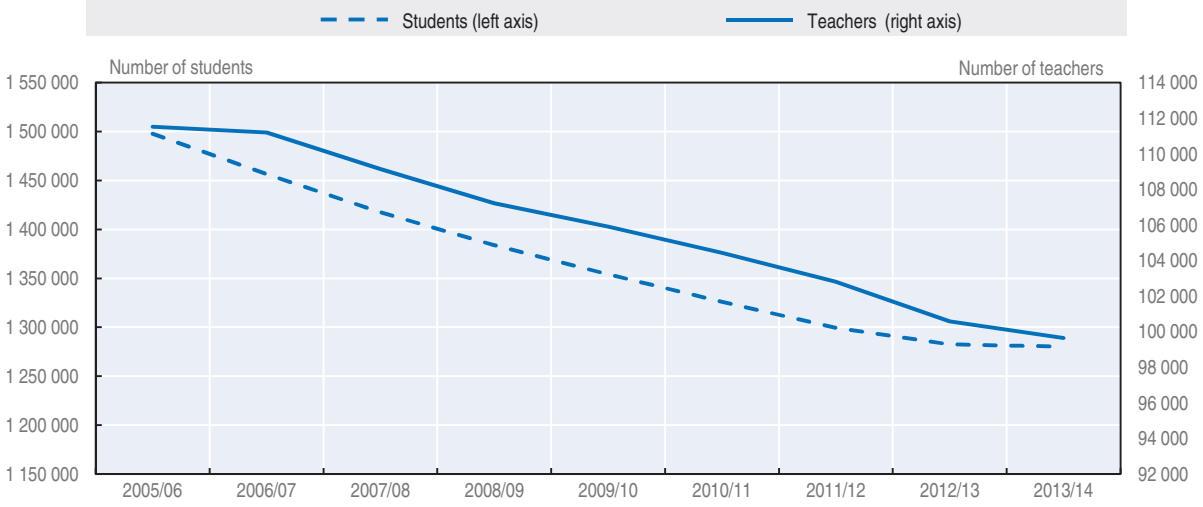
Source: OECD (2009), *Education at a Glance 2009: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2009-en*, Table D7.1. (Web only) Age distribution of teachers (2007); OECD (2014a), *Education at a Glance: OECD Indicators 2014*, *http://dx.doi.org/10.1787/eag-2014-en*, Table D5.1. Age distribution of teachers (2012).

Table 4.A1.6. **Inclusion of pedagogical workers in salary categories according to the Work Catalogue and annual salary tariff**

Job title	Salary category	Minimum (CZK)	Maximum (CZK)
Nursery school teachers Leisure time pedagogues	8-10	180 000	271 200
School-teachers at the 1st and 2nd stages Teachers of general and vocational subjects at secondary schools, *conservatoires* and higher vocational schools Teachers at primary artistic schools Pedagogues in facilities for the in-service training of pedagogical staff Special pedagogues and psychologists	11-13	244 200	325 200
Teachers of practical instruction and professional training	9-11	240 000	279 000
Pedagogue's assistants	4-9	114 600	264 600
Educators (according to the type of facility they work in)	8-12	180 000	301 800

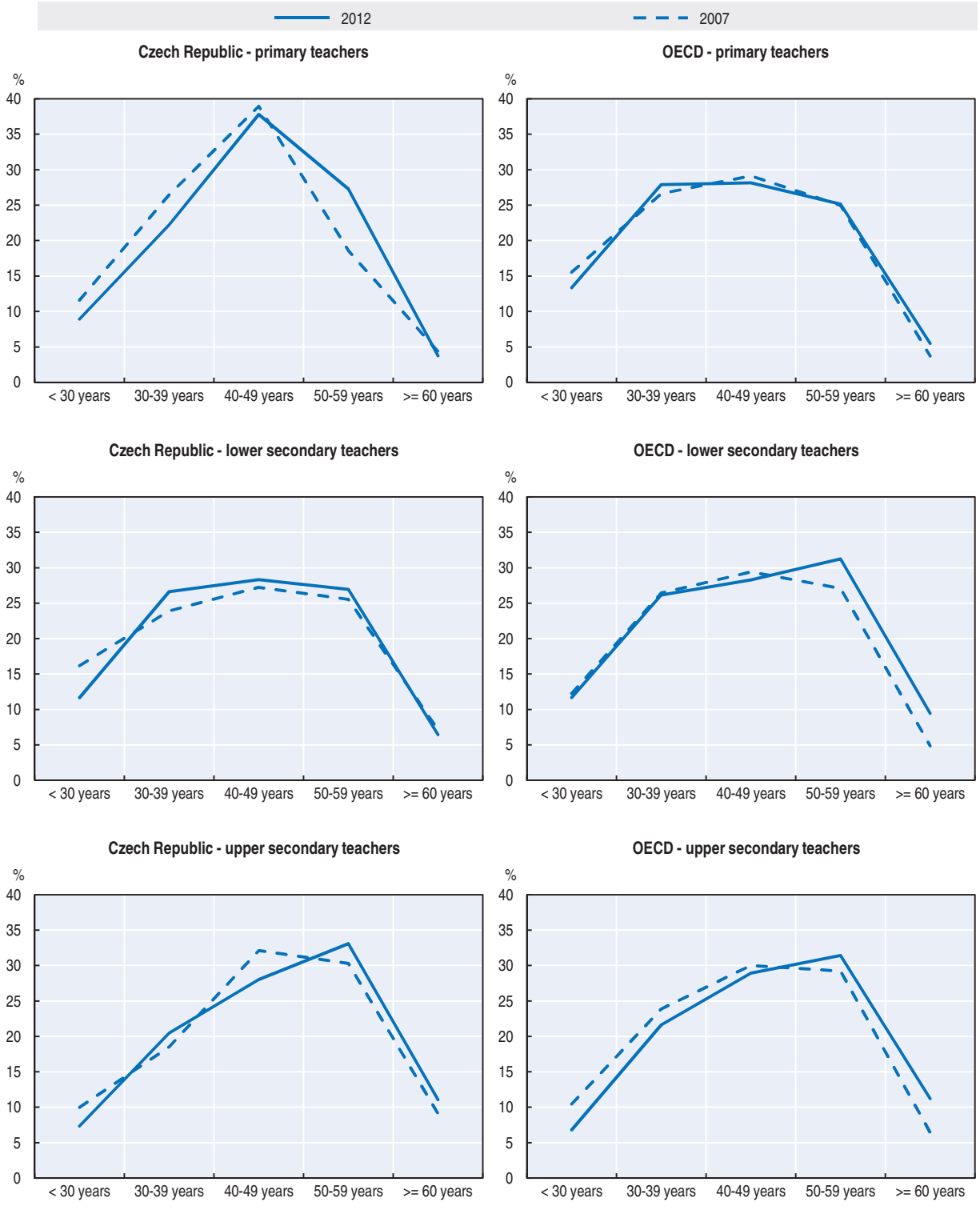
Source: Provided to the review team by the Ministry of Education, Youth and Sports.

Figure 4.A1.1. **Trend in number of students and teachers in schools, 2005/06-2013/14**



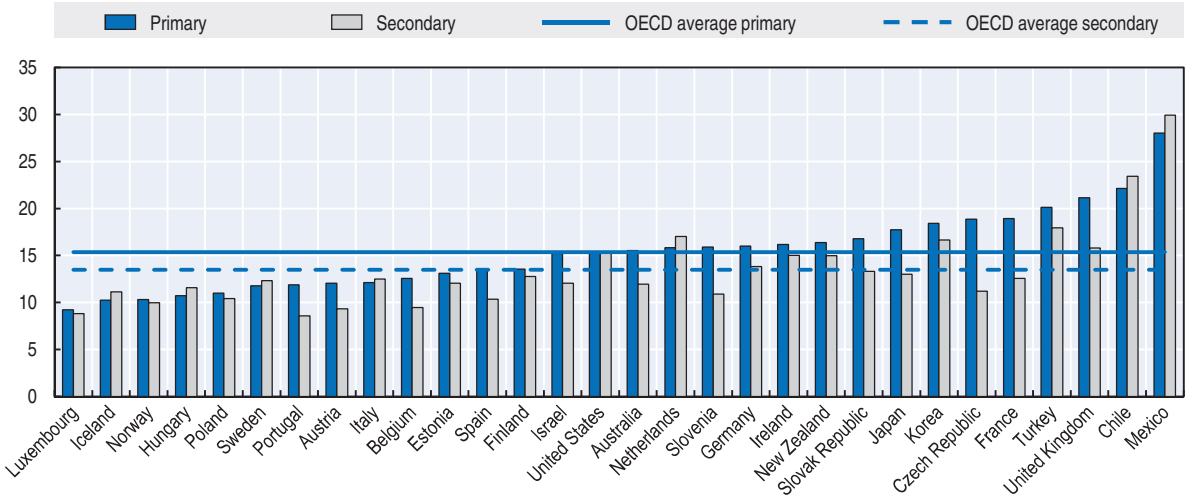
Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

Figure 4.A1.2. **Change in age distribution of teachers in the Czech Republic and OECD, 2007-12**



Source: OECD (2009), *Education at a Glance 2009: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2009-en*.

Figure 4.A1.3. **Ratio of students to teaching staff, primary and secondary, 2012**



Source: OECD (2012b), "Indicator B3 How much public and private investment in education is there?", in *Education at a Glance 2012: OECD Indicators*, *http://dx.doi.org/10.1787/eag-2012-18-en*, Table D2.2.

Chapter 5

School leaders in the Czech Republic

This chapter presents a profile of school leaders in the Czech Republic and describes current approaches to recruitment, qualification requirements, remuneration, work load, professional development and career structure. It considers the strengths and challenges inherent in the current system and makes policy recommendations designed to improve the management and development of school leaders.

Context and features

Profile

Age and Gender

According to data from the OECD Teaching and Learning International Survey (TALIS) 2013, Czech school principals in lower secondary education are on average one year younger than their counterparts in other countries, and the proportion of older school principals aged 60 or above is also comparatively low (Table 5.1).[1] Most Czech school principals are in the age bracket of 50-59 year-olds (44.6%), but also a relatively large share of principals is aged 40-49 (38.8%, compared to a TALIS average of 29.7%) (OECD, 2014).

Table 5.1. **Profile of Czech school principals in international comparison, lower secondary education, TALIS 2013**

	Czech Republic	Poland	Slovak Republic	TALIS average
Aged 60 years + (%)	10.3	6.8	17.4	17.1
Aged under 40 years (%)	6.3	6.4	9.7	7.2
Mean age	50.3 years	49.9 years	52.5 years	51.5 years
Females (%)	48.4	66.6	60.0	49.9
ISCED 5A qualification (%)	91.8	99.2	98.1	92.7
ISCED 6 qualification (%)	8.2	0.8	1.9	3.3
Full-time employed and teaching (%)	97.6	71.4	91.3	35.4
Full-time employed, but not teaching (%)	x	20.3	5.0	62.4
Part-time employed and teaching (%)	2.4	6.8	3.7	3.4
Average years of work experience as a principal	9.7 years	11.2 years	11 years	8.9 years

x: not applicable.
Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Tables 3.8, 3.8c, 3.9c, 3.12 and 3.13.

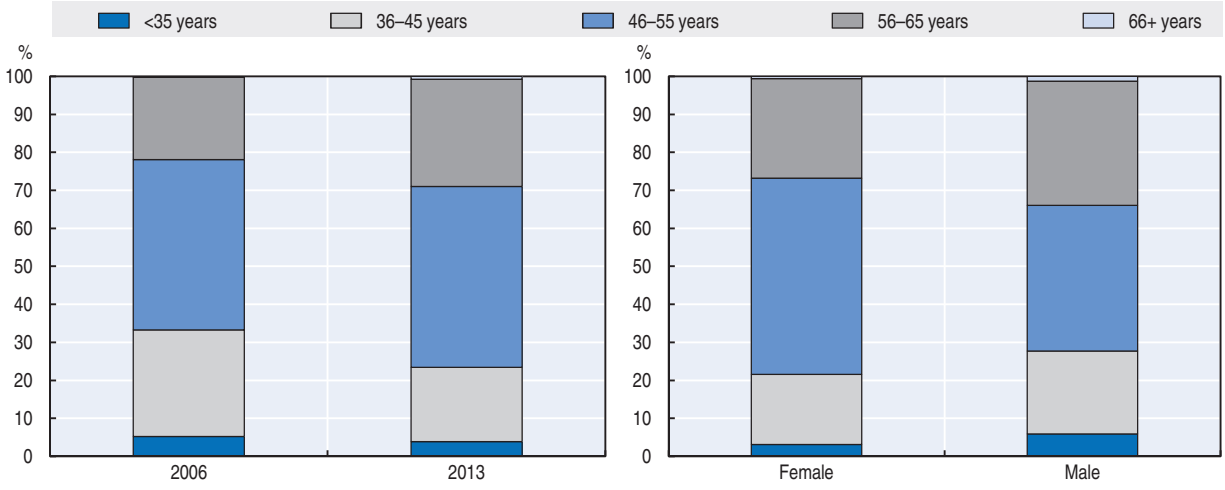
Nevertheless, national administrative data reveal that the school leadership profession has been ageing steadily (Figure 5.1). On average, school principals in Czech lower secondary schools have about ten years of experience in their role (OECD, 2014).

Slightly less than two out of three school principals in Czech schools are women. However, this differs greatly across levels of education: while almost all school principals in kindergartens are women, except for age-integrated institutions, there are more men among principals in basic and secondary schools (MŠMT, forthcoming). The proportion of female principals in lower secondary schools according to the TALIS sample is comparable to many other countries taking part in the survey, but lower than in other Central-Eastern European countries (see Table 5.1, OECD, 2014).

Distributed leadership

Leadership is often distributed, but the nature of the leadership team depends on the size of the school. Smaller schools typically have one deputy; large schools have two or

Figure 5.1. **Trend in the age distribution of school principals, 2006 and 2013, and age distribution of school principals by gender, 2013, secondary schools**



Source: MŠMT (forthcoming), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools National Background Report: Czech Republic*, Czech Ministry of Education, Youth and Sports, Prague.

more deputies who focus on specific areas, such as the curriculum, human resources, strategic planning and data management. Larger schools also often have other administrative personnel, such as accountants, who support school principals in their work (Halász, 2009). It is up to school principals themselves to appoint their deputies and to decide which responsibilities to delegate, but principals always bear full responsibility for the management and operation of their school (MŠMT, forthcoming).

School principals can, furthermore, get guidance from the school's pedagogical council (*pedagogická rada*) and the school's co-ordinator of the School Educational Programme (SEP). Pedagogical Councils are made up of teachers at the school, debate all fundamental curricular documents and the assessment of the educational activities of the school, and provide advice on curriculum development and the school strategy. Co-ordinators of SEPs give advice on the development of local curricula which should be in line with national Framework Education Programmes (FEPs) and reflect the students' current needs at the school.

Teachers can take on further leadership roles through specialist functions (e.g. school psychologists, education counsellors, prevention co-ordinators, co-ordinators of environmental education, ICT co-ordinators, and leaders of subject commissions) (NLQ Hildesheim, 2011; Sláviková et al., 2009). Teachers that take on such leadership responsibilities can be remunerated through classification in a higher salary grade or through the system of personal allowances and bonuses (also see Chapter 4).[2] The National Institute for Further Education (NIDV) has been developing a teacher career system (*kariérní system*) (also see Chapter 4). The new career system, which at the time of the OECD review visit was planned to be fully implemented in 2018, will also enable teachers to take on different roles, particularly related to mentoring and peer support, but also other areas, such as ICT, SEPs, educational counselling, and school self-evaluation (Eurypedia, 2015; NIDV, 2015).[3]

Employment

Appointment, training and dismissal

School principals of public schools established by the Ministry of Education, Youth and Sports (*Ministerstvo školství, mládeže a tělovýchovy* or MŠMT), the regions or the municipalities

are employed and appointed by their school founder.[4] Following a change in legislation to the Education Act (Act No. 561/2004, Paragraph 166) in 2012, school principals are appointed for a period of six years. It is at the discretion of school founders to initiate a selection process and school founders can decide not to do so, but to renew a school principal's appointment automatically by a further six years in that case. Both the Czech School Inspectorate (ČŠI) and the school council (*školská rada*) can, however, ask the school founder by a specified deadline to initiate an appointment and selection process. Legal regulations (Act on Education Staff No. 563/2004 and Decree No. 54/2005) specify certain elements of the selection and appointment process, such as the composition of the selection panel. School founders are advised to rely on the selection panel's judgement about the most qualified candidate, but they are not bound by the selection panel's suggestion and can take their own decision about the final appointment. Based on an Amendment to the Education Act in May 2015 (Act No. 561/2004, Paragraph 166, *metodika novela* ŠZ 82-2015), school principals will be granted permanent instead of fixed-term contracts in the future, but the concept of six-year mandates and the appointment process as described will remain in place.[5]

Candidates for principal positions must meet certain eligibility criteria set out by law:

- Candidates must meet the requirements for pursuing the post of a pedagogical worker.
- Candidates must have practical experience with a direct pedagogical activity, with an activity for which knowledge of the same or similar character is necessary, with an executive activity or with an activity in the field of research and development. The duration of practical experience required depends on the level of education of the school a candidate is applying for. In kindergartens, three years of experience are required; in basic schools, candidates need four years of experience; in secondary schools, five years.

Once principals are appointed to their position, they are required to take a course in school management and leadership within the first two years of their appointment. Principals holding a tertiary degree in the accredited school management programme are exempt from this requirement, as are principals who have participated in a tertiary lifelong learning programme on school organisation and management. Besides this obligation for initial training, there are no further requirements for school principals to undertake professional development.

School principals in public schools established by the ministry (MŠMT), the regions or the municipalities can only be dismissed by their school founder in certain cases stipulated by law. According to the Education Act, the following circumstances can lead to dismissal

- failure to meet the requirements for the position or failure to acquire the relevant knowledge in education management
- the gross violation or non-fulfilment of legal obligations identified in most cases by the school founder, Czech School Inspectorate or the school council or other supervisory bodies
- and organisational changes which result in the discontinuation of the principal position (Eurypedia, 2015; MŠMT, forthcoming).

Remuneration and working time

School principals receive a basic salary ("tariff salary") and personal allowances and bonuses. In public schools established by the ministry (MŠMT), the regions or the municipalities, school principals' remuneration is governed by the same regulations that

provide the framework for the employment of teachers and other educational staff in schools (also see Chapter 4). The specific level of remuneration, such as the grade in the salary scale and the amount of allowances and bonuses, is set by the school founder responsible for the employment and appointment of the school principal.

As educational staff, the basic salary of principals is set according to the teacher salary scale. The salary scale has 11 grades (4-14) and 5 steps within each grade. When deciding about a principal's basic salary level, the school founder takes into account the principal's responsibilities set out in the provisions of their contract of service and the relevant qualification requirements. Principals of basic schools and secondary schools are typically given salary grades 11-13. The Labour Code also stipulates the range of the personal allowances, typically from 15% to 60% of the highest salary step of a school principal's salary category. In exceptional cases, personal allowances can reach up to 100% (Eurydice, 2014; Eurypedia, 2015; MŠMT, forthcoming).

In public basic and secondary schools, the minimum annual gross statutory salaries are reported to be CZK 244 200 (EUR 8 896) and the maximum statutory salaries to be CZK 325 200 (EUR 11 847).[6] However, the average actual salaries are reported to be considerably higher for all levels of the education system, and in particular for secondary schools (see Table 5.2). This difference most likely stems from the influence of personal allowances and bonuses on principals' salaries.

Table 5.2. **Annual gross salaries of full-time fully qualified school principals in public schools, 2013**

	Basic statutory salary				Average actual salary	
	Minimum		Maximum			
	CZK	EUR	CZK	EUR	CZK	EUR
Kindergarten	180 000	6 557	279 000	10 194	388 040	14 136
Basic school (primary and lower secondary)	244 200	8 896	325 200	11 847	481 395	17 537
Secondary school (upper secondary)	244 200	8 896	325 200	11 847	524 823	19 119

Note: Data on average actual salaries are from the national information system of salaries (Ministry of Finance of the Czech Republic). The data concerned are provided within the statistical survey by public schools and school facilities twice a year. There is a change in data collection methodology: due to the implementation of classification CZ-ISCO, it is not possible to divide salaries of school principals and deputy principals.
Source: Eurydice (2014), *Teachers' and School Heads' Salaries and Allowances in Europe, 2013/14, http://eacea.ec.europa.eu/education/eurydice/documents/facts_and_figures/salaries.pdf*.

While school principals' remuneration is not competitive relative to teachers and to GDP when comparing statutory salaries, the job of a school principal does seem to be attractive when average actual salaries are the basis for comparison (see Annex 5.A1). The average actual salaries of principals are about 1.5 times the average actual salaries of teachers in basic schools, and 1.6 times the average actual salaries of teachers in secondary schools. The average actual salaries of principals in basic education are 123.5% of GDP, the average actual salaries of principals in secondary schools are 134.6% of GDP (Eurypedia, 2015). Interestingly, salaries differ between male and female school principals in both basic and secondary schools. In basic schools, female principals earn on average CZK 2 939 per month less than their male peers, a difference of 7% (CZK 39 410 average monthly salary in 2013, compared to CZK 42 349). In secondary schools, the salary difference is smaller and amounts to CZK 1 167, that is 2.6% (CZK 44 070 average monthly salary in 2013, compared to CZK 45 237) (MŠMT, forthcoming).

School principals' working hours are set by the Labour Code at 40 hours per week, as for teachers and for most other employees. The responsibilities and the general workload are set by the Education Act, Act on Education Staff, and in more detail by the government regulation on the extent of educational activity of education staff and the work rules for employees of schools and school facilities (Eurypedia, 2015).

Plans for the development of a career system for school leaders

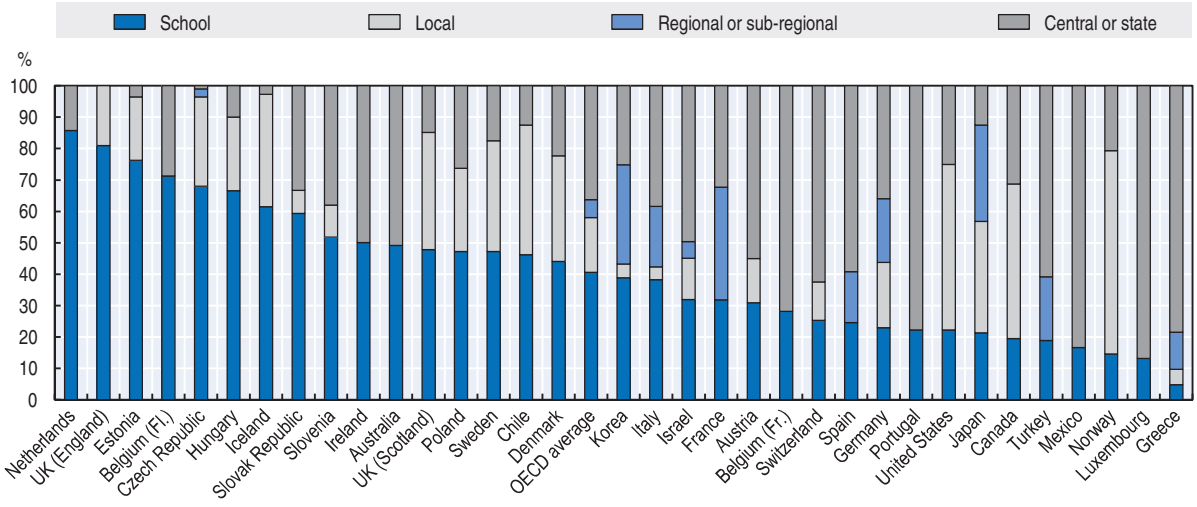
As part of the process of developing a teacher career system (see Chapter 4), the National Institute for Further Education (NIDV) has also developed a proposal for a career system for school principals (*kariérní systém pro ředitele*). The process was completed by a working group between January and March 2015 and is intended to serve as a starting point for a broader discussion about the development of such a career system for school principals. The proposal is built around the following key ideas: school principals should be pedagogical leaders; candidates interested in school leadership should be well prepared for their future role and receive adequate support from the beginning of their career; school principals should be selected through a national system that facilitates the transparent evaluation of interested candidates; the introduction of a formative appraisal at the end of an induction period and changes to the appraisal of school principals throughout their career; the introduction of standards that principals should meet during their appointment; links with the new teacher career system and a strong role of principals for supporting teachers' professional development; opportunities for mentoring, coaching and mutual learning among school principals and opportunities for system leadership; and the systematic involvement of school principals in school evaluations. The proposal suggests the introduction of four career stages: stages 0, 1, 2 and 3. Teachers at stage 2 of the teacher career who are interested in school leadership would start in career stage 0 and move to stage 1 with appointment to a school principal position. Stage 1 would provide a two-year induction phase followed by a post-induction phase, after which school principals would move to stage 2, the basic level of school leadership. Exceptional school leaders could move to a system leader role in stage 3. A set of professional school leadership standards would serve as the basis for the proposed school leadership career system (NIDV, 2015).[7]

Tasks and responsibilities

In international comparison, Czech schools enjoy a high level of autonomy and decision-making responsibility (Figure 5.2) – although decisions must be taken within a central framework (Chapter 2, Table 2.1). This is the result of a process of decentralisation in 2001 which saw the transfer of many responsibilities from the central level to the level of the regions and municipalities as well as to the school level (MŠMT, forthcoming; NLQ Hildesheim, 2011; Sláviková et al., 2009). Since 2003, all Czech schools are independent legal entities (although these can take different forms – see Chapter 2) which supports greater autonomy for school principals for financial management and human resource management. The majority of public schools are a "subsidised organisation" or a "school legal entity", which means they hold full responsibility for the quality of education, school management and administration, school budget and finances, human resource management and community relations. However, the level of autonomy may be limited in practice. For example, schools may not be able to use their autonomy to allocate personal allowances and bonuses to reward teachers considering limited financial leeway or the need to build a financial reserve in case of an unexpected decrease in school funding.

Figure 5.2. **School autonomy, Education at a Glance, 2011**

Percentage of decisions taken at each level of government in public lower secondary education



Note: Countries are ranked in descending order of the percentage of decisions taken at the school level.
Source: OECD (2012a), *Education at a Glance 2012: OECD Indicators*, http://dx.doi.org/10.1787/eag-2012-en.

For the overall organisation and operation of schools, school principals are responsible for issuing regulations that apply to their particular school and for ensuring that their school's provision of education complies with the Education Act. School principals manage the process of developing the School Educational Programme (SEP), that is the educational courses and content offered at the school, and for ensuring that it is in line with the Framework Education Programme (FEP), the national curricular document. School principals prepare their school's annual report and analyse the school's economic activity as required by the ministry (MŠMT). Furthermore, school principals are responsible for creating the conditions so that the ČŠI can carry out its external school evaluations, for following up on these evaluations, and for co-operating in the implementation of other ministry (MŠMT) programmes for the evaluation of the performance of the education system.

As part of their responsibilities for human resource management, school principals are responsible for the recruitment of their staff. They also have authority over certain organisational aspects of teachers' working conditions: in terms of teaching hours, they can ask teachers to take on direct pedagogical tasks that go beyond their regular teaching time up to a limit of four hours per week; in terms of remuneration, they can decide which work experience should be recognised for the determination of a teacher's basic salary level within the general rules set out in the respective ministerial order, and since 2012, they can decide to determine the basic salary level on other criteria than the number of years of work experience, such as performance, as well as the salary step within the salary grade. In addition, school principals can allocate individual allowances and bonuses to teachers for high performance or additional work.[8] The level and criteria for these personal allowances and bonuses is not defined by law, but fully within the discretion of the principal. Besides teacher recruitment and teachers' working conditions, school principals are responsible for ensuring that teachers and pedagogical staff can participate in professional development, and for observing and appraising their teachers. School principals, furthermore, decide about the use and recruitment of school psychologists, pedagogue's assistants, and education advisors, and they can seek the assistance of the ČŠI in case of learning difficulties.

As far as students are concerned, school principals decide on the rights and duties of compulsory school attendance, on the placement of children in early childhood education and care, on admissions criteria, aptitude tests and entrance examinations, on the admission to secondary and higher vocational schools and to *conservatoires*, on the format of final and school-leaving examinations, the recognition of prior educational experience and qualifications, the expulsion of students, the change of a branch of study or apprenticeship, the reduction or exemption from fees for early childhood education and care,[9] the award or withdrawal of scholarships, the amount of the financial contribution for school catering, and the provision of free textbooks for disadvantaged students in secondary schools. School principals also ensure that parents and students receive information about the school and students' performance.

In addition to their management and leadership responsibilities, Czech school principals are also required to teach. The number of hours of direct teaching per week depends on the level of education, the type of education provided and the number of classes in the school. For school principals of basic schools, the teaching load ranges from 8 to 16 hours in schools providing primary education only, from 5 to 8 hours in schools providing lower secondary education only or both primary and lower secondary education, and from 4 to 16 hours in basic schools providing special needs education. In secondary schools, principals teach between 2 and 6 hours a week. For deputy principals, the number of teaching hours goes from 7 to 11 hours in basic school, and from 4 to 14 hours in secondary school. Teaching duties do not necessarily mean direct teaching, but can be made up of work performed (e.g. educational childcare staff or school psychologist) (Eurypedia, 2015; MŠMT, forthcoming; NLQ Hildesheim, 2011; Sláviková et al., 2009).

Personnel evaluation and quality assurance

School principals of public schools are accountable to the founder of their school – the ministry (MŠMT), regions or municipalities – as well as their school council in the performance of their responsibilities. School founders can evaluate schools and the performance of school principals at their own discretion, for example when it comes to the reappointment of school principals, to inform decisions about personal allowances and bonuses, or in the case of complaints (Eurypedia, 2015; OECD, 2013b; Santiago et al., 2012; MŠMT, forthcoming).

School principals in the Czech Republic must meet some requirements for regular compliancy reporting. They are required to prepare an annual report on their school's activities, submit it to the school council, and, with the school council's approval, pass it on to the school founder and publish it. Following an amendment to the Education Act, school self-evaluation reports are no longer a legal requirement, but school annual reports should make reference to a school's self-evaluation and external school evaluations may check the quality of self-evaluation processes. Beyond such requirements, schools have been encouraged to evaluate themselves through other means, such as the availability of self-evaluation tools and guidelines developed as part of the "Road to Quality Improvement" project.[10] In addition to the annual report, school principals are required to report on the school's financial management and economic activity (Eurypedia, 2015; MŠMT, forthcoming).

There are also external school evaluations. All schools that are included in the school registry are systematically evaluated by the ČŠI irrespective of their school founder. The inspectorate carries out its evaluation activities according to a long-term conceptual plan of evaluation activities (currently the Conceptual Objectives of Inspection Activities for the

Period 2014-20), a plan of main objectives set for the school year (Plan of Principal Assignments) and central criteria (Criteria for the Evaluation of the Conditions, Course and Results of Education and School Services).[11] Both the annual plan of main objectives and the central criteria need to be approved by the ministry (MŠMT). The ČŠI does not appraise individual staff at schools, but evaluates principals and teachers as part of the overall school evaluation. As part of the 12 evaluation criteria for 2014/15, evaluations are supposed to also assess "school management". At the end of the inspection, the inspectorate publishes a public report on the results of the evaluation. The inspection cycle recently changed from three to six years to coincide with the six-year appointment period of school principals introduced in 2012. In addition, the inspectorate carries out other controlling activities, such as public-legal audits of the economical, functional and effective use of financial means spent on schools and checks of compliance with legal regulations related to the provision of education, including health and safety regulations (Eurypedia, 2015; MŠMT, forthcoming). Following the 2015 amendment to the School Act, the ČŠI also plays a role in monitoring the inclusion of Roma children in mainstream education. In the school year 2013/14, the ČŠI evaluated 742 out of 4 095 schools in basic education, and 98 *gymnasia*, 124 secondary vocational schools, 20 secondary schools providing both vocational and general education, and 3 *conservatoires* (out of 1.331 secondary schools) (ČŠI, 2014).

Networks and collaboration

In the Czech Republic, there are no central networks for the collaboration of schools and principals, but some school founders have made efforts to connect their schools and to facilitate a sharing of knowledge and experiences among their schools. Professional associations provide an informal opportunity for collaboration. Since 2005, basic schools can co-operate through the Association of Principals at Basic Schools. This association focuses on the representation of the interests of its members towards the MŠMT and other government institutions and on the exchange with universities about the training of principals, but it also provides training workshops and seminars that offer principals the opportunity to exchange experiences. Membership in this association is optional. At the secondary level, there is no such general professional association, but there are individual associations for schools within a region, with a similar vocational orientation, or with a specific background (e.g. Association of Secondary Schools of the Olomuc region, Association of Technical Colleges, Association of Secondary Schools for Hairdressers and Beauticians, Association of Private Schools) (MŠMT, forthcoming).

Strengths

Legislation specifies clear procedures for the appointment and contract renewal of school principals

While school founders are responsible for the recruitment of their school principals, they need to follow the central requirements set by the ministry (MŠMT) (Eurypedia, 2015). Accordingly, school founders are required to publicly announce the vacancy, which ensures a certain level of transparency. School founders are then responsible for appointing the members of the selection panel which consists of two members chosen by the founder, one member chosen by the director of the regional office, one expert in the field of public administration, organisation and management in education (e.g. a principal from another school), one member of the pedagogical staff at the school for which the candidate is applying, one member of the ČŠI, and one member of the school council. The founder or the

panel can invite additional external experts. The panel assesses whether candidates are suitable for the post on the basis of their application. Candidates who fulfil the application requirements are then invited for a structured interview of up to 60 minutes, and may have a further interview with external experts and/or have to sit a written examination. The assessment can also include a knowledge test and may require candidates to set out their vision and strategy for the school they wish to work at. The selection panel then votes on the candidates and the candidate with the most votes is recommended to the school founder (IIE, 2011; NLQ Hildesheim, 2011; Sláviková et al., 2009). The involvement of pedagogical staff from the school that is concerned and the school council gives local stakeholders the opportunity to represent the interests of the school community. At the same time, involvement of a school inspector and an expert in the field of school management as well as the possibility for the panel to seek the advice of further external experts provides additional objectivity and brings in expertise and professionalism.

Even though school principals are employed on open-ended contracts, their appointment is valid for a period of six years only after which the school founder, the ČŠI or the school council can initiate an open recruitment in case they wish to replace a school principal. If none of these stakeholders intervenes, the contract can be renewed for a further six-year term without an appointment process. This provides stability for schools, but also provides an opportunity to periodically reassess, recognise and acknowledge well-performing principals, and to provide incentives for continuous development and improvement. It also reflects developments in other countries that have been moving from lifetime appointments to renewable fixed-term contracts (Pont et al., 2008). Considering the risk of "political" appointments through school founders, it is positive that both the ČŠI and the school council can theoretically intervene and prevent an automatic renewal in the case of concerns, even if the review team gained the impression that this is very rare in practice (more on this below).

Specialised training exists, school principals are required to undertake it, and it is theoretically open to deputy principals and teachers as well

Like other Central-Eastern European countries, the Czech Republic requires school principals to undertake specific training within a certain timeframe after their initial appointment. Principals who do not fulfil this requirement must be dismissed by their school founder. Having such a pre-requisite for initial school leadership training can contribute to greater professionalisation of the role of school principals as well as greater satisfaction of principals in their jobs (Pont et al., 2008). Training is, furthermore, open to deputy principals as well as teachers interested in school leadership. This can build the leadership capacity of schools and ensure a sustainable supply of qualified candidates.

There are essentially two training courses in the Czech Republic: basic and compulsory training ("Study for School Principals") and optional in-service training ("Training for Managerial Staff").[12] Apart from these two courses which are defined by law, there are many other opportunities for professional development offered by a number of in-service training institutions, including professional associations and private providers. The Plzen region, for example, has established a specialised institution that offers professional development and lifelong learning for pedagogical staff, such as sources, seminars and lectures (*www.kcvjs.cz*). This institution also provides school leadership training and the opportunity for school principals to gain the necessary qualification requirement (Eurypedia, 2015; Schratz et al., 2013; NLQ Hildesheim, 2011; Halász, 2009; Sláviková et al., 2009).

In TALIS 2013, 90.3% of principals of lower secondary schools reported having completed a school administration or school leadership training programme or course, compared to 84.8% on average in participating countries. The nature of the compulsory training requirement in the Czech Republic is reflected in the TALIS 2013 data: 52.7% reported they had undertaken such training after taking up their position (compared to 37.5% on average) (OECD, 2014, Table 3.10).

School principals can delegate responsibilities to other managerial and administrative staff in their school, such as deputy principals and school accountants, as well as to teachers

Considering school principals' high level of responsibility as the head of their legal entity in most public schools, it is positive that they can rely on administrative and pedagogical support. As research, furthermore, suggests, the distribution of leadership, including to teachers and within teams, can contribute to greater overall leadership capacity, help foster change, and sustain that improvement over time, even if it creates its own challenges at the same time (e.g. the management and organisation of distributed arrangements) (Louis et al., 2010; Mulford, 2008; Pont et al., 2008).

Depending on the size of the school, principals can count on the support of one or more deputy principals. While small schools visited as part of the country review had one deputy principal, larger schools had three to eight deputy principals, including one statutory deputy who replaces the principal in his or her absence. In the Czech Republic it is up to the school principal to decide which tasks to delegate as long as it complies with legislation, such as the Education Act, the Labour Code and the Work Catalogue. In some schools visited as part of the review visit, deputy principals took on primarily responsibilities for administrative tasks, such as student admission, student records, *maturita* examinations, class schedules, the scheduling of substitute teachers, the organisation of school events, the collaboration with out-of-school centres, and facility management for example. In other schools, and particularly large schools, deputy principals also seemed to take on more human resources related and pedagogical leadership tasks, such as teacher feedback and appraisal and the management of teacher professional development. Where appropriate, deputy principals take on the responsibility for a particular type or level of education offered in the school as the review team learned. One basic school visited during the review, for example, had one deputy principal for primary education and one deputy principal for lower secondary education, another school providing basic and vocational upper secondary education had one deputy for basic education, two deputies for the theoretical part of secondary education and two deputies for the practical part of secondary education. In addition to their school leadership and teaching responsibilities, deputy principals may take on further roles, such as special needs education or counselling roles.

While deputy principals may take on tasks related to the school budget in some schools, many schools also employ clerks and accountants with a specialised background in business studies and accounting. These provide invaluable support for schools to meet their responsibility for their own budgeting and accounting. School accountants deal with issues such as the level of the budget, operating finance, petty cash, invoices, bank accounts, utilities, rental agreements, accident reporting, insurance, and the maintenance of school equipment.

In addition, school principals benefit from the support of teachers for pedagogical tasks, such as curriculum development and teacher management. Schools may have

pedagogical councils and SEP co-ordinators that provide support for the curriculum and for student assessment. However, these roles were not highlighted in school visits during the review and thus it remained unclear how much pedagogical councils and SEP co-ordinators explore issues of learning and teaching versus more routine and administrative subject-related matters. Specialist teachers provide further support in specific areas, such as special needs education, prevention of risky behaviour, environmental education, and ICT; and the role of heads of subject commissions can include providing support for teachers of students in specific subject areas (e.g. through classroom observations and peer feedback, or through involvement in the selection of teachers).

There are legally defined vertical and horizontal accountability mechanisms for school principals

In terms of vertical accountability, schools and school principals can be held accountable both by their school founder as well as central authorities. School principals must submit annual reports on the school's activities to their school founder after they have been approved by the school council, and report on their financial management.[13] Annual reports must then be published at an accessible place in the school, thus creating some transparency and horizontal accountability.

External school evaluations provide further vertical accountability. Schools are evaluated through regular school inspections by the ČŠI (also see Chapter 2). In these evaluations, "school management" is typically one of the central evaluation criteria that are set on an annual basis, and many further evaluation criteria and related requirements concern school principals' tasks and responsibilities. School evaluations can lead to recommendations for changes and improvements as well as summative consequences, including individual fines and proposals for the removal of a school principal or for the erasure of a school from the school registry.[14] In addition, schools and school principals may also be evaluated by their school founder, but these evaluations typically only focus on the auditing of school budgets (more on this below) (Eurypedia, 2015; MŠMT, forthcoming; Santiago et al., 2012).

In terms of horizontal accountability, all schools are required to have a school council to be established by the school founder and to be made up to one-third each by representatives of the school founder, parents and school staff. Members are elected every three years. Principals are excluded from membership, but can attend school council meetings in an advisory role, and are required to participate if needed and to provide any documentation deemed necessary. School councils must meet at least twice a year. By law, the school council should approve the school's annual report, discuss a draft budget, comment on the economic report and submit proposals for the improvement of management practices; comment on proposals of SEPs and their implementation; approve rules for student assessment; approve school rules (scholarship rules in secondary schools); participate in the development of the school development goals; discuss inspection reports by the ČŠI; and send notices to the school principal, school founder or state administration bodies, including the proposal for the removal of the school principal, if necessary (Eurypedia, 2015; MŠMT, forthcoming; NLQ Hildesheim, 2011; Sláviková et al., 2009).

Challenges

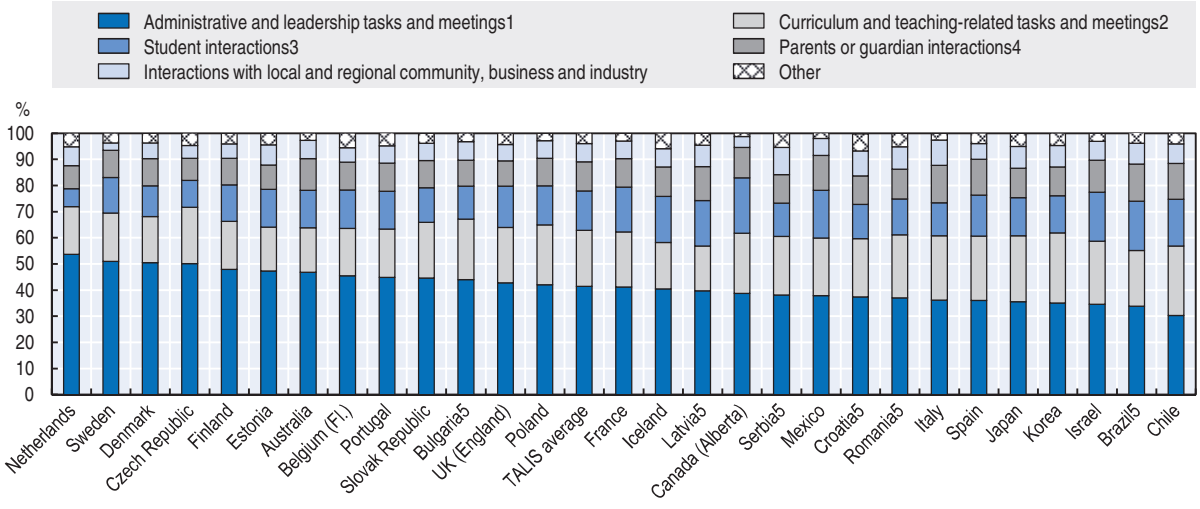
Legislation does not promote school principals' role as pedagogical leaders

School principals have a large range of responsibilities and are not conceived as pedagogical leaders

In the vast majority of public schools in the Czech Republic, school principals are the authorised body of highly autonomous schools and as such hold a large array of legal responsibilities. As a result, school principals in the Czech Republic have to cope with a large amount of administrative and managerial tasks as various stakeholders stressed during interviews. At the same time, school autonomy is confined through central frameworks and legal regulations that schools need to comply with and adapt to. As Hálasz (2009) pointed out, constantly changing legal regulations add further stress to the life of school principals in the Czech Republic. Data from TALIS 2013 substantiate the review team's impressions of a large administrative workload. According to this survey, principals in lower secondary education spend, on average, half of their time (50.2%) on administrative and leadership tasks and meetings,[15] one of the highest values among participating countries (41.3% on average) (see Figure 5.3). While Czech school principals can delegate some administrative tasks, they still spend a large amount of time on other administrative tasks. Only one in five principals (20.3%) reported to "often" or "very often" resolve problems with the lesson timetable in the school (TALIS average: 46.9%), but almost all principals (94.1%) reported to "often" or "very often" check for mistakes and errors in school administrative procedures and reports (TALIS average: 60.9%) (OECD, 2014, Tables 3.1 and 3.2). In addition, similar to principals in other Central-Eastern European countries, Czech school principals are still considered as teachers and as such hold considerable teaching responsibilities, particularly in basic schools.

Figure 5.3. **Principals' working time, TALIS 2013**

Average proportion of time lower secondary education principals report spending on the following activities



Note: Countries are ranked in descending order of proportion of time spent on administrative and leadership tasks and meetings.

1. Including human resource/personnel issues, regulations, reports, school budget, preparing timetables and class composition, strategic planning, leadership and management activities, responding to requests from district, regional, state, or national education officials.
2. Including developing curriculum, teaching, classroom observations, student evaluation, mentoring teachers, teacher professional development.
3. Including counselling and conversations outside structured learning activities.
4. Including formal and informal interactions.
5. Not a member of the OECD.

Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, http://dx.doi.org/10.1787/9789264196261-en.

According to TALIS 2013, almost all lower secondary school principals working full-time reported that they had teaching obligations, while this was only the case for every third principal on average in participating countries (see Table 5.1). Differences in teaching load requirements between basic schools that offer primary and lower secondary education and general secondary schools that also offer lower secondary education may, furthermore, create inequities. The general role overload can create difficulties for principals to fulfil all of their responsibilities effectively and can create a large amount of stress, particularly in small schools that have less administrative support and that place a higher teaching load on school principals than is the case in larger schools.

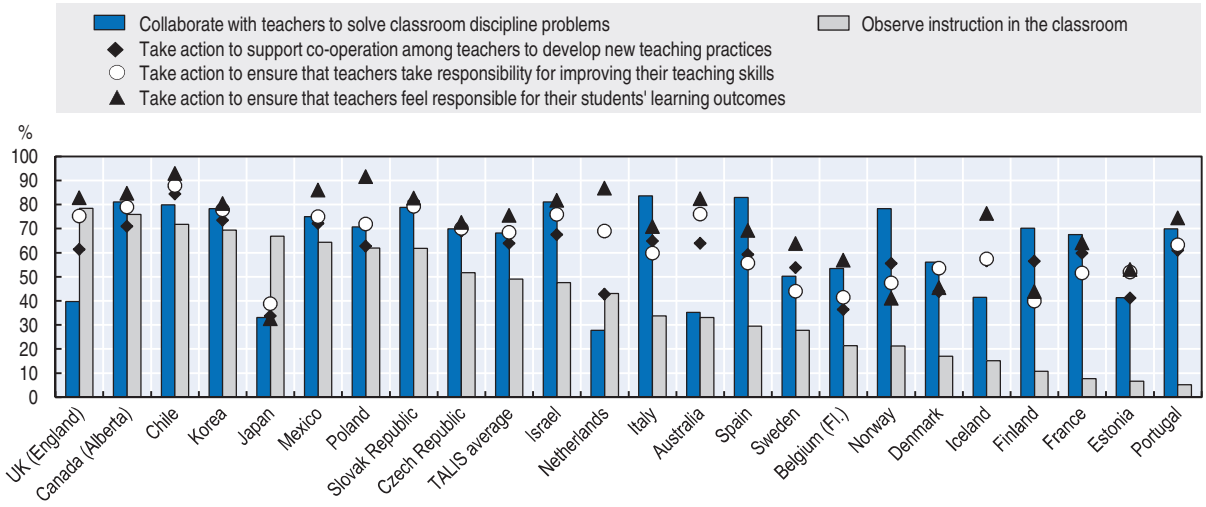
On the other side of the coin, there seems to be significant scope to develop the pedagogical leadership of Czech school principals which can make a big difference to the quality of teaching and learning (Day et al., 2009; Leithwood et al., 2004; Louis et al., 2010). While school principals provide some pedagogical leadership, e.g. through occasional classroom visits, and while further pedagogical leadership is provided by other school staff as pointed out above, pedagogical leadership did not seem to be school principals' main role. Pedagogical leadership practices seemed to still be relatively rare and of limited impact. School principals seemed to be little involved in the development of a collaborative school culture and in the professional learning of teachers, as elaborated in Chapter 4. There also appeared to be room for principals to make more and better use of tools such as school development planning, which seems to be mainly related to the implementation of School Educational Programmes (SEPs), to set and evaluate school goals and objectives, and to involve teachers in this process. School self-evaluation has been encouraged recently, e.g. through school inspections and the availability of guidelines and tools, but the potential of school self-evaluations does not seem to have been fully recognised yet in schools and also does not always involve the whole school community. And as highlighted in Chapter 4 and a previous OECD study in the Czech Republic (Santiago et al., 2012), teacher appraisal seems to be widely accepted and practiced, but the quality and practicality of feedback also seems often to be limited. Similarly, data from international surveys suggest that while some pedagogical leadership is practiced in Czech schools, it could be strengthened. According to TALIS 2013, lower secondary principals spend only about one-fifth of their time on curriculum and teaching-related tasks (around the TALIS average).[16] The reported frequency with which principals engaged in further pedagogical leadership tasks related to teacher management was also only around the TALIS average (Table 3.2; see Figure 5.4). However, in particular, Czech lower secondary principals reported very low engagement and time for interactions with students, parents and the community (OECD, 2014, Table 3.1), which is also an essential part of pedagogical leadership.[17]

School founders and the Czech School Inspectorate do not provide effective support for school principals and do not focus on principals' role as pedagogical leaders, but on legal compliance and budget discipline

While schools have assumed a large amount of new responsibilities over the past 15 years, school principals did not receive adequate support to prepare them for their new role (MŠMT, forthcoming). As the review team noted during its country visit, school principals still lack support structures that would provide guidance and feedback for improvement. In theory, school founders should support and supervise school principals once they are in their position, but in practice school founders often take little interest in the educational processes in their schools. The representatives of most school founders

Figure 5.4. **Principals' leadership, TALIS 2013**

Percentage of lower secondary education principals who report having engaged "often" or "very often" in the following leadership activities during the 12 months prior to the survey



Note: Countries are ranked in descending order of frequency with which principals observe instruction in the classroom.
Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en.*

stated that the supervision of school principals and feedback on educational processes is the task of the ČŠI. Support by school founders is, therefore, limited and does not happen on a systematic, but rather on an ad hoc basis, and seems to focus more on administrative and managerial rather than pedagogical aspects.[18] School principals and school founders meet during the school year, but these meetings seem to focus on the financial needs of schools and the school budget, material conditions at the school, the working conditions of school staff, and school annual reports. Similarly, school founders do evaluate their school principals, often to determine personal allowances and bonuses, but these evaluations typically also only focus on schools' financial management and budget discipline without consideration to the quality of education. Aspects that are examined include, for example, the correctness, transparency, completeness and clarity of bookkeeping, observation of budget discipline, effective and economical use of the means provided, and the observation of generally binding legal regulations. Evaluations by school founders do also not provide any feedback on areas for improvement or professional development (MŠMT, forthcoming; Eurypedia, 2015; Schratz et al., 2013; Santiago et al., 2012).

The ČŠI has the potential of providing some supportive role for schools through its school evaluations (also see Chapter 2). While the review team noted a desire for cultural change among the leadership of the inspectorate to focus more on school development and improvement, current school evaluations still tend to lack a focus on the quality of education in schools. Instead, school evaluations still focus mainly on compliance with legal requirements and regulations (Santiago et al., 2012). A sample of school evaluation reports available to the review team provided a brief description of the different inspection criteria and aspects of the school's processes (e.g. school climate and teamwork, impressions from classroom observations, extracurricular activities, collaboration with the school council), but did not offer a large amount of critical and practical feedback for improvement.[19] The review team also gained the impression that school evaluations did not yet lead to changes in school practices and that school evaluation reports did not lead to discussions in the school community (e.g. with teachers and the school council) on what could be improved.

Furthermore, while inspections evaluate "school management" as one of the evaluation criteria, and while various other criteria relate to school principals' responsibilities, whole-school evaluations do not provide sufficient individualised feedback for school principals. The inspection cycle of six years makes it difficult for school evaluations to provide useful feedback during a school principal's appointment period.

The initial training and professional development of principals and other school leadership staff could be improved

Considering that a teaching background alone does not guarantee the competencies required for leading a school (Pont et al., 2008), it is a strong point that school principals in the Czech Republic are required to undertake specialised training and that school staff interested in moving up to a school leadership role are free to participate in leadership training before taking up such a role. Allowing school principals to only undertake training once they are on the job theoretically provides greater flexibility for teachers to move into school leadership roles and can be beneficial in case of a shortage of candidates (Halász, 2009). Induction programmes may also reduce the cost of providing widespread training for anyone interested in leadership training and target the training to the specific needs of new principals (Pont et al., 2008). However, the review team also noted several challenges with the Czech approach to initial training, which was also identified as an area for improvement by the ČŠI (2014) and TALIS 2013 data (OECD, 2014).

New school principals will inevitably be faced with many challenges in their new job and go through a significant learning curve at the beginning of their career. Taking up such a demanding role without preparation adds an additional challenge to the first stage of a school principal's career. Prior training could help ease school principals' transition into their new role by providing useful theoretical knowledge and practical experience before assuming the leadership position. It could also help reduce the stress and pressure that new principals might face when having to cope with the new demands of their role and having to undertake compulsory functional training at the same time. In addition, the performance in school leadership training could provide useful information for the selection panel in the recruitment and appointment process. A further concern is related to the content of the current school leader training course. Basic compulsory training seeks to familiarise participants with the basics operational management and administration as well as fiscal and legal issues so they can take responsibility for a school in accordance with the legal requirements. Pedagogical issues only take up a small part of the training. For example, in TALIS 2013, 30.9% of lower secondary principal reported that instructional leadership was not included in their formal education (TALIS average: 22.2%) (OECD, 2014, Figure 3.6). While initial training needs to cover a range of content considering school principals' scope of responsibilities in the Czech Republic, including legal and budgetary aspects, it could devote more time and attention to the development of pedagogical leadership (Schratz et al., 2013; Halász, 2009; Sláviková et al., 2009).

Regarding professional development, different providers, including tertiary institutions and private organisations, offer a number of short-term courses, workshops and seminars on specific topics and current issues (Sláviková et al., 2009; NLQ Hildesheim, 2011). However, after completion of compulsory school leadership training, there are no requirements or incentives for school principals to engage in ongoing professional development. According to TALIS 2013, not all school principals participate in professional development and those who do, do so for less time (see Table 5.3). When asked about barriers to participation in

Table 5.3. **Principals' participation in professional development, lower secondary education, TALIS 2013**

Participation rates, types and average number of days of professional development reported to be undertaken by lower secondary education principals in the 12 months prior to the survey

	No participation in any professional development	Participation in a professional network, mentoring or research activity		Participation in courses, conferences or observation visits		Participation in other types of professional development	
	(%)	(%)	Average number of days	(%)	Average number of days	(%)	Average number of days
Czech Republic	13.4	28.1	11.8	82.2	9.0	33.7	7.1
Poland	0.7	31.2	14.5	95.6	9.1	51.2	8.0
Slovak Republic	16.4	63.6	10.1	62.2	7.8	28.4	6.2
TALIS average	9.5	51.1	20.2	83.4	12.6	33.5	10.4

Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, *http://dx.doi.org/10.1787/9789264196261-en*, Table 3.14.

professional development, about one in five lower secondary principals agreed or strongly agreed that they lacked incentives (20.0%) and that it was too expensive (20.5%); about one-third of principals agreed or strongly agreed that professional development conflicted with their work schedule (OECD, 2014, Table 3.15). This fits well with the review team's concerns about school principals' high workload and level of responsibilities. There are also no processes that ensure that professional development of school principals meets their needs and the needs of their school. School principals do not receive any guidance on professional development needs from their school founders or the ČŠI. Concerning the quality of programmes, the review team could not obtain any information on principal satisfaction or about any monitoring procedures or standards of good practice that could ensure a minimum level of quality across providers (Pont et al., 2008).

Pedagogical leadership is often delegated to deputy principals and middle leaders such as heads of subject commissions in the Czech Republic. However, not all deputy principals and middle leaders may be well prepared for their role. While some specialisations among teachers require further qualifications and training (e.g. SEP co-ordinators, ICT co-ordinators, co-ordinators of special education needs, and co-ordinators of environmental education) (Eurypedia, 2015), the review team is not aware of such a requirement for deputy principals and heads of subject commissions. The ČŠI also identified this as one area of improvement and suggested in its latest annual report to "focus on the further education of deputy school principals, methodologists, subject commission leaders and other persons whom principals usually authorise to execute a part of their powers in the area of management of pedagogical processes" (ČŠI, 2014).

Concerns about decisions on school principal appointment, allowances and dismissal

Legislation in the Czech Republic provides some flexibility for school founders to influence school principals' remuneration, particularly through personal allowances and bonuses. In theory, this provides the possibility to provide incentives and to reward principals for high performance within budgetary limits (also see Chapter 3). The evidence on performance-based rewards is scarce. If such systems are in place, however, the remuneration process should be fair, based on transparent and objective criteria, carried out by competent evaluators and take the specific context into account (Pont et al., 2008). Personnel appraisal that leads to summative consequences can otherwise negatively affect

the school environment as well as individual motivation (Pashiardis and Brauckmann, 2008). Considering such concerns, the review team noted various challenges in the allocation of personal allowances and bonuses in the Czech Republic which seem to have a considerable impact on remuneration (see above and Annex 5.A1).

Most importantly, the allocation of personal allowances and bonuses did not seem to be based on transparent and objective processes and criteria which can lead to a lack of fairness. Personal allowances and bonuses typically depend on processes that are determined by school founders themselves and that are not always clearly defined or openly communicated. School principals in schools visited as part of the review were often not aware of the range of the personal allowances and bonuses allocated within their region or municipality. Furthermore, as decisions about individual performance-based rewards are in the hands of school founders, and as there is no national framework or criteria of good practice, the nature of this process differs across the country. This risks that not all principals are treated equally irrespective of their place of work. As school founders tend to take no interest in the pedagogical leadership of school principals, decisions about individual rewards are, furthermore, based on a limited set of criteria, such as budget discipline, instead of an appraisal process that evaluates all of school principals' responsibilities.

The principal appointment and dismissal processes could also be improved. Central regulations for the appointment of school principals which school founders need to follow provide a sound basis for the recruitment of qualified candidates. However, decisions of the selection committee constitute a recommendation only and school founders are free to ignore the proposal of the selection panel. This bears the risk for "political" appointments by school founders. When it comes to the reappointment of a school principal, in theory, both the ČŠI and the school council can intervene to prevent the contract renewal of a school principal in the case of concerns. In practice, however, this mechanism depends on sound school evaluations through the inspectorate and a competent and knowledgeable school council. Considering the review team's impressions that school evaluations are only beginning to focus on the quality of education and that school councils often seem to lack capacity, this mechanism may not be very effective. Some stakeholders also raised concerns that the circumstances specified by law that can lead to dismissal, that is mainly the gross violation of non-fulfilment of legal obligations, are very limited and that it can be difficult to remove principals from office in practice.

There is no planning for the future supply of school principals

Neither the ministry (MŠMT) nor school founders pay attention to the attractiveness of principal positions and to leadership succession. There are no systematic data on the number of applicants and the distribution of applicants across different schools (e.g. levels of education, school types, disadvantaged schools or schools in urban/rural areas). The lack of succession planning does not seem to be a particular concern at the moment as there seem to be sufficient candidates – one school founder reported seven to ten candidates in current appointment proceedings, for example – but may be so in the future as both the teacher as well as the school principal workforce are ageing (see Chapter 4 and Table 5.1). Data from TALIS 2013, furthermore, indicate some concerns about the working conditions of principals which can have an impact on the attractiveness of the profession. While a large majority of lower secondary school principals reported to be all in all satisfied with their job, a relatively large share of principals did not believe that the advantages of the profession clearly outweigh the disadvantages.[20]

There is limited collaboration, exchange and learning among school principals

School principals in the Czech Republic have some opportunities to learn from each other and to take on responsibility for the development of the wider education system. Compulsory school leadership training offers leadership staff an informal chance to network (Sláviková et al., 2009) and professional associations offer further opportunities for exchange through workshops and meetings. Some school founders may also seek to foster collaboration among their schools. For instance, Prague 7, one of the administrative districts of Prague and the school founder of public kindergartens and basic schools within the district, has developed an online platform (*www.jaknaskoly.cz*) for schools to share information among each other as well as parents and the general public. The district also organises roundtables among teachers and school leaders and meetings among the educational staff of all schools before the school year to discuss past achievements and future objectives (MŠMT, forthcoming).

However, exchange between schools and principals is not supported on a systematic basis and seems to be rare. For TALIS 2013, only slightly more than one in four lower secondary principals (28.1%) reported to have engaged in a professional network, mentoring or research activities in the 12 months prior to the survey, compared to about one in two principals on average across countries taking part in TALIS 2013 (51.1%). The Czech Republic had one of the lowest proportions of principals reporting such an involvement among TALIS 2013 countries. Similarly, only slightly more than one in three lower secondary principals (37.2%) reported to have often or very often collaborated with principals from other schools during that time (TALIS average: 62.1%) (OECD, 2014, Tables 3.14 and 3.2). Opportunities for school principals to contribute to the development of the broader education system are also relatively limited. School principals can apply for school inspector positions with the ČŠI or take part in school evaluations as part of a body of experts which also includes school principals, but school inspector positions are not attractive financially as some stakeholders pointed out during the review visit.

School councils do not play a role in school development

School councils enable the school community, including teachers, parents and students, to participate in the management of their school and to hold their school leadership accountable (also see Chapter 2) (Pont et al., 2008). The law requires all schools to establish a school council and sets some requirements for the operation of school councils, such as membership, frequency of meetings and tasks and responsibilities. However, PISA 2012 data suggest that community involvement in local school governance is low. According to these data, only 4.9% of 15-year-olds were in a school whose principal reported that students' parents participated in local school government, compared to an OECD average of 10.8% (OECD, 2013a, Table IV.4.17). The review team also gained the impression that where the school community and parents participate in local school governance, the capacity to have an impact on school improvement (e.g. through critical feedback) was rather limited. Various school councils reported little involvement in processes such as school development planning and external and internal school evaluations. Also, school councils did not always seem aware of their right to prevent the contract renewal of school principals or suggest their dismissal, and the school council's involvement in the selection of their school principal seemed weak. Students can also play a critical role to determine how schools and classrooms can be improved (Pekrul and Levin, 2007; Rudduck, 2007; Smyth, 2007). However, student involvement through student bodies or representatives also seemed relatively limited, even if two schools reported the collection of student feedback through questionnaires, for example.

Policy recommendations

The high level of school autonomy and the legal status of schools give school principals a key role in the Czech education system as the managers of relatively autonomous entities. The effective management of the school leadership profession is, therefore, essential to ensure that this function is exercised by qualified individuals. School leaders need to be well selected, adequately prepared for their role and developed throughout their career, have the support they need to do their job and be held accountable for their responsibilities. The Czech Republic has paid some attention to the development of school leadership (e.g. through the White Paper,[21] the use of European Structural Funds and the implementation of the Education for Competitiveness Operational Programme between 2007 and 2013,[22] and participation in various international projects[23]) (Hálasz, 2009). Current initiatives such as Strategy 2020[24] and the proposal for a new career structure for school principals illustrate some continued awareness of the importance of school leadership. Furthermore, the Czech Republic has already implemented some concrete measures that provide conditions for good leadership in schools. These include standardised procedures for the recruitment of principals, requirements for initial training, the possibility to distribute leadership responsibilities, feedback from external school evaluations, and the possibility for the school community to participate in school management.

However, like previous studies (e.g. Schratz et al., 2013; Santiago et al., 2012) the review team also noted the urgent need to further professionalise school leaders in the Czech Republic. While school leaders enjoy a considerable level of autonomy – an important precondition for school leaders to influence teaching and learning (Halász, 2009; Pont et al., 2008) – they do not use their autonomy to this end through pedagogical leadership. The most important task ahead is the greater recognition that school principals can play a significant role for teaching and learning through pedagogical leadership, that school principals' workload needs to be more manageable to exercise this function, and that school principals require adequate support to grow into this role. For this to happen, it is essential that central actors in the Czech education system, such as school founders, assume responsibility for the development of their school leaders, that existing support structures and tools, such as training and school evaluations, are used more effectively in practice and focus on the role of school principals as pedagogical leaders, and that new structures that facilitate the development of pedagogical leadership, such as opportunities for peer networks and system leadership, are put in place.

Considering the general impact school leaders can have on teaching and learning through their influence on teachers (Louis et al., 2010; Day et al., 2009) and the particular role of school principals in the Czech education system it is crucial that these challenges are addressed. Strategy 2020 and the proposal for the development of a school leadership career point into the right direction. The development of the school leadership profession will also be key for the implementation of Strategy 2020 itself and the realisation of its strategic priorities. For instance, Strategy 2020 aims to make the education system more equitable through steps such as creating better links between schools and out-of-school education, by encouraging schools to integrate further education, and to better collaborate with educational guidance and counselling services; and to develop the teaching force through the introduction of a new teacher career system, more meaningful feedback and appraisal, mentoring and the sharing of good practices, and career development opportunities. School principals will be crucial to make these initiatives work. As school

leaders constitute a small, but potent group of actors in the education system, school leadership development constitutes a highly cost-effective measure for improving education (Hálasz, 2009; Louis et al., 2010).

Create a vision for and support pedagogical leadership in the Czech education system

Implement professional school leadership standards to clearly communicate the pedagogical role of school leaders

While various paradigms of effective school leadership have emerged through time, research has recently stressed the importance of pedagogical leadership for teaching and learning, even if more administrative and management-oriented leadership practices may be required under certain circumstances (OECD, 2013c; Krüger and Scheerens, 2010; Louis et al., 2010; Day et al., 2009; Pont et al., 2008). In the Czech Republic, the importance of pedagogical leadership has not been fully recognised, the legal and administrative tradition of school leadership is still visible, and the content of current legislation and school leadership training courses continue to focus on this legal and administrative role. Furthermore, legislation and school leadership training only specify duties and tasks and fields of studies and do not provide a specification of the competencies required to be an effective school leader. There is, then, little guidance for school leaders to interpret their role, to know what is expected of them, and to self-evaluate themselves against those expectations. It also means there is no framework for the effective management of the school leadership profession that would guide the selection and recruitment, development and training, and evaluation and appraisal on the basis of a vision of pedagogical leadership (Halász, 2009).

The implementation of professional standards for school leaders would help communicate this key function of school leaders (OECD, 2013b). Professional standards would be useful to a range of actors and ensure that all initiatives are directed towards the development of pedagogical leadership: individual school leaders could use them for self-evaluations; teachers could use them to understand the role of their manager; trainers of school leaders could use them to monitor the progress of their students; training institutions could use them for developing, evaluating and improving their programmes; school founders could use them for selection, recruitment, appraisal and development; and policymakers could use them for decision making (Schratz et al., 2013). In the implementation of such professional standards, the Czech Republic could build on previous initiatives such as the school leadership project realised within the framework of the Central European Cooperation for Education (CECE) and the school leadership standards ("Central5") that resulted from this project (Schratz et al., 2013; Schratz et al., 2010; Schratz et al., 2009)[25] as well as the current work on the development of a school leadership career undertaken by the National Institute for Further Education (NIDV).

Ease the administrative and managerial workload of school leaders and consider a reduction of school leaders' teaching responsibilities

However, it is also important to recognise that the wide range of tasks and responsibilities that school leaders are often expected to fulfil also bears a risk of placing too high expectation on school leaders (OECD, 2013b; Pont et al., 2008). Strengthening the pedagogical role of school principals, therefore, also requires a reflection on how school principals can be better relieved from administrative and managerial tasks. Considering that school principals already often have support from deputies, teacher leaders and accountants, it

would be useful to investigate how school principals distribute their tasks and if they require further guidance on how best to do so. Since deputy principals and teacher leaders also fulfil important pedagogical leadership functions, it would also be worth examining if more administrative and secretarial staff is needed or if certain administrative and managerial functions could be fulfilled more effectively by school founders themselves. School principals in the Czech Republic have a dual role as school leaders and teachers. Teaching responsibilities can be positive for school principals as teaching allows school principals to remain close to classroom reality. However, considering the large workload of school principals, it would be worth to consider if the teaching load of school principals could be reduced or if school principals could be allowed to manage their teaching responsibilities more flexibly, particularly in small basic schools where the teaching load is especially high. A European project on school leadership suggested that school leaders' teaching role should be reduced to enable school principals to effectively fulfil their function which is increasing in complexity (NLQ Hildesheim, 2011). In light of demographic changes and the need to consolidate the school offer (also see Chapter 2), it could also be worth considering alternative approaches to the leadership of schools (e.g. common leadership of a group of small schools, a shared pool of administrative staff for a group of schools) (Schratz et al., 2013), even though the evidence on such approaches is very scarce.

Provide more support for school leaders and improve the training and preparation of school leaders

School leaders also require the capacity to be pedagogical leaders and to manage their teachers effectively. The Czech Republic already provides school leadership training, but the review team identified several areas for improvement.

First, the development of the school leadership profession is not yet seen from a perspective of lifelong learning, but focuses resources on the development of recently appointed principals through an induction process. Similar to the international school leadership project realised within the framework of the Central European Cooperation for Education (CECE) (Schratz et al., 2013; Halász, 2009), the review team recommends to reconsider the current approach and to develop a leadership continuum that reflects school leaders' needs at different stages of their career. This should entail opportunities for aspiring and emerging school principals, mandatory training prior to appointment, an induction phase and opportunities for ongoing development. In particular, the introduction of a requirement to undertake training before assuming a leadership role would ensure that school principals have the knowledge and competencies needed to fulfil their role and that only qualified individual assume a leadership role. It would also provide useful information for the recruitment process. Considering the apparently large number of applicants for school leadership positions, it seems feasible in the Czech context to introduce such a more rigorous pre-training requirement. The length of the practical part of training would have to be increased. Professional development should be provided periodically to give school principals the opportunity to further develop their competencies and to learn about new practices. A requirement for regular participation and guidance on professional development needs from school founders and the school inspectorate (see below) could strengthen school principals' learning throughout their career. As TALIS 2013 data suggest, one of the greatest barriers of school principals for participation in professional development is their high workload, which provides an additional argument for finding ways to ease principals' workload and distribute their tasks more effectively.

Second, while the review team could not obtain much information about the quality of the current training offer, it seems that training could also be improved. Training should focus more on the development of pedagogical leadership to help principals interpret their role as pedagogical leaders. As an OECD project on school leadership highlighted, school leadership training should focus on competencies in areas that contribute to improving teaching and learning, such as strategies for supporting, evaluating and developing teacher quality; goal setting, assessment and accountability; strategic financial and human resource management; and system leadership (Pont et al., 2008). School leaders influence the quality of teaching and learning through the management of their teachers. Human resource management should therefore be an important part of training. School leaders should learn about aspects such as how to facilitate professional learning as part of everyday teaching practice, how to build a collaborative culture so teachers learn from each other and address their day-to-day challenges together, and how to give meaningful feedback (more on this in Chapter 4). This will also be essential to facilitate the implementation of the new teacher career system. In terms of teaching methods, training programmes should emphasise approaches such as action-research, coaching, mentoring and peer learning. Both the implementation of professional school leadership standards that could be the basis for the accreditation of training programmes and the further education of trainers on these programmes could help improve the quality of school leader training (Schratz et al., 2013).

Third, considering the role of distributed leadership in Czech schools, stakeholders should pay greater attention to the development of deputy principals, middle leaders and teacher leaders, such as heads of subject commissions (e.g. through the introduction of training requirements or a review of current development opportunities). This has also already been pointed out by the Czech school inspectorate (ČŠI, 2014). The development of distributed leadership could be based on a broader strategy to foster potential school leaders (e.g. through taster courses that help teachers and potential school leaders to self-evaluate their interest and strengths and weaknesses, or through teacher education courses that cover school leadership issues) (Pont et al., 2008). The new teacher career system could play a promising role in the development of future school leaders. In addition, it could be useful to put in place a monitoring system of the number of applicants for school principal positions for different levels of education and school types to identify potential shortages, and to implement actions to ensure sustainable leadership succession.

Fourth, the ČŠI and school founders should provide adequate support to schools and school principals to develop their practice (e.g. through feedback on professional development needs, support for school development planning and self-evaluation, the use of annual reports as strategic documents) and move beyond school principals' administrative and managerial role to focus on their pedagogical function (also see Chapter 2).

Promote greater objectivity in appointment, appraisal and remuneration decisions and ensure these processes support the development of good school leadership

Appointment and dismissal

The recruitment process of school principals entails a number of positive elements that provide the basis for the selection of qualified candidates. However, there is room for improvement to ensure that the best candidates are selected. Fair and transparent selection procedures are also key to encourage motivated individuals to apply.

There are various arguments for school founders to hold ultimate responsibility for the final selection of school principals (see Pont et al., 2008 for an overview of country practices). School founders are the employer of principals and should therefore take responsibility for the management of their human resources. The power to select who leads their schools gives school founders the possibility to match their human resource policy with their educational strategy. And a recruitment process through regional and municipal authorities provides the opportunity to tailor the recruitment process to local needs. While there can be capacity concerns and high administrative costs to carry out a rigorous selection process when local authorities are responsible for this process, the involvement of the school inspectorate and a representative of the regional education office in the Czech Republic should ensure some minimum standard, particularly in small municipalities. However, considering the risk of political appointments, greater checks and balances should be in place. Greater objectivity could be achieved in a number of ways. The judgement of the selection panel could receive greater weight, for example, by introducing a requirement that the school founder has to choose its final candidate from a shortlist of x number of top candidates presented by the selection panel. The ministry (MŠMT) could also introduce a clearer and more transparent set of national selection criteria, which could be based on the new professional school leadership standards (see above). The development of national guidelines for quality in recruitment procedures and training opportunities for regional and municipal authorities could also improve the recruitment process. A further way to increase the objectivity of recruitment lies in strengthening the role of school councils in the process, which would also have the potential to empower school councils and strengthen their overall role for horizontal accountability and school improvement. The MŠMT could pilot to give school councils (possibly together with the School Inspectorate) a role in auditing the recruitment decisions of school founders. And school councils could get some further influence in the recruitment process through the definition of local selection criteria or a local competency profile that supplements national selection criteria. In Victoria, Australia, for example, school councils or committees add a community criterion to a list of five central selection criteria, and in Chile, school boards define a competency profile that then serves as a reference for a central recruitment process through national authorities.

Considering concerns about the possibility to dismiss principals that do not fulfil their role, school founders should take greater responsibility for the management of their human resources. The capacity of the Czech School Inspectorate and school councils should also be strengthened so that they are able to fulfil their role for vertical and horizontal accountability (see further below).

Appraisal

While the evidence base on school leader appraisal is still rather limited, some recent research suggests that appraisal, depending on the way it is designed and implemented, can help to improve school leaders' practices and behaviours, and to focus on their role as pedagogical leaders (OECD, 2013b; Radinger, 2014). School founders should, therefore, be encouraged and supported to develop appraisal processes that go beyond legal compliance and budgetary discipline as is currently the case. Appraisal could, then, become a tool to manage the school leadership profession and to communicate that school principals are responsible for the quality of teaching and learning in their school. As appraisal processes can increase school principals' workload and stress levels, it is important that school principals experience appraisal as a meaningful exercise that helps them improve their practice (OECD, 2013b; Radinger, 2014).

To improve current school leader appraisal processes, the Czech Republic could introduce a national framework that school founders need to implement. Such a national framework would ensure that appraisal meets essential criteria of personnel evaluation, such as validity, reliability, accuracy, utility and fairness, and that appraisal follows best practices (see Box 5.1). It would also address concerns about the objectivity and transparency

Box 5.1. **OECD recommendations on procedures for school leader appraisal**

1. **Promote the appraisal of pedagogical leadership together with scope for local adaptation**

A focus on pedagogical leadership is essential to encourage school leaders to take direct responsibility for the quality of learning and teaching in their school. However, a focus on pedagogical leadership in appraisal must:

- **Be manageable and relevant**: local selection of criteria in line with central guidance that emphasise the importance of pedagogical leadership; focus on priority areas relevant to a particular school and the leadership required in that context; promote individual as well as school needs, e.g. through the mandatory use of a range of reference standards and documents, such as individual job descriptions and school development plans; recognise that successful school leadership requires choices on time investment and management and administration-oriented tasks may at times be equally important as pedagogical leadership tasks.
- **Recognise the need for and promote professional development**: ensuring access to high-quality, targeted and relevant professional development opportunities to develop pedagogical leadership; embedding appraisal for pedagogical leadership within a comprehensive leadership development framework; providing an opportunity for feedback and identifying areas for school leader's development.

2. **Promote the appraisal of school leaders' competencies for monitoring, evaluation and assessment**

School leaders play a key role for the effectiveness of evaluation and assessment, particularly for teacher appraisal and school evaluation. Therefore, school leader appraisal should address their ability to:

- **Manage internal teacher appraisal processes**, e.g. through evaluating school leaders' competencies to manage staff; to authentically evaluate teaching and learning; to understand, observe and recognise good teaching; and to give developmental feedback to teachers.
- **Lead the school's self-evaluation processes**, e.g. ensuring their school's collaboration during external evaluations, and communicating external evaluation results to their school community.

It should also lead to opportunities to improve these competencies. For example, with professional development in how to observe classrooms and interview teachers; how to analyse data; how to use school evaluation results; how to develop school improvement plans; how to involve teachers, students and parents in school self-evaluation.

3. **Promote shared leadership via school leader appraisal**

The OECD Reviews of Evaluation and Assessment in Education underlined the role that school leader appraisal could play in promoting a more effective sharing of management responsibilities. School leader appraisal could consider how leadership responsibilities are shared within the school and beyond the school by:

Box 5.1. **OECD recommendations on procedures for school leader appraisal** *(cont.)*

- **Examining the ways in which school leaders foster distributed leadership in their schools** (e.g. school leaders' competencies for building structural capacity, school leaders' efforts to create opportunities for teacher leadership, school leaders' ability to enhance their teaching staff's capacity to lead, school leaders' ability to foster succession planning).
- **Providing feedback on the arrangements of distributed leadership.** It may help inform professional development and wider support structures. It may also provide an opportunity to provide feedback to school leaders on their efforts to enhance teacher leadership in their schools.
- **Reflecting the growing importance of leadership tasks beyond school borders** as a way of sharing expertise for system-wide improvement.

4. **Promote the use of multiple instruments and sources of evidence**

Research has increasingly stressed the benefits of using multiple tools to form a fair, valid and reliable picture of a school leader's performance from a comprehensive perspective. Limited research has provided some insights into the benefits of different tools and the caution needed when using others:

- The use of school leader portfolios, if embedded within wider support structures, may ensure a school leader's views are adequately represented in the appraisal process and help strengthen the formative dimension of appraisal.
- The use of stakeholder surveys requires an awareness among evaluators of the politics that appraisal may involve. Teachers' views may add most value to an appraisal process considering their close insights into a school's daily routine.
- Given the wide range of factors that influence student outcomes within and outside schools, and persistent evidence that the impact of school leaders on student learning is mainly indirect and mediated through others, holding school leaders directly accountable for improved student test scores or the value-added by the teachers in their school faces serious challenges and risks.

Source: OECD (2013b), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, *http://dx.doi.org/10.1787/9789264190658-en*.

of appraisal which is essential considering the current link between evaluations and personal allowances and bonuses. Considering the importance of context for successful school leadership, a central framework should leave sufficient scope to adjust procedures to local, school and individual circumstances. The national appraisal framework should reflect a number of further aspects so it becomes a useful process. First, appraisal should go beyond informing employment-related decisions and include a strong formative dimension, possibly in combination with summative purposes. In the Czech Republic, for example, appraisal could be organised annually as a formative process, it could inform remuneration decisions periodically (e.g. every three years), and inform the contract renewal process every six years. To function as a formative process, appraisal itself should provide useful feedback (e.g. through the regular interaction between evaluators and school principals) and feed into decisions about principals' professional development (e.g. through the preparation of an individual development plan). Including professional development activities as one aspect and criterion of appraisal provides a further possibility to strengthen ties between appraisal

and professional development. Second, individual appraisal procedures should be linked with external school evaluations to communicate consistent feedback. And third, as all other employment-related processes, appraisal should draw on a set of national school leadership standards as a reference point for the definition of individual objectives or the selection of appraisal aspects and criteria (OECD, 2013b; Radinger, 2014).

While it is essential to improve the design of appraisal, it is equally important to ensure that appraisal is effectively implemented and that evaluators and school principals have the capacity to do so. Czech policy makers should, therefore, also pay attention to the development of evaluators' and school principals' competencies in this area. Possible measures to promote and develop appraisal-related skills among evaluators include funding for evaluators' training and professional development, the piloting of newly developed appraisal systems before implementation, opportunities for on-site formal training sessions for evaluators and the development of online platforms for ongoing discussion (OECD, 2013b; Schratz et al., 2013).

Remuneration

The implementation of a sound national appraisal framework would also help address concerns about the allocation of personal allowances and bonuses. As an OECD Review of Evaluation and Assessment Frameworks and an OECD project on Improving School Leadership pointed out, systems that link salaries and benefits to performance need to ensure that principals perceive the process as fair (OECD, 2013b; Pont et al., 2008). Considering the limited and mixed evidence of the impact of such payments (Pont et al., 2008), however, it could be worth considering an evaluation of the impact of personal allowances and bonuses in the Czech Republic.

Provide platforms for school leaders to exchange experiences and to learn from each other

School leadership can be a lonely role and school principals can face feelings of professional isolation. It is, therefore, essential that school principals have sufficient sources of external feedback and support. This is particularly the case for new school principals and for school principals in challenging contexts. Opportunities for school principals to learn from each other and to share good practices with school principals from other schools can provide such a source of feedback. Furthermore, peer learning and collaboration can be instrumental in spreading promising practices and in improving teaching and learning across an education system (OECD, 2013b; OECD, 2012b; OECD/SSAT, 2008; Pont et al., 2008).

While there are some opportunities for networking through professional associations, there is a lot of potential to further facilitate peer learning and collaboration between schools and school principals. As other countries have demonstrated, various models can be used to promote peer learning and collaboration. Coaching programmes that pair new and experienced school principals can be one way to increase support and to facilitate school principals' start in their new role. Formal or informal school networks that build on individual school leaders' commitment, that involve regular and constructive communication, and that are supported through the educational administration can foster improvement over time at a larger scale (OECD, 2012b). The Flemish Community of Belgium provides an interesting example of school collaboration and networking (see Box 5.2). Considering its knowledge of the broader education system, the Czech school inspectorate could play a leading role in the facilitation of school exchange and networking. Personnel appraisal that

Box 5.2. **School networks and system leadership roles: school associations in the Flemish Community of Belgium and a national body of learning consultants in Denmark**

Flemish Community of Belgium

In 1999, the authorities of the Flemish Community of Belgium launched a policy to encourage school collaboration through the establishment of "school associations" (*scholengemeenschappen*) in secondary education. From 2003, school associations were also introduced in the primary sector. School associations are collaborative partnerships between schools in the same geographical area. On average, school associations comprise between six and twelve schools. In 2010, the vast majority of schools (96.7%) belonged to a school community, and most of the schools that have not joined a school community provided special needs education. The key goal of this initiative is to strengthen schools' organisational and leadership capacities through increased co-operation. In secondary education, the policy also aims to improve the co-operation of schools in the supply of study options, career guidance and efficient use of resources. Joining a school association is voluntary, but the Flemish Ministry of Education and Training provides incentives for schools to join an association by attributing resources to the association, and granting more organisational flexibility in the case of secondary schools. School associations receive a package of points for the management and support staff in their schools, which are then redistributed among the individual schools in the community based on a repartition system agreed between the schools forming the community. In elementary education, some of these points may be used to appoint a co-ordinating director of the school community, and in secondary education, the school community can retain up to 10% of the points to ensure its own functioning.

Source: Nusche, D. et al. (2015), *OECD Reviews of School Resources: Flemish Community of Belgium 2015*, *http://dx.doi.org/10.1787/9789264247598-en*.

Denmark

The Danish Ministry of Education has introduced a national body of 80 learning consultants in 2014 to provide support to municipalities and schools for quality development, to spread good practices, and to facilitate school networking and peer-learning. Both schools and municipalities can ask for the support of a learning consultant and schools can also work together in groups with a learning consultant. Learning consultants work in teams and analyse the challenges a school faces based on school data and information on student performance. They then develop a school development plan, a strategy for change management, and indicators for monitoring and evaluation. Learning consultants collaborate with a ministerial research centre to learn about the latest evidence and to feed into the knowledge available in the research centre. They also collaborate with teacher training institutions to develop links between theory and practice. Learning consultants have diverse backgrounds, from teaching and school leadership to local administration in a municipality. They receive training and capacity building for their role and meet on a monthly basis to learn about new methods and evidence and to reflect about their experiences and challenges. Learning consultants can work in different arrangements. For example, learning consultants can work for two days a week in their learning consultant role at the ministry and for three days a week in the field. Learning consultants are typically hired for two years after which they return to a school or municipality. This allows the ministry to adjust the number and profile of learning consultants depending on the demand and also helps spread knowledge more widely across the system. Some municipalities in Denmark, such as Copenhagen, have developed and implemented their own systems of learning consultants to facilitate leadership and specialist advice to schools from practitioners with high credibility.

Source: Nusche D. et al. (forthcoming), *OECD Reviews of School Resources: Denmark 2016*, OECD Publishing, Paris.

involves peer-evaluators and school self-evaluation that involves critical friends can also provide opportunities for school leaders to learn from each other as long as school leaders are prepared and trained for such roles (OECD, 2013c). Other countries have sought to spread new ideas and approaches through the creation of system leadership roles (e.g. leadership of

a federation of schools or consultant leadership roles). Such roles also provide career development opportunities for school leaders and can help make school leadership more attractive, also for long-serving school leaders (OECD/SSAT, 2008; Pont et al., 2008). Denmark provides a recent example for the development of such system leadership roles (see Box 5.2).

Promote the role of the school council for school development

As specified in legislation, school councils have a role to play in a number of important areas, such as the selection of school principals, the review of annual reports and school development planning. However, in practice, school councils often play a limited role in local school governance and lack the capacity for contributing to the development of their school. The ministry (MŠMT) and school founders should, therefore, foster great awareness of the important role that school councils can play for school development (e.g. by highlighting good practices and through guidelines and advice) and offer training and capacity building for members of school boards. In the Slovak Republic, for example, district school offices offer targeted training to school boards to make them familiar with their role in the school leader selection process. In addition some district school boards bring together the chairs of all school boards in the district on an annual basis to facilitate learning and an exchange of experience (Santiago et al., 2016a). In Estonia, similarly, some municipalities actively promote the role of school boards and offer training to school board members. In Tartu, for example, members of boards of trustees participate in periodic training and Tallinn gathers feedback from parents on the role of boards of trustees as part of the city's quality assurance scheme. In addition, Tallinn organises an annual competition to nominate "the best board of trustees of the year" (Santiago et al., 2016b).

Notes

1. Lower secondary education (ISCED 2) comprises Years 6 to 9 in the Czech school system and can thus be offered in basic schools, general secondary schools (*gymnasia*) and *conservatoires* (specialised arts institutions).
2. For the leadership of other employees, the allowance specified by law ranges from 5% to 50% of the highest salary step in the given grade depending on the level of leadership, for class teachers or heads of department at *conservatoires* and basic art schools, the personal allowance ranges from CZK 400 to CZK 1 000 monthly (Eurypedia, 2015).
3. For further information (in Czech), see *www.nidv.cz/cs/projekty/projekty-esf/karierni-system.ep* and *www.karieraucitelu.cz*.
4. The employment, appointment and dismissal of school principals of schools established by other founders (i.e. church and private schools) is not regulated by school legal regulations, but governed by general legal regulations. The leadership of denominational or private schools is performed by an authorised body, by a member of the authorised body or another person employed by the school who fulfils certain conditions related to requirements for exercising the function of educational staff and to work experience in education, or a different entity or a person in a labour-law relationship to the school fulfilling these conditions. Principals of denominational or private schools are not required by law to undertake school management training. Employment is always based on an employment contract (Eurypedia, 2015; MŠMT, forthcoming).
5. For further information (in Czech), see *www.msmt.cz/dokumenty/konsolidovany-text-skolskeho-zakona?lang=1*.
6. The gross annual statutory salary is the amount paid by the employer in a year. It includes the basic statutory salary together with general increases to salary scales, the 13th month and holiday-pay (where applicable) excluding the employers' social security and pension contributions. This salary does not include other salary allowances or financial benefits (related, for example, to further qualifications, merit, overtime, additional responsibilities, geographical location, the obligation to teach classes in challenging circumstances, or accommodation, health or travel costs). The minimum salary is the gross salary received by principals at the start of their career. The maximum

salary is the basic gross salary received by school principals on retirement or after a certain number of years of service. The maximum salary includes increases related solely to length of service and/or age (Eurydice, 2014).

7. For further information, also see *www.nidv.cz/cs/projekty/projekty-esf/karierni-system.ep/322_1629-klicova-aktivita-1-%E2%80%93--standard-pro-reditele/1*.

8. Such individual allowances and bonuses are different to a number of personal allowances for certain additional defined by law (e.g. for class teachers, teachers exposed to a high risk of injury, multi-grade teaching, and the performance of specialised roles, such as co-ordination of the School Educational Programme (SEP), ICT co-ordination, co-ordination of environmental education, etc.).

9. Education in public institutions is free of charge for parents. Only the participation in early childhood education and care can incur costs for parents with the exception of the last year of early childhood education and care. School principals determine the amount of fees and fees may vary from year to year. The level of tuition fees is restricted by law and it must not exceed 50% of the real average monthly non-investment expenditures of the legal person running a nursery school for the education of a child in early education and care centre. Such expenditures do not include salaries, compensations for salaries, wages, compensations for wages, bonuses for readiness for work, bonuses for work performed based on contracts for work performed out of the employment relationship, severance pays, social security premiums, contributions to state employment policy, general health insurance premiums, allocations to the Cultural and Social Need Fund, other payments resulting from labour law relations, necessary increase in the costs associated with the education of children with disabilities, costs of teaching aids, costs for the further education of pedagogical workers and costs for activities directly associated with the development of schools and quality of education, for the coverage of which the financial means from the state budget were used.

10. For further information (in Czech), see *www.nuov.cz/ae?lchan=1&lred=1*.

11. The Plan of Principal Assignments of the Czech School Inspectorate for the School Year 2014/15 is available here: *www.csicr.cz/getattachment/b34b0931-2ef6-4b9a-8bc5-7f1645650339*; the Criteria for the Evaluation of Conditions, Course and Results of Education for the School Year 2014/15 are available here: *www.csicr.cz/getattachment/d778c2e9-1cd5-484f-b889-5557e728f458*.

12. The "Study for School Principals" course entails at least 100 hours of contact time as defined by ministerial regulations and is based on the key professional competences of managerial staff at schools as well as on the specification of responsibilities following from the provisions of the Education Act. It covers four modules: basic law; labour law; school financing; and the organisation of the educational process. Training entails three days of practical experience at another school as well as self-study and is completed with a final examination. At the end of the course, participants receive a certificate. This training is provided by the National Institute for Further Education (NIDV), the national organisation offering professional development for teachers, and other approved in-service training centres. The NIDV operates with 13 regional training centres and school leadership training is, therefore, easily accessible across the Czech Republic. Participation in "Training for Managerial Staff" also meets the further qualification requirement. Alternatively, this programme provides an opportunity for further professional development of school principals who have already undertaken basic and compulsory training to strengthen professional competencies and to gain a better knowledge of school management issues. This course of at least 350 contact hours covers the theory and practice of school management, the application of legislation in schools, economic and financial management, educational process management, and personnel management. It is completed with the defence of a thesis and final examination and leads to further qualifications, such as a master's degree. This programme is typically offered at tertiary institutions (Sláviková et al., 2009).

13. Past annual reports of schools visited as part of the review visit were between 15 and 50 pages in length and covered a number of areas: basic information about the school: e.g. school name and location, school leadership team, school vision and focus, fields of education offered, changes in the school registry, school council, school website; school staff: e.g. number, age, qualifications and professional development of teaching staff, information about teaching assistants and non-teaching staff; students: e.g. number of students and number of classes, average class size and student-teacher ratio, results in examinations, admission to further education, students with a migrant or ethnic minority background, special needs students, gifted students; educational processes: e.g. School Educational Programme, educational guidance and counselling, prevention of risky behaviour, language training and support, environmental education, multicultural education, student competitions and extracurricular activities; Activities and presentation of the school in the public: collaboration with parents and other school partners, participation in national and international programmes, after-school activities and clubs, use of school facilities during school

holidays; Results from external evaluations: e.g. summaries of ČŠI inspections, financial audits, compliance with hygiene standards; school budget and financial information (Eurypedia, 2015).

14. The inspectorate can communicate the performance of individual teachers in case of concerns to school principals who are entitled to take relevant labour law measures; the inspectorate can ask schools to take measures to address concerns identified during the evaluation (e.g. poor performance of teachers and principals) and the inspectorate can charge schools a penalty of up to CZK 50 000; the inspectorate can ask the school founder for the removal of a principal from office or for the announcement of an appointment process of a new principal, but the final decision lies with the school founder; the inspectorate can submit a proposal for the erasure of a school from the school registry, i.e. for the termination of school operations. In the school year 2013/14, the inspectorate submitted one proposal for the erasure of a school from the school registry. In the school year 2012/13, no proposal was made (MŠMT, forthcoming; ČŠI, 2014; ČŠI, 2013).

15. This includes human resource/personnel issues, regulations, reports, school budget, preparing timetables and class composition, strategic planning, leadership and management activities, and responding to requests from district, regional, state, or national education officials.

16. This includes developing curriculum, teaching, classroom observations, student evaluation, mentoring teachers, and teacher professional development.

17. Lower secondary school principals reported to spend only 10.3% of their time on student interaction (14.9%), 8.4% of their time on parents or guardian interactions (TALIS average: 11.2%), and 4.9% of their time with local and regional community, business and industry (TALIS average: 7.1%). Only 54.7% of lower secondary principals reported to have "often" or "very often" provided parents or guardians with information on the school and student performance (TALIS average: 65.8%) (OECD, 2014, Tables 3.1 and 3.2).

18. The region of Pardubice, for example, provides some support in resource management through its staff and legal experts as well as an online platform (school portal: *www.klickevzdelani.cz*). The regional authorities also provide some unified administrative services, such as a common insurance, common services related to telecommunications and ICT, monitoring of energy efficiency, etc. (MŠMT, forthcoming).

19. One of the reports, for example, concluded that "school activities are in line with the requirements for inclusion in the school registry. The school complies with the principles and objectives of the Education Act, respecting the principle of equal access to education. School Educational Programmes are in line with the relevant Framework Education Programmes and the school successfully meets and achieves the desired outcomes. In the area of evaluation, the school follows the set rules and regularly monitors and evaluates the overall success of children and students. The school creates the conditions for the healthy development of children and students, and ensures their health and safety. The school evaluates health and safety risks including bullying and adopts measures to minimise health and safety risks."

20. Percentage of lower secondary school principals reporting to "agree" or to "strongly agree" with the statement that "All in all, I am satisfied with my job" (Czech Republic: 94.7%; TALIS average: 95.7%); percentage of lower secondary school principals reporting to "disagree" or to "strongly disagree" with the statement that "The advantages of the profession clearly outweigh the disadvantages" (Czech Republic: 28.8%; TALIS average: 19.7%) (OECD, 2014, Table 3.26 web).

21. The National Programme for the Development of Education ("White Paper") published in 2001 related the realisation of its objectives directly to the capacities of school leaders (Hálasz, 2009; Slaviková et al., 2009).

22. For example, ESF funds were used to finance the "Successful Headteacher" project (*www.nidv.cz/en/projects/esf-projects/national-project-successful-headteacher.ep*).

23. The Czech Republic has participated in a three-tage project on school leadership realised within the framework of collaboration between five countries (Austria, the Czech Republic, Hungary, Slovakia and Slovenia) in form of the Central European Cooperation for Education (CECE), under co-ordination of the Tempus Public Foundation, and with support of the Hungarian Ministry of Education and the European Commission.

24. Strategy 2020, for instance, envisages the development of the school leadership profession through the development of professional school leadership standards, a new approach to the selection and appraisal of school principals, and changes to the initial training and professional development of school principals.

25. Based on the results of a three-year project, partners from Austria, the Czech Republic, Hungary, Slovakia and Slovenia sought to develop a cross-border competency framework for school leaders

based on the expectations of key stakeholders such as school leaders, teachers, trainers of leaders, educational experts and policy-makers. The Central5 – the Central European Competency Framework for School Leaders – defines the knowledge, skills and attitudes a school leader is expected to possess. It encompasses five domains: i) Leading and managing learning and teaching; ii) Leading and managing change; iii) Leading and managing self, iv) Leading and managing others, and v) Leading and managing the institution (Schratz et al., 2013).

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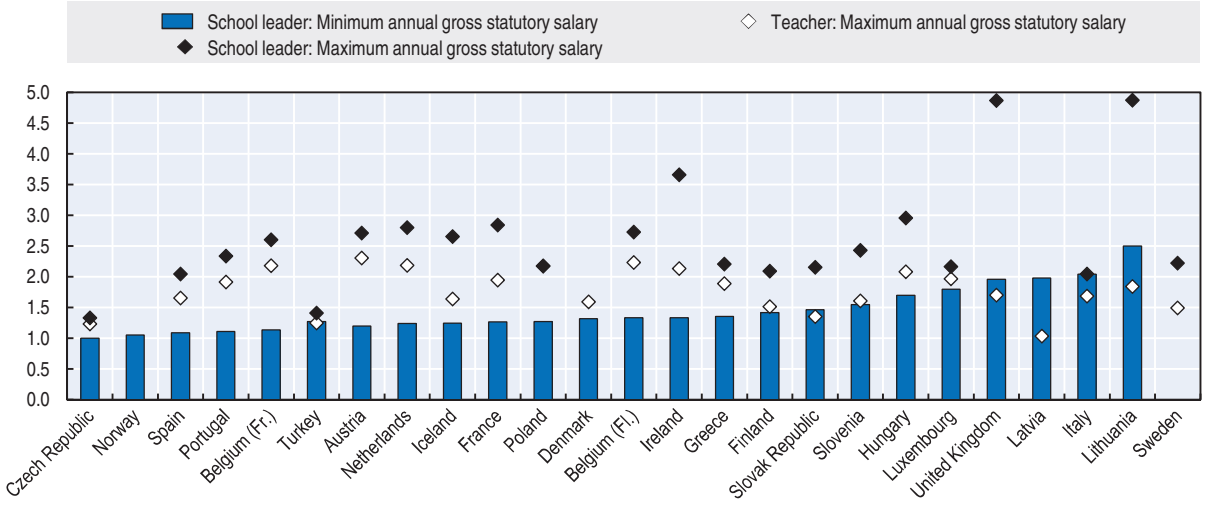
ANNEX 5.A1

Data for Chapter 5

Figure 5.A1.1. **Relative attractiveness of school principal remuneration**

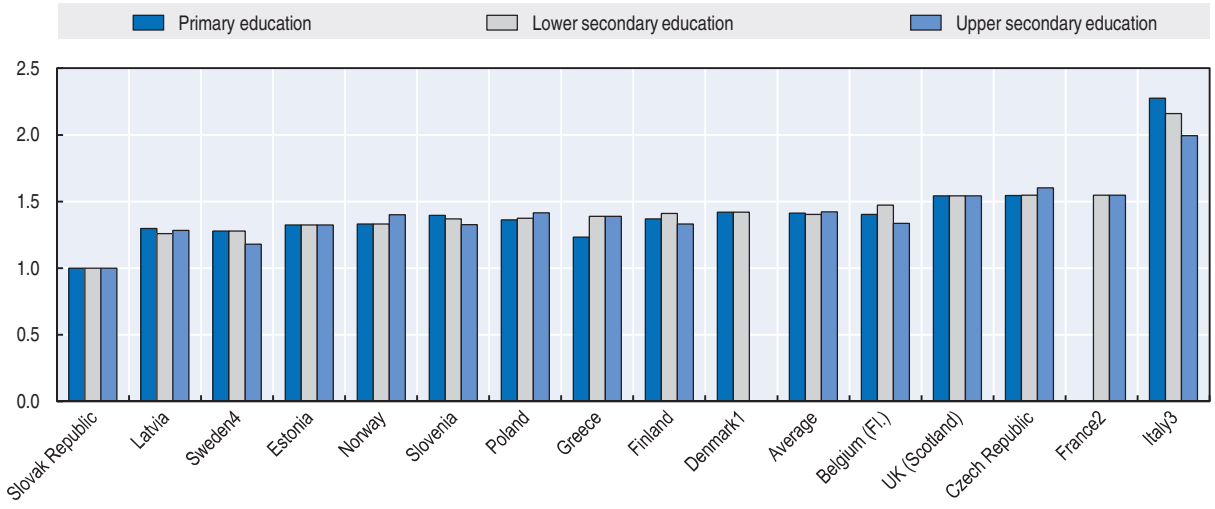
Ratio of school leader and maximum teacher salaries to the minimum annual statutory salary for teachers, 2013/14



Note: Countries are presented in ascending order of ratio of minimum school leader salary to minimum teacher salary. Minimum salaries are based on the lowest salary across levels of education. Maximum salaries are based on the highest salary across levels of education

Source: Calculated from data in Eurydice (2014), *Teachers' and School Heads' Salaries and Allowances in Europe, 2013/14, http://eacea.ec.europa.eu/education/eurydice/documents/facts_and_figures/salaries.pdf.*

Figure 5.A1.2. **Ratio of actual average principal salaries to actual average teacher salaries, 2013/14**

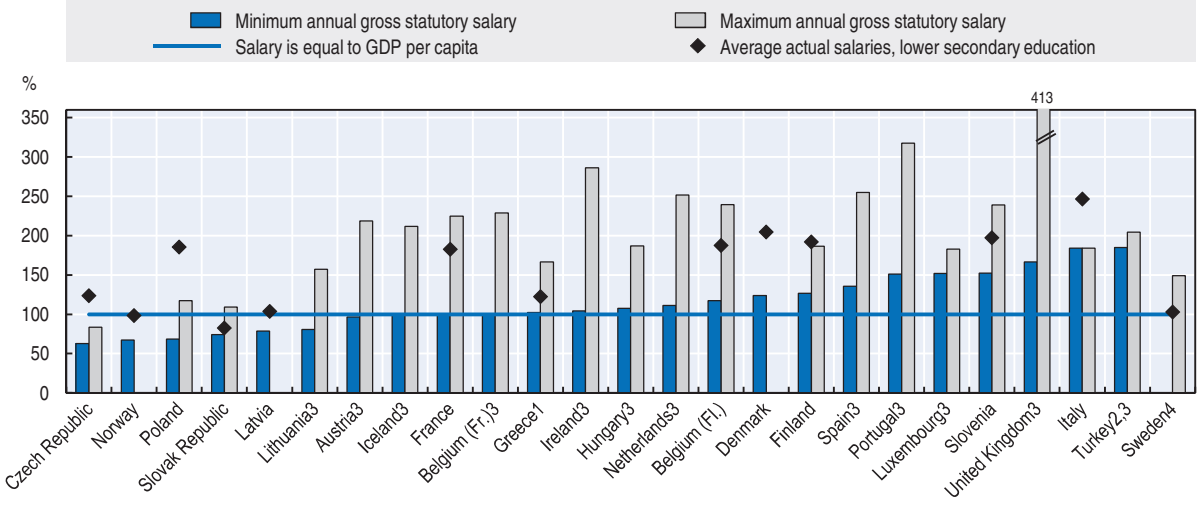


Notes: Countries are ranked in ascending order of the ratio of actual average principal salaries to teacher salaries in lower secondary education.

1. No data for upper secondary education available.
2. Data for upper secondary education refer to *lycées* only; and no data for primary education available.
3. Data for upper secondary education refer to teachers with Laurea/master's degree only.
4. Data refer to 2012/2013.

Source: Calculated from data in Eurydice (2014), *Teachers' and School Heads' Salaries and Allowances in Europe, 2013/14, http://eacea.ec.europa.eu/education/eurydice/documents/facts_and_figures/salaries.pdf*.

Figure 5.A1.3. **School leader salaries as a percentage of GDP per capita, 2013/14**



Notes: Countries are presented in ascending order of minimum annual gross statutory salary.

1. GDP data are for 2012.
2. GDP data are for 2011.
3. Data on average actual salaries not available.
4. Data on minimum salary not available.

Source: Calculated from data in Eurydice database and Eurydice (2014), *Teachers' and School Heads' Salaries and Allowances in Europe, 2013/14, http://eacea.ec.europa.eu/education/eurydice/documents/facts_and_figures/salaries.pdf*.

ANNEX A

The OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools

The ***OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools*** (also referred to as the *School Resources Review*) is designed to respond to the strong interest in the effective use of school resources evident at national and international levels. It provides analysis and policy advice on how to distribute, utilise and manage resources so that they contribute to achieving effectiveness and efficiency objectives in education. School resources are understood in a broad way, including financial resources (e.g. expenditures on education, school budget), physical resources (e.g. school buildings, computers), human resources (e.g. teachers, school leaders) and other resources (e.g. learning time).

Fifteen education systems are actively engaged in the review. These cover a wide range of economic and social contexts, and among them they illustrate quite different approaches to the use of resources in school systems. This will allow a comparative perspective on key policy issues. Participating countries prepare a detailed background report, following a standard set of guidelines. Some of the participating countries have also opted for a detailed review, undertaken by a team consisting of members of the OECD secretariat and external experts. Insofar, the participating countries are (in bold those that have opted for an individual review): **Austria, Belgium (Flemish Community)**, Belgium (French Community), **Chile**, the **Czech Republic**, **Denmark**, **Estonia**, Iceland, **Kazakhstan**, **Lithuania**, Luxembourg, the **Slovak Republic**, Spain, Sweden and **Uruguay**. An international comparative report from the OECD Review, bringing together lessons from all countries, will be completed in 2016.

The project is overseen by the Group of National Experts on School Resources, which was established as a subsidiary body of the OECD Education Policy Committee in order to guide the methods, timing and principles of the review. More details are available from the website dedicated to the review: *www.oecd.org/education/schoolresourcesreview*.

ANNEX B

Composition of the OECD Review Team

Claire Shewbridge, a British national, is an Analyst in the OECD Directorate for Education and Skills and currently working on the School Resources Review. She has already participated in reviews in Estonia, Lithuania and the Slovak Republic. She most recently co-authored the OECD report Synergies for Better Learning: An International Perspective on Evaluation and Assessment (2013) taking responsibility for analysis on school evaluation and education system evaluation. Prior to that, she worked on the OECD Review on Migrant Education, co-authoring the OECD report Closing the Gap for Immigrant Students (2010). For five years, Claire worked on the Programme for International Student Assessment (PISA), leading analysis of student attitudes towards science learning and the environment in the PISA 2006 survey, co-authoring Are Students Ready for a Technology Rich World? What PISA Studies Tell Us (2005) and co-ordinating various analytical reports on PISA 2000, 2003 and 2006 results. She also worked on international statistics in Education at a Glance. Claire is rapporteur for the OECD Review of School Resources in the Czech Republic.

Jan Herczyński, a Polish national, has 18 years of experience in education finance, in education policy and in formulation and analysis of education strategy. Between 1999 and 2001, he advised the Polish Ministry of National Education on the problems of education finance and education decentralisation, developed and helped implement the new per student algorithm for the allocation of education subvention to local governments. Between 2002 and 2007, Jan advised the Macedonian Ministry of Education and Science on strategic issues of education decentralisation and finance, including preparation and implementation of a per student allocation formula for categorical and block grants for education. Between 2010 and 2012, Jan co-ordinated a project on strengthening strategic capacities of Polish local governments in the education sector, and edited a seven-volume Library of Local Government Education (2012). Jan has been a consultant and report author in many short term projects in education finance, strategy and management in transition countries, including Albania, Belarus, Bulgaria, Georgia, Kazakhstan, Kosovo, Kyrgyzstan, Lithuania, Macedonia, Moldova, Poland, Romania, Serbia, Tajikistan, and Ukraine. His earlier professional experience included lecturer and researcher in applied mathematics at Warsaw University.

Thomas Radinger, a German national, is a Policy Analyst with the OECD Directorate for Education and Skills. He joined the Organisation in September 2011. Since February 2015, Thomas has been working on the School Resources Review and has already participated in reviews in Denmark and Uruguay. Thomas initially worked on the OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes. He co-authored the OECD report Synergies for Better Learning: An International Perspective on Evaluation

and Assessment (2013) taking responsibility for analysis on school leader appraisal. Between October 2012 and January 2015, he was involved with the development of the OECD Education GPS, an online platform to disseminate OECD data and research on education to a broader audience.

Julie Sonnemann, an Australian national, is a Fellow at The Grattan Institute, one of Australia's leading think tanks. Julie has significant experience in education policy and system design, and has co-authored a number of ground breaking reports including 'Catching Up: Learning from the Best School Systems in East Asia' and 'Making time for Great Teaching'. She recently co-authored a major international report on teacher development in Singapore, Canada, Shanghai and Hong Kong for the Bill and Melinda Gates Foundation in the US. Julie has experience in consulting and government, and began her career at the Prime Minister's Department, Canberra. She is an economist and policy analyst by training.

ANNEX C

Visit programme

Tuesday, 26 May 2015, Prague	
08:00-08:30	Meeting with National Co-ordinator
08:30-09:00	Ministry of Education: general meeting • General Director of Section of Policy Co-ordination • Director of Department of Strategy and European Affairs • Researchers, University of Economics (authors of CBR)
09:00-10:00	National Institute for Further Education (NIDV) • Director
10:00-11:00	Ministry of Education: Human Resources • Director of Department of School Statistics, Analytics and Information Strategy • Head of Unit of Project Management and Central Agenda • Head of Unit of Further Education and Career System of Teachers
11:20-12:20	Ministry of Education: Allocation and use of EU funds • Operational Programmes Research and Development for Innovation
12:20-13:20	Ministry of Education: School Network • Director of Department of Education System • Head of Unit of Pre-School, Basic and Artistic Education
13:20-14:20	Official Lunch
14:20-15:20	Ministry of Education: Policies for Equity • Director General of Section of Legislation and Law • Director of Department of Legislation • Head of Unit of Prevention and Special Education
15:20-16:20	Ministry of Education: Budget and Planning • General Director of Section of Funding • Director of Department of Budget and Budget Analysis • Director of Department of Internal Audit • Department of Budget Management
16:20-16:50	Supreme Audit Office (NKÚ) • Section of Control
17:10-18:10	Umbrella Regional organisations • President and Vice-President of Union of Towns and Municipalities • Association of Local Autonomies
Wednesday, 27 May 2015, Prague	
08:30-10:00	Capital City of Prague: general meeting; school network; and funding resources allocation to education • Alderman for Education and Social Policy • Director of Department of Schools and Youth • Head of Unit of School Funding
10:30-13:00	**School visit 1: Prague – 8-year *gymnasium* (Nad Štolou)** • Management • Teachers • Students • Parents

14:30-17:00	**School visit 2: Prague 5 – Large basic school at Barrandov (V Remízku)** • Management • Teachers • Students • Parents
17:20-18:30	Local Municipality (Prague 5): School network and funding; resources allocation to education; social services in education (free meals etc.) • Vice-mayor • Department of Schools
Thursday, 28 May 2015, Ostrava And Kozmice, Moravia-Silesia Region	
08:30-10:00	Moravia-Silesia Region: general meeting; school network and funding; resources allocation to education; social services in education (free meals, etc.) • Deputy President of the Region • Deputy Head of Department of Schools, Youth and Sports and head of Unit of Direct Funding • Head of Unit of School Funding • Lawyer, Department of Schools, Youth and Sports
10:30-13:00	**School visit 3: Ostrava – Practical school (Ostrava-Hrabuvka)** • Management • Teachers • Students • Parents
14:30-17:00	**School visit 4: Ostrava – Pre-school and basic school years 1 to 5 (ZŠ+MŠ Kozmice)** • Management • Teachers • Students • Parents
17:20-18:30	Local Municipality (Kozmice): school network and funding; resources allocation to education; social services in education (free meals, etc.) • Mayor
Friday, 29 May 2015, Zlín, Zlín Region	
08:30-10:00	Zlín Region: general meeting; school network and funding; resources allocation to education; social services in education (free meals, etc.)
10:30-13:00	**School visit 5, Zlín – *gymnasium* (Lesni ctvrt)** • Management • Teachers • Students • Parents
Monday, 1 June 2015, Ústí Region / Prague	
09:20-10:50	Ústí Region: general meeting; school network and funding; resources allocation to education
11:20-12:30	**School Visit 6: Basic (offering special education; former practical school) and secondary school (vocational education and training)** • Management • Teachers • Students • Parents
15:30-16:20	Teachers' Unions • Head of Unit of Prevention and Special Education, Ministry of Education (instead of Special Pedagogues Association) • President of Association of Teachers in Basic Education • President of Czech and Moravian Trade Union of Workers in Education
16:20-17:10	School Leader Associations • Association of School Leaders in Gymnasia • Association of School Leaders in Basic Education • CZESHA (Union of Schools' Associations in the Czech Republic) • Ferdinand Eder, University of Salzburg
17:10-17:40	Employers • Deputy Head of Unit of European Affairs, Union of Industry • Vice-President of Czech Chamber of Commerce

17:40-18:10	Private Schools • SSSCMS (Association of Private Schools in Bohemia, Moravia and Silesia) • Head of Unit of Church Education (Czech Bishop's Conference)
Tuesday, 2 June 2015, Prague	
08:00-08:30	Meeting with National Co-ordinator at the Ministry
08:30-09:20	Teacher Educators • University of West Bohemia • Charles University in Prague • Masaryk University • University of South Bohemia
09:20-10:10	Ministry of Finance • Culture, Education and R&D Department
10:10-10:50	National Institute of Education (NÚV) • Director
11:10-11:40	Centre for the Evaluation of Educational Achievement (CERMAT) • Director
11:40-12:10	Czech Statistical Office (ČSÚ) • General Director of Section of Demographics and Social Statistics • Director of Department School Statistics • Director of Department of School Statistics, Analytics and Information Strategy
12:10-12:40	Czech School Inspectorate (ČŠI) • Chief School Inspector
12:40-13:40	Official lunch
13:40-14:40	Inclusive Education (other stakeholders) • President of Czech Expert Society for Inclusive Education (ČOSIV) • Deputy Minister for Legislation and Equal Opportunities • Systemic Support for Inclusive Education in the Czech Republic
14:40-16:10	Seminar with researchers in education • Charles University in Prague • Masaryk University
16:30-17:40	Final Delivery by Review Team: Preliminary Impressions

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