

DIRECTORATE FOR EDUCATION AND SKILLS
EDUCATION POLICY COMMITTEE**First Draft of the Thematic Comparative Report on the Funding of School Education****Group of National Experts on School Resources****OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools****13-14 December 2016****OECD Conference Centre, Paris**

This document is the first draft of the thematic comparative report on the funding of school education from the OECD Review of School Resources. It reflects comments received on an extended outline presented at the 3rd meeting of the Group of National Experts on School Resources on 10-11 May 2016. This document has been prepared for review and advice from the Group of National Experts (GNE) on School Resources. The document reflects preliminary findings and conclusions from the Review and should not be distributed, published, quoted or cited. This draft includes a first attempt to compile data on current and capital expenditure from the questionnaires submitted by participating countries (Annex 4.A1). In some cases, there will be a need for clarification and these will be further developed accordingly. In addition, it is planned to include further analytical sections in Chapters 4 and 5. The thematic comparative report on the funding of school education will be completed in early 2017.

The Group of National Experts is invited to: - REVIEW this first draft and COMMENT on the content and structure of the report; - ANALYSE the preliminary descriptions of country practices, challenges and policy options proposed, DISCUSS their suitability and PROPOSE adjustments; - BRING to the attention of the OECD Secretariat both successful policy initiatives in countries and policy documents useful for the analytical work to be developed in the preparation of the thematic report; and - ADVISE on how to best include information from the questionnaires submitted by participating countries.

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INTRODUCTORY NOTE ON METHODOLOGY

1. This report is concerned with school funding policies that can help countries achieve their educational goals and student learning objectives. It draws on a major study, the *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools (School Resources Review)*, conducted in collaboration with countries and under the guidance of the OECD's Group of National Experts on School Resources. This report on school funding is the first of the series of thematic comparative reports. Two other thematic reports are currently planned: School Offer and the Organisation of the School Network (late 2017); and Human Resources Management (late 2018).

2. The *OECD 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 govern, distribute and manage resources so that they contribute to achieving countries' educational objectives to the fullest. It reviews policy evidence to help governments achieve efficiency and equity objectives in education. School resources include financial resources (e.g. expenditures on education, funding mechanisms, school budget), physical resources (e.g. school size and location, school buildings, equipment), human resources (e.g. teachers, school leaders) and other resources (e.g. learning time). The overarching policy question is "What policies best ensure that school resources are effectively used to improve student outcomes?"

3. Sixteen 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 allows 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 Country Review, undertaken by a team consisting of members of the OECD Secretariat and external experts. The countries actively engaged in the Review are:¹

- Preparation of Country Background Report (15 countries, involving 16 reports): Austria, Belgium (Flemish Community), Belgium (French Community), Chile, Czech Republic, Denmark, Estonia, Iceland, Kazakhstan, Lithuania, Luxembourg, Slovak Republic, Slovenia, Spain, Sweden and Uruguay.
- Country Review countries (10 countries): Austria, Belgium (Flemish Community), Chile, Czech Republic, Denmark, Estonia, Kazakhstan, Lithuania, Slovak Republic and Uruguay.

3. The analysis developed by the project is designed to support the development of effective national education policy. In particular, the project proposes policy options that best ensure that school resources are effectively and equitably used to improve student outcomes. The project provides opportunities for exchanges of best practices, mutual learning, gathering and dissemination of information

¹ However, to the extent they are covered by the OECD Education Database and by the academic and policy literatures, countries less actively engaged in the Review are still considered in the analysis and feature in the report's figures and tables.

and evidence of what works. It is also expected that, through the wide public dissemination of its results, the project will inform national policy debates on school resource among the relevant stakeholders.

4. The project involves a reflection about the policy implications of the currently available evidence on resource use in schools in a wide range of national settings. Evidence analysed includes the relevant academic and policy papers published in peer-reviewed journals, detailed information provided by countries on their school resource use policies, and views and perspectives collected from a wide range of stakeholders in a variety of countries. The work is undertaken through a combination of desk-based analysis and country reviews. This is complemented with meetings of the Group of National Experts. The work involves three major strands:

- *An analytical strand*, to draw together evidence-based policy lessons from international data, research and analysis. The analytical strand uses several means – literature reviews, country background reports (CBRs) and data analyses – to analyse the factors that shape resource use in school systems. The CBRs use a common framework to facilitate comparative analysis and maximise the opportunities for countries to learn from each other.
- *A country review strand*, to provide policy advice to individual countries tailored to the issues of interest in those countries, on the basis of the international evidence base, combined with evidence obtained by a team of experts visiting the country. For each country review, a team of up to five reviewers (including at least two OECD Secretariat members) analyses the CBR and subsequently undertakes an intensive case study visit of about 8 days in length. Each study visit aims to provide the review team with a variety of perspectives on school resource policies and includes meetings with a wide variety of stakeholders. Country review reports are published in the series OECD Reviews of School Resources.
- *A synthesis strand*, with the preparation of a series of thematic comparative reports. These blend analytic and review evidence and provide overall policy conclusions on specific themes.

5. The project is conducted in co-operation with a range of international organisations to reduce duplication and develop synergies. In particular, within a broader framework of collaboration, a partnership with the European Commission (EC) is established for this project. The support of the EC covers part of the participation costs of countries which are part of the European Union's EU's Erasmus+ programme and contributes to the preparation of the series of thematic comparative reports. In addition, the Review of Kazakhstan was undertaken in co-operation with the World Bank. Social partners are also involved through the contribution of TUAC and BIAC to the GNE as Permanent Observers. Other international agencies collaborating with the project include Eurydice, the Inter-American Development Bank (IDB), the Organising Bureau of European School Student Unions (OBESSU), the Standing International Conference of Inspectorates (SICI) and UNESCO.

Organisation of the report

6. This thematic report is intended to add value to the wide range of materials produced through the Review in the area of school funding by drawing out its key findings and policy messages. This report seeks to:

- Provide an international comparative analysis of funding policies in school education;
- Provide a stock-take of current school funding policies and practices in countries;
- Draw attention to effective school funding policy initiatives in countries;

- Develop a comprehensive framework to guide the development of school funding policies;
- Propose evidence-based policy options for the development of school funding policies; and
- Identify priorities for follow-up work at national, regional and international levels.

7. The contexts within which school funding policy making operates can vary markedly across countries depending upon their historical traditions, educational cultures and economic conditions. Policy initiatives that work well in one national context are not necessarily transferable. The Review has attempted to be sensitive to this through an approach that analyses school funding policies in relation to the values, vision and organisation of school systems in different countries as well as the broader economic, social and political contexts in which they operate. It is important to note that not all policy directions apply equally across countries. In a number of cases the policy suggestions are already in place, while for other countries they may have less relevance because of different social, economic and educational structures and traditions. The implications also need to be treated cautiously because in some instances there is not a strong enough research base across a sufficient number of countries to be confident about successful implementation. Rather, the discussion attempts to distil potentially useful ideas and lessons from the experiences of countries that have been searching for better ways to govern, distribute and manage school funding.

8. The report has five chapters. Following Chapter 1 which explains key concepts and major trends in school funding, Chapters 2-5 are concerned with the key substantive issues involved in school funding policies: Governing the use of financial resources (Chapter 2); Planning the use of financial resources (Chapter 3); Distributing financial resources (Chapter 4); and Evaluating and reporting the use of financial resources (Chapter 5). The chapters provide a description of school funding frameworks in countries; analyse strengths and weaknesses of different school funding approaches; and provide recommendations for the improvement of funding strategies. In doing so, the report synthesises research-based evidence on the impact of school funding policies.

9. The report provides examples of country initiatives in funding school education (available also in specific boxes). It should be noted that country-specific information given in this report with no associated source or reference is taken from Country Background Reports and Country Review reports produced through the Review. All the documents produced through the Review are available from www.oecd.org/edu/school/schoolresourcesreview.htm

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CHAPTER 1. MAIN CONCEPTS AND TRENDS IN SCHOOL FUNDING

10. This chapter sets the context for the subsequent analysis of school funding policies. It provides definitions of the efficiency and equity concepts which are used in this report to assess the suitability of school funding policies. It also elaborates on the contextual developments shaping the funding of school education and reviews the main trends within school funding. Furthermore, it discusses the need of securing adequate levels of funding and summarises the most typical sources of inefficiency and inequity in the use of resources within a school system. Finally, it identifies the areas for which there is room for further investment.

Concepts of efficiency, effectiveness and equity

11. Education systems have limited resources with which to pursue their objectives. Since most school resources in OECD countries are guaranteed by public budgets, the best allocation of state resources among competing priorities is a relevant policy concern. This concern is even more visible in times of economic downturn and in countries with pressing fiscal constraints: allocation of public resources is more scrutinized and political choices are increasingly based on effectiveness and efficiency arguments. As countries seek to enhance the performance of all students while providing more equitable learning opportunities, there has been a greater focus on ensuring that resources are directed to the areas where improvements in teaching and learning can best be achieved. Since, on average, long-run education expenditures as a proportion of GDP per capita have been increasing among OECD countries (Wolff et al., 2014; Wolff, 2015) while education services become relatively more expensive than other goods (De Witte and López-Torres, 2015), providing an efficient allocation of school resources and leading efficiency-driven reforms becomes increasingly important.

12. Education can be conceptualized as a process by which to a given set of resources employed a set of given outcomes will correspond. Schooling is thus the transformation of such resources as teachers' qualifications and practices, classroom size, or schools' facilities into improved cognitive skills, individual achievement and successful participation in the labour market. This process is mediated by the institutional factors shaped by educational policy and broader national policies as well as contextual factors affecting the success of the education system in general and the effectiveness of political reforms.

13. Therefore, there has been a greater focus on ensuring that resources are directed to those areas where improvements in teaching and learning can best be achieved and where funding is most needed. In this context, devising funding strategies promoting an *effective, efficient and equitable* use of resources is of key importance. The following sub-sections will provide the definitions of these main concepts which will be used throughout the report.

Effectiveness

14. Educational effectiveness refers to the ability to fulfil the potential of a particular combination of school resources to provide the desired outcomes. An effective school or school system are those able to adequately accomplish stated education objectives, taking the maximum possible outcomes from their available human and physical resources. Studies of educational effectiveness analyse whether specific resources have positive effects on different outcomes, and if so, how large these effects are (Lockheed and Hanushek, 1994). Therefore, effectiveness analyses are not necessarily concerned with the cost of different resources, but rather with which minimum combination of non-financial school resources provides a desired level of quality education or social and economic outcomes.

15. Effectiveness can be internal or external, depending on the nature of the outcomes being considered. Internal effectiveness analyses assess the extent to which the potential for providing quality education is being fulfilled. Educational policies targeted at increasing internal effectiveness are thus dependent on an evaluation of alternative uses of resources *within* the education system. External effectiveness, on the other hand, addresses how that educational potential is being fulfilled in terms of private and social financial outcomes. This type of analyses focus on how can particular different combinations of non-financial resources, as different teachers' characteristics or different educational curricula, impact over longer-term outcomes at the labour market. However, external effectiveness evaluations are of little help to provide guidance to educational policy since the financial effort invested in providing the human and physical resources actually used is not quantified. Hence, the concept is normally used as a first stage of a cost-benefit analysis (Lockheed and Hanushek, 1994).

16. Improving internal or external effectiveness can be attained through two different approaches: either by lowering the intensity of resources in the system maintaining identical levels of outcomes, or by attaining better outcomes with the same level of resources employed. The choice of the approach is not innocuous for policymakers, being especially relevant in the context of a limited set of available policies. The best way for seeking more effective education systems is always dependent on the political, cultural and economic constraints faced by education officials. In times of economic growth, an orientation towards increasing student performance, with a controlled increase or even no increase in the amount of school resources used, may more easily earn political traction, while in times of severe budget constraints the overuse of public resources becomes more salient and there is more pressure for reallocation to other uses. In any case, even with favourable political and economic conditions, having a more effective education system overall means a better adequacy between school resources and educational outcomes, and not that *more* resources necessarily lead to better results.

Efficiency

17. Educational efficiency, in turn, refers to the ability of fulfilling the maximum educational potential at *the lowest possible cost*. It thus adds a financial cost component to the effectiveness analyses. This means that it does not only matter, for instance, how many teachers per student or computers per school does an educational system need in order to provide quality education, but rather how the intensity of those resources translate into monetary terms and weigh on budgetary decisions. Thus, in order to analyse efficiency, it is necessary to have information regarding the cost of human and physical resources.

18. From the definitions, it follows that an education system can be effective without being efficient, but cannot be efficient without being effective. In a political perspective, this implies that there is no logical support for seeking cost reducing policies based on an efficiency argument, if a neutral or positive impact over effectiveness of education is not guaranteed in the first place. Thus, a policy reform can only reveal itself truly efficient if, from its proceedings, internal and external effectiveness remain at least unchanged.

19. Efficiency can also be internal or external depending on the nature of the outcomes considered. Internal efficiency focuses on the relationship between financial resources and outcomes which more directly accrue to the education system, like student achievement or literacy and numeracy levels. In the context of education policies, evaluations of internal efficiency are targeted at assessing how the available funds can be bet allocated *within* the system. The use of these analyses can provide some guidance on which school funding policies should be pursued, and are thus of crucial importance for the recommendations found in this report. External efficiency, on the other hand, focuses on comparing the benefits from investing in the education system with the benefits from investing comparable amounts in alternative priorities. As a condition, the outcomes of the different priorities must be comparable, which normally implies that these are measured as financial returns, normally in the labour market context. Thus,

these evaluations help to understand how many funds should be allocated *to or from* the system. They also provide the justification for long-term trends in education expenditures by showcasing how the economic costs with providing quality education can continuously translate into improved social and economic outcomes.

Conceptual limitations

20. There are some limitations to the concept of efficiency which bound the analyses to a restricted territory. Recognizing these limitations helps to frame and justify the analyses performed in the following chapters of this report.

21. First, it is not possible to have an absolute account of efficiency. In this sense, no abstract school or education system can be conceived as *perfectly* efficient. Absolute efficiency would imply knowing the limits of the educational process; however, it is both intuitively and empirically challenging to have a notion of these limits. These difficulties not only stem from the multiple inputs and objectives of the educational process, but mainly from the uncertainty underlying the educational process itself. Teaching and learning are *complex* rather than mechanical processes, which encumbers the task of finding a one best way of guaranteeing efficiency. This means that the mechanisms by which given combination of resources are turned into desired outcomes are not clear and feed into one another, implying that no benchmark system can be established from these fundamental relations. Educational efficiency evaluations are thus always relative to an existing standard, either in the past or in other educational systems.

22. Second, for the comparisons to be valid and the use of educational efficiency to be politically useful, the educational resources and outcomes must be considered in a sufficiently standardised way. Furthermore, the general conditions of educational provision in the systems compared in the analysis must be sufficiently identical (Wolter, 2010). Identifying the context and main features of each education system is thus crucial for establishing both the main similarities and differences, helping to draw general recommendations. However, even if the conditions are sufficiently comparable, the relative importance to different educational objectives may vary across countries. This means that the comparative work will mostly refer to the stated general educational goals set by the countries, and not to objectives discretionarily chosen during the analysis.

23. Third, an efficiency analysis, as defined above, is generally strictly focused on the quantitative relation between the resources and the outcomes. If care is not taken, the comparative work could eventually fail to capture the synergetic relations between specific sets of school resources across the different levels of the system. Such approach would disregard the organization and governance features of schools, local authorities and the education system as a whole. Beyond the right allocation of educational resources, designing the right incentive and organizational structure is essential for fulfilling the potential of education systems at the lowest possible cost (Levin, 1997).

24. Finally, efficiency analyses usually disregard social considerations. However, educational officials are often more interested in the allocation of resources that is more efficient from a societal perspective, and guarantees a distribution of resources complying with a given degree of fairness. An excessive focus on allocations which are strictly efficient at the school and system level can lead to outcomes which are nevertheless not socially desired. Therefore, it is important to account for decisive components of educational policy reality, including persistent institutional habits and political unwillingness to change, but also the inclination or not to provide fair educational experiences to all students.

25. Economic and financial perspectives will thus be considered in light of the broad objectives of education across countries, equity of educational opportunity and the long-term impact of the schooling process.

Equity

26. Educational equity is a broad and not easily definable concept. It is not only concerned with issues internal to the education system, but includes broader policy options targeted to such problems as social segregation, discrimination and integration of immigrants and minorities (Levin, 2003).

27. The formulation of the concept usually takes into account three different possible strategies underpinning policymaking: seeking equal opportunities, equal treatment or equal results across students and schools (Castelli et al., 2012). Equity is not, in every circumstance, synonym of equality: it is open to the unequal treatment of those who come from different starting points. Equality of opportunity implies the design of funding schemes that only allow for inequalities in resource provision if these are due to differences in merit. Striving for equal results across students with different characteristics, in turn, allows for differences in funding that take into account the differential costs of providing identical educational experiences. The different approaches also reveal a different relevance given to the phases of the educational process. While a concern with equal opportunities focuses on providing access to identical resources, the focus on equity as an achievement equalizer turns the debate towards the best policies to ensure an even distribution of educational outcomes. However, the policy options considered for each objective are not mutually exclusive and do not necessarily reflect divergent political strategies. Political disregard for an even distribution of school resources, based on a principle of equal opportunity, yields the potential for hampering the efforts to narrow the gap in educational differences across different subpopulations of students or schools with different characteristics.

28. There are two main ways of operationalizing equity in education: horizontally and vertically. While horizontal equity targets the overall provision of education, vertical equity justifies policy options targeted to ensure disadvantaged groups of students or schools have access to additional funds. Both these concepts will be further developed in the next sections.

Horizontal Equity

29. Horizontal equity is usually defined as the equal treatment of equals. It closely reflects the principle of equality in resource distribution, such that the same amount of school resources is allocated for similar types of provision. For the case of horizontal equity, the differences in educational opportunities are analysed within each subpopulation of students or schools to be targeted. It is, then, a useful concept when applied to intra-group equality, if the relevant subpopulations are well identified and separately analysed (Berne and Stiefel, 1999).

30. Horizontally equitable funding schemes are set such that there is a minimum dispersion of access to resources *within* the relevant subpopulations of students or groups of schools.

Vertical equity

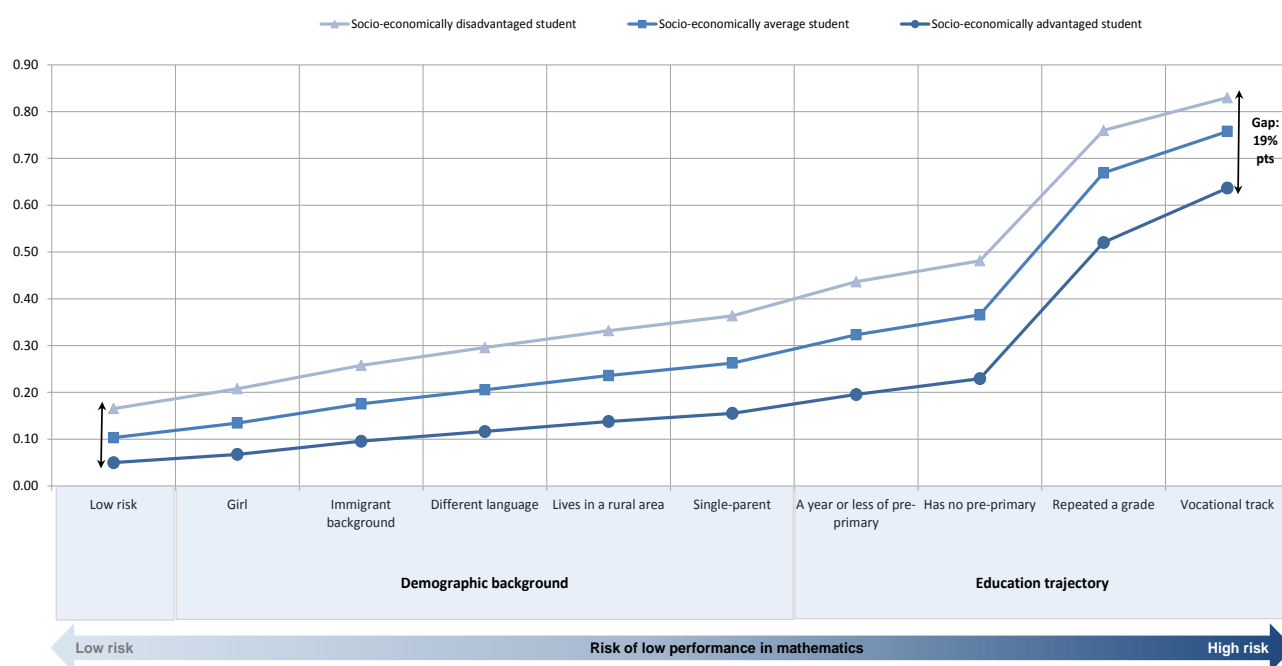
31. Vertical equity is normally defined as the unequal treatment of unequals. In other words, students or schools with different characteristics should be given access to different levels of funding. These differences in funding reflect the additional costs of providing similar educational experiences *across* students with different characteristics. It is thus the concept that most closely reflects the principle of equal educational opportunity. At the student level, it implies that funding should be allocated according to the specific needs of each subpopulation of student, identified by its relevant characteristics. These characteristics are normally those of family and cultural background, gender, ethnicity, immigrant status or

specific special education needs. At the school and regional levels the usual characteristics considered are related with the level of urbanicity of the municipality or region, its dimension and the financial capacity to raise additional revenues.

32. Vertically equitable funding schemes are set such that the all students have an equal opportunity to achieve their full potential, independently of the circumstances which are out of their direct control. As Figure 1.1 portrays, using PISA data, the risk of low performance in mathematics is significantly different and systematically increases for students with key identified characteristics (OECD, 2016d: 48; OECD, 2016c). Funding strategies for education must take this into account if equity across different groups of students is to be achieved.

Figure 1.1. Cumulative probability of low performance in mathematics

Variations between levels of socio-economic advantage across risk profiles (OECD average)



Note: Risk profiles are based on students' socio-economic, demographic and education characteristics.

The profile of a low risk student is a student who is a boy, has no immigrant background, speaks the same language at home as the language of assessment, lives in a two-parent family, attends a school located in a city, attended pre-primary education for more than one year, has not repeated a grade, and is enrolled in a general track.

A socio-economically advantaged student is a student at the top quarter of the PISA index of economic, social and cultural status (ESCS). A socio-economically disadvantaged is a student at the bottom quarter of ESCS, and a socio-economically average student is a student at the average of the second and third quarters of ESCS.

Coefficient estimates come from a multivariate logistic regression with low performance in mathematics as the outcome and each of the variables in the figure as a covariate.

Source: OECD (2016) Figure 2.19. Low Performing Students: Why They Fall Behind and How to Help Them Succeed, PISA, OECD Publishing, Paris.

33. Inequality of opportunity in educational systems can both reflect particular governance and organizational features as well as broader social inequalities. Research has been providing relevant evidence for supporting the design of vertically equitable funding schemes. Schools yield the potential to be a fundamental lever of social mobility and therefore to mitigate risks of future social inequality. Attaining higher levels of education is correlated with such positive outcomes as lower risk of

unemployment, higher wages or better health (OECD, 2013a). Providing such results at an aggregate level implies an equitable access to quality education. Furthermore, within inclusive schools, students with learning difficulties tend to become more successful by being integrated in an environment of intellectually motivated students and teachers (OECD, 2011; 2012).

Potential trade-off between horizontal and vertical equity

34. There is an apparent tension between the concepts of vertical and horizontal equity. While horizontal equity is assessed by minimum variability in the distribution of resources, vertical equity focuses on providing differential funding across the education system. In order to minimize this apparent tension, the analyses must be clearly identified and be correctly conditioned in the relevant factors for differentiation.

35. Allocation of differential funding to comply with vertical equity objectives leads to overall variability in funding across regions and schools. Therefore, if the analyses do not separate increases in funding for schools and regions *with greater needs* from increases in funding *independently of needs*, the policymakers seem to be faced with a trade-off between ensuring vertical equity and horizontal equity (Toutkoushian and Michael, 2007). However, a clear conceptual distinction and assessment reveals no trade-off between them. Horizontal equity can be pursued with no prejudice of vertical concerns. It is possible to both provide differential funding across subpopulations of students, while guaranteeing minimum variability of access to resources within those subpopulations. So, while a funding scheme can allocate additional funding for schools with a higher proportion of students from disadvantaged socioeconomic backgrounds, horizontal equity can be attained by guaranteeing that such additional funding is identical for those groups of students or schools with similar characteristics.

36. Research in the area of educational economics has been providing evidence supporting well designed and transparent *funding formulas* as the best way to combine horizontal and vertical equity, while incentivizing the efficient use of school resources at the different levels of the system (Levačić, 2008). A funding formula is a set of agreed funding criteria which are impartially applied to each school, normally through a mathematical formula making the coefficients attached to each criterion explicit (Levačić et al., 2000; Fazekas, 2012). Through funding formulas, the equity and efficiency objectives are made explicit and the coefficients yield the potential to better address specific school priorities. However, a more thorough discussion of funding formulas is included in Chapter 4.

Trade-offs and complementarities between efficiency and equity

37. The effort in providing similar educational opportunities, treatment or results across students and schools normally entails higher investment and the use of more resources. This additional funding may not be proportionally translated into higher achievement at the aggregate level, meaning that there is a potential for lower efficiency, and thus a trade-off between these two main objectives. In fact, it has been noted that equity and efficiency are traditionally seen as competing goals (Heckman, 2011: 31). However, the relation between efficiency and equity is not clear, rather depending on the set of educational policies pursued. Education officials are not *necessarily* faced with a choice between these two notions (Wößmann, 2008).

38. Admitting that efficiency and equity can be complements to one another changes focus from a matter of political inclination, either to one or the other objective, to a choice of the organizational design that best favours synergies between inclusive education, better results, and the best use of the available resources. Echoing the words of Wößmann (2008: 214), “if schools challenge all students to their highest potential, an efficient school system can also be equitable at the same time”. It is thus the challenge of education officials to provide the structure for schools to trigger *all* students’ potential. If it can be shown

that more equitable distributions are both a necessary and sufficient condition for education success and efficiency, political willingness to pursue such distributions is more easily obtained.

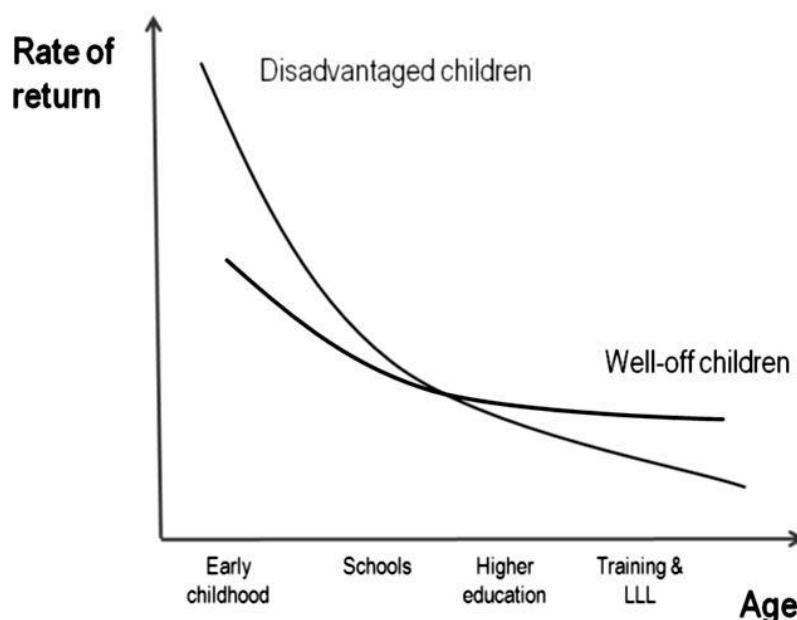
Funding of early childhood education

39. The policy orientation that seems to be gathering more consensus, regarding the complementarities between educational efficiency and equity, is the provision of quality early childhood education. Evidence from the United States (Cunha et al., 2006; Schütz et al., 2008; Blankenau and Youderian, 2015) and Europe (Wößmann, 2008) has been showing that investing as early as possible in high quality education for all yields larger returns for students' individual achievement (Figure 1.1). Education is a self-reinforcing process, in which new knowledge and skills are attained over a previous solid basis of both those factors. In other words, early cognitive development makes it easier to acquire skills and knowledge later in life. Therefore, policies directed to providing better early childhood education have a multiplicative effect over the individual's time cycle. Failing to provide the adequate level of resources to sustain quality early childhood education increases resource expenditure in later stages of the schooling process, hampering the efforts for more efficient allocations of resources.

40. In the case of early childhood education the most efficient and equitable policies coincide. Integrating the students unable to get the necessary early skills at home in pre-primary quality education leads to better achievement across all the individual's schooling experience (Wößmann, 2008). Preschool systems with higher levels of enrolment and duration lead to higher equality of opportunity (Schütz et al., 2008) and yield the potential for a significant reduction in intergenerational inequalities (Blankenau and Youderian, 2015). Therefore, reallocating investment to early childhood education, while targeting it to disadvantaged students, yields persistent positive effects across the individual's life.

Figure 1.2. Efficiency and equity of investing early in education

Rate of return differences between disadvantaged and well-off children across levels of education



Source: Cunha, F. et al. (2006), "Interpreting the Evidence on Life Cycle Skill Formation", in E. A. Hanushek and F. Welch (eds.), *Handbook of the Economics of Education*, Vol. 1, North-Holland, Amsterdam; Wößmann, L. (2008), "Efficiency and equity of European education and training policies", *International Tax and Public Finance*, Vol. 15/2, pp. 199–230, <http://dx.doi.org/10.1007/s10797-008-9064-1>.

41. However, as for all levels of education, not only the amount of funding is important, but also the way the additional resources are translated into effective quality education. The complementarities are, thus, potentially stronger for preschool systems that emphasise learning curriculums over exclusively investing in childhood care, since the former are more effective at promoting skill formation than the latter (Wößmann, 2008).

42. Despite the demonstrated importance of early education, most school resources are still allocated to higher levels of education. Nevertheless, several countries have been extending their networks of early childhood education, with participation rates increasing considerably between 2005 and 2014 (OECD, 2016a: 300). Raising awareness for the potential gains in both efficiency and equity are a fundamental concern in school finance and a logical support for defending higher investments in this area.

Development of non-cognitive skills

43. Academic achievement accounts for just a fraction of the full impacts of the schooling process on a child's life. Besides preparing students academically, schools perform the crucial function of replicating the environment, habits and attitudes that emulate the social relations that students will later find in the labour market (Bowles and Gintis, 2002). Communication skills, positive attitudes towards work, initiative, control or motivation are all skills sought by employers and important for determining individual success (Gutman and Schoon, 2013; Farkas, 2003). Therefore, on the broader light of such outcomes, both educational effectiveness and efficiency can be increased by designing policies promoting the development of the non-cognitive skills that enhance the chances of future students' success in the labour market.

44. It has been argued that socioeconomic background also influences the development of certain personality traits and non-cognitive skills, even after controlling for measures of cognitive capacity and health differences (Fletcher and Wolfe, 2016). The evidence also suggests that the divergence of socio-emotional outcomes across different socioeconomic backgrounds tends to accumulate with time. Therefore, policy interventions aimed at preventing, rather than remedying, such differences are more effective in the early stages of the educational process (Kautz et al., 2014). Furthermore, fostering non-cognitive abilities at an early age has been shown to have a positive impact over the cognitive abilities of students in later stages of their lives (Heckman, 2008). Therefore, investing early on the development of such abilities, especially for the case of students from disadvantaged socioeconomic backgrounds, contributes to successfully tackling both efficiency and equity concerns.

Cultural capital as a determinant for educational achievement

45. The arguments for seeking a vertically equitable distribution of school resources across students come from the fact that socioeconomic and family backgrounds have a strong influence on the academic achievement of children, one of the most consistent findings in educational research. The transmission of cultural capital hypothesis is important for explaining the influence of the children's family over educational outcomes.

46. The schooling process promotes specific language, behaviours and relations with authority which, directly or indirectly, emulate the social arrangements which can be found in society at a larger scale. Cultural capital has been defined as the familiarity and ease in identifying with those social arrangements that determine the dominant culture (Bourdieu, 1986). These can be translated in the form of attendance in such activities as going to museums and theatres or possessing cultural goods like art works, classical music or several books at home, but also by the activation of these resources through the effective engagement of children on those activities (Tramonte and Willms, 2010). Socioeconomic background is usually correlated with the possession of cultural capital, meaning that children from higher socioeconomic

status families are already familiar with the social arrangements found when entering school, which helps them to better adapt to the school environment and attain better academic results.

47. Cross-country comparisons have been showing that cultural capital is generally significant in explaining students' results in mathematics and science (Huang and Liang, 2016), besides having positive effects over such different outcomes as reading literacy, sense of belonging to school or occupational aspirations (Tramonte and Willms, 2010). The positive effect of cultural capital was also found to be stronger in schools with more lower achievers and with higher variability in student performance (Andersen and Jæger, 2015). Furthermore, a study of Swedish secondary schools has shown that cultural practices, like reading and visiting cultural institutions, mediate part of the relation between socioeconomic background and academic success (Nordlander, 2016). Thus, the most recent international evidence seems to reveal a potential for policies promoting both efficiency and equity through the adequate endowment of cultural resources to students, especially those from disadvantaged socioeconomic backgrounds.

Main trends and concerns in school funding

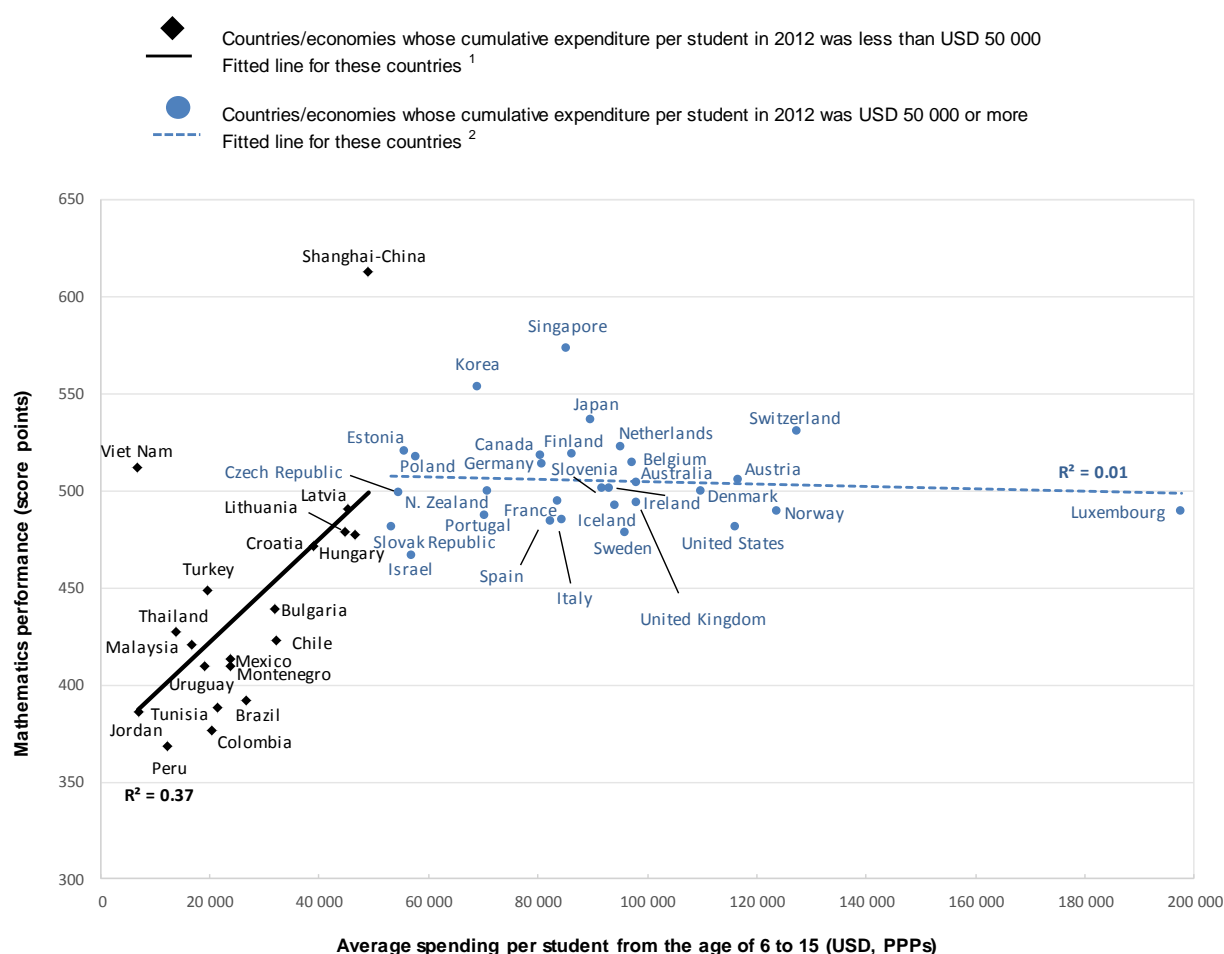
The overall level of funding matters but allocation strategies are equally important

48. A major variable conditioning the use of resources in school education is the overall level of resources available. Spending choices, the ability to respond to new priorities and achieving quality education for all, among other things, will depend on resources available for education. Although the relationship between the learning achievement of 15-year olds (as measured by PISA) and the amount spent on their schooling is not purely causal, research has shown that a minimum level of financing is required to ensure that students have access to materials and resources necessary for learning (World Bank, 2013).

49. As can be seen in Figure 1.3, countries that fall below the cumulative spending per student threshold of roughly USD 50 000 in purchasing power parity (PPP) terms are more likely to see a correlation between cumulative spending per student and PISA performance (OECD, 2013). This indicates that while larger education budgets are no guarantee of better education quality, a minimum level of spending is necessary for ensuring good quality education provision. A school system that lacks quality teachers and school leaders, adequate infrastructure and enough textbooks will almost certainly fail to promote quality education. Underinvestment in the school system can also result in educational inequalities, as resource challenges tend to concentrate in certain disadvantaged areas or schools.

50. At the same time, Figure 1.3 also appears to indicate that above a certain threshold of funding which ensures adequate material conditions in schooling, the overall level of spending is no longer a predictor of a country's mean performance in PISA - the success of a country's education system seems to depend more on how educational resources are invested than on the volume of investment. The countries that are the strongest performers in PISA are not the wealthiest, nor do they allocate more money to education. This suggests that, in these countries, what matters more is how the resources are allocated rather than how much is spent (OECD, 2012a).

Figure 1.3. Spending per student from the age of 6 to 15 and mathematics performance in PISA 2012



Note: Only countries and economies with available data are shown. 1. A significant relationship ($p < 0.10$, at 10% significance level) is shown by the solid line. 2. A non-significant relationship ($p > 0.10$, at 10% significance level) is shown by the dotted line.

Source: Figure IV.1.8 in OECD (2013b), *PISA 2012 Results: What Makes Schools Successful: Resources, Policies and Practices (Volume IV)*, PISA, OECD Publishing, Paris. <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-IV.pdf>.

The growing imperative of an efficient use of public resources

There has been a long-term increase in educational spending

51. The efficient use of resources is a growing concern. Education is costly and getting more so (Baumol, 2012; Wolff et al., 2014; Wolff, 2015). As of 2013, expenditure per student at primary and secondary level varied between 22% and 26% of GDP per capita, across OECD countries. Between 2005 and 2013 expenditure per student by educational institution at the primary, lower secondary and upper secondary levels increased by an average of 19%, even though enrolment rates in most countries remained relatively stable (OECD, 2016b).

52. The long-term pattern of education spending largely reflects a continuous increase in the cost of human resources. Since public sector services, and education in particular, have limited ability to substitute human labour by less expensive productive capital, such as machines, it is expected that the weight of public costs with education will continue to rise (Baumol, 2012). This natural tendency for the increase in

costs can justify political unwillingness to follow efficiency-driven reforms. However, this does not have to necessarily be the case. The difficulties in maintaining a stable pattern of expenditures with education in the long-term does not imply that a more efficient use of resources should not be obtained. Evidence seems to suggest that the variations of student performance across countries are mainly explained by differences in institutional factors determining the organization of the school system, rather than the intensity of the school resources used (Hanushek, 2006; Wößmann, 2016). Understanding the imperative for a more efficient allocation of resources through the reorganization of funding schemes and governance structures is therefore fundamental. Box 1 provides an overview of potential sources of inefficiencies in school education that were identified across countries participating in the OECD School Resources Review.

53. Addressing such inefficiencies is often politically challenging. Policies aimed at increasing available resources to education are generally easier to pass through in public opinion than measures targeted at reshaping the organizational structures and changing institutional habits (Hanushek, 2006). On the other hand, recognising that the long-term continuous increase in education costs is a natural tendency helps justifying an excessive focus on achieving efficiency gains through the minimization of costs, which could otherwise limit the ability of schools to provide minimum quality education and eventually crowd out the best human resources. It is important to ensure that strategies to achieve greater efficiency of a school system go in line with a focus on quality improvement. In order to build momentum for change and engage stakeholders in designing a more efficient provision of education, it is important that the focus is not merely on cost savings or a prioritisation of accessibility over quality.

54. Improving educational efficiency is a complex task. Effective monitoring and evaluation is thus critical for delivering efficient allocations of resources. Monitoring and evaluation in education have become a necessity for policy makers to demonstrate that public funds are spent effectively and that the public purposes for funding education are actually fulfilled. This is also crucial to better justify given policy options to all the stakeholders involved. These issues will be discussed in more detail in Chapter 5.

Box 1.1. Main sources of inefficiency and inequity in education

Small schools. While research indicates that small schools are likely to have positive effects on teacher-student relationships, student well-being and links with the community, the operation of a large number of small schools raises efficiency, quality and equity challenges. The costs of providing education in a small school, for a given number of students, are generally higher than the costs of similar educational provision in larger schools. If students are so few that the school's capacity is underutilised, this has a direct negative impact on the efficiency of the school system (Ares Abalde, 2014). Research from different countries indicates that per student expenditure is highest in smaller schools (Falch et al., 2008; Larsen et al., 2013) and that important economies of scale can be achieved when increasing school size up to a certain enrolment level. A network mainly composed of small schools and small buildings not only has financial implications but also makes it more difficult to realise other policy objectives. Creating comprehensive schooling and full-day provision are usually more difficult to guarantee with few students by educational institution. Also, small-sized schools may not have sufficient students to implement single-grade classes or allow for teacher specialisation (Ares Abalde, 2014). In countries with many extremely small schools, underutilisation (i.e. large spaces and high staff numbers for few students) is very likely to occur. In some countries, given projected demographic developments, this problem will only increase in years to come.

Small classes. Keeping lower student-teacher ratios and small classes implies a large intensity in the use of human resources. Despite the common sense perception that small classes imply better learning environments by enabling a closer relation between teacher and students, international evidence has been showing a not significant positive relationship between small classes and student achievement in most countries (Wößmann, 2016), although there are indications that students in the early years of schooling and those from disadvantaged backgrounds are likely to benefit from small classes more than others. Educational research findings suggest a policy trade-off between investing in *more* human resources, by maintaining small classes, and investing in *better* human resources, for example through investment in teacher education, professional development and employment conditions (see, for instance, Dolton and Marcenaro-Gutierrez, 2011 and Bietenbeck et al., 2015).

Box 1.1. Main sources of inefficiency and inequity in education (cont.)

Drop-outs. An important source of inefficiency is linked to the high cost of educational failure. There is substantial resource waste when students do not progress through the system as expected and exit with insufficient knowledge, skills and competencies. School failure measured by inability to guarantee a minimum level of skills and students dropping out before completion is an important challenge across OECD countries (OECD, 2012b: 17). This may be linked to the fact that many school systems allocate resources in a traditional pattern in which students who progress through to the end of secondary education are treated from a funding angle as requiring higher outlays, while students who are struggling at the primary or lower secondary levels receive fewer resources. There is a case to be made for seeking greater balance in funding across educational levels, as a major reduction in under-achievement in primary school could help increase the flow of students into cognitively demanding upper secondary programmes and would likely reduce levels of dropout as well as unemployment on leaving school. Students in risk of dropping out are normally those with the lowest skills, and thus the least prepared for leaving the education system to the labour market. Therefore, systems with high drop-out rates of students in formal schooling find it harder to obtain both externally efficient and vertically equitable allocations of resources.

Inadequate provision of for students with special educational needs. The operation of a large network of schools for students with special educational needs (SEN) involves high costs in many countries. Although an increasing number of students have been enrolled in inclusive settings across the OECD, concerns remain in many countries about the provision of schooling for students with special educational needs. Special schools may be necessary for some students with moderate or severe disabilities, but the enrolment of high functioning students with mild disabilities in these schools appears both stigmatising and inefficient. In some countries, a large proportion of students with special educational needs are still educated in separate special schools, which may reflect insufficient resources invested in achieving greater inclusion in mainstream schools. Providing teachers the specific preparation for coping with the presence of special education needs (SEN) children is fundamental to guarantee that greater inclusion enables these students to reach their potential.

Year repetition. Retaining low-performing students in the same school year raises three main efficiency concerns. First, it is detached from a student-based conception of the schooling system. Year repetition as an extensively used practice involves branding some students as a failure, which may ultimately hamper their progression in the system. A vast body of literature reports that the slight academic benefits of year repetition are short-lived, while it holds rather high individual and social costs (OECD, 2012b: 49–56). Second, it gives the wrong incentives for teachers. When children are responding negatively to given teaching methods, teachers having the possibility of retention as common practice, will have higher incentives to relax the support to those students and opt for retention instead. Third, the direct costs for school systems are high, since the retention of students in the system increases the number of enrolled students and thus the level of funding required, besides delaying the participation in the labour market by one year or more. Moreover, student retention also poses risks for equity, due to a bias based on social background (Field et al., 2007). According to PISA 2012 data, in 35 out of the 61 education systems examined, disadvantaged students were significantly more likely to have repeated a year, even after controlling for differences in performance (OECD, 2013c: 75).

Early tracking. Selection policies in general, and early tracking in particular, affect the distribution of achievement across students, having effects on both efficiency and equity. International research has been showing that early selection to specific educational tracks is typically related to a stronger effect of socio-economic background on the performance of students (OECD, 2012b: 56–63; Wößmann, 2016). Countries with these kind of policies have greater inequality of results across students, with no significant impact on overall performance (Hanushek and Wößmann, 2006). Less demanding tracks tend to provide less stimulating learning environments for students to improve their achievement, by not being around more capable and intellectually stimulated peers, reducing their performance (Hanushek and Wößmann, 2006; Ammermüller, 2005) and future academic and other expectations (Shavit and Müller, 2006).

Box 1.1. Main sources of inefficiency and inequity in education (cont.)

Inadequate teachers' salaries, recruitment and training. Teachers are fundamental agents in the schooling process and their quality and effectiveness matters for improving student achievement (Rockoff, 2004; OECD, 2005). Paying teachers insufficiently might generate ineffectiveness through the crowding out of the best and most qualified human resources. Spending reforms driven by systematic reductions in teachers' salaries (the highest portion of current expenditure in education across OECD countries) may entail a substantial loss of attractiveness of the profession and create challenges to quality, equity and efficiency in the long run. Research has been showing that teachers' compensation levels are important to determine who comes to the profession, who remains and for how long (Dolton and Marcenaro-Gutierrez, 2011). However, not only the compensation levels are important, but also how the recruitment and management policies regarding teachers incentivise best practices. This relates to the level of flexibility given for hiring teachers at the local and school level, as well as the selection criteria for obtaining the positions and the distribution of teachers across schools.

Inadequate provision of pre-primary education. Early childhood pre-primary education is fundamental for attaining both efficiency and equity. However, the percentage of students enrolled in pre-primary education institutions varies considerably across countries. While in France, every 3-year-old child is enrolled in pre-primary education, in Greece, only 1 in 2 4-years-old is enrolled in such type of education, as of 2014 (OECD, 2016a: 298, Figure C2.1.). Also, the funding of pre-primary education across the OECD is still relatively low, compared to other levels of education. Ensuring adequate levels of funding allows for recruiting the qualified human resources to support the development of children's cognition, socio-emotional capacities and attitudes towards learning. International research has been showing that a re-allocation of investment towards pre-primary education reduces the impact of socio-economic background on future academic performance and increases achievement in later stages of the schooling process (Wößmann, 2008; Cunha et al., 2006). Furthermore, investment in these early stages also avoids higher levels of spending in later stages of education, where the differential costs for closing the gaps between high and low performers are higher.

Other potential sources of inefficiency. The OECD School Resources review identified some other potential sources of inefficiency which are directly related to those above. Excessive **fragmentation of study offerings** in secondary education, if not justified in a proved alignment with students' cognitive level and labour market needs, may lead to inefficiencies due to the existence of very small courses and classes. **Ineffective transitions between education levels** may occur when the curricula is not articulated between the different levels and types of education, which may lead to lower performance across specific groups of students and increased additional costs to bridge the gaps between low and high performers. High rates of **student absenteeism** lead to inefficiencies due to the available resources which are wasted by students consistently skipping school. Finally, if there is **little use of evaluation results** it is difficult to identify specific resource misuse and generate improvement of practices at the school level, conducive to higher internal efficiency.

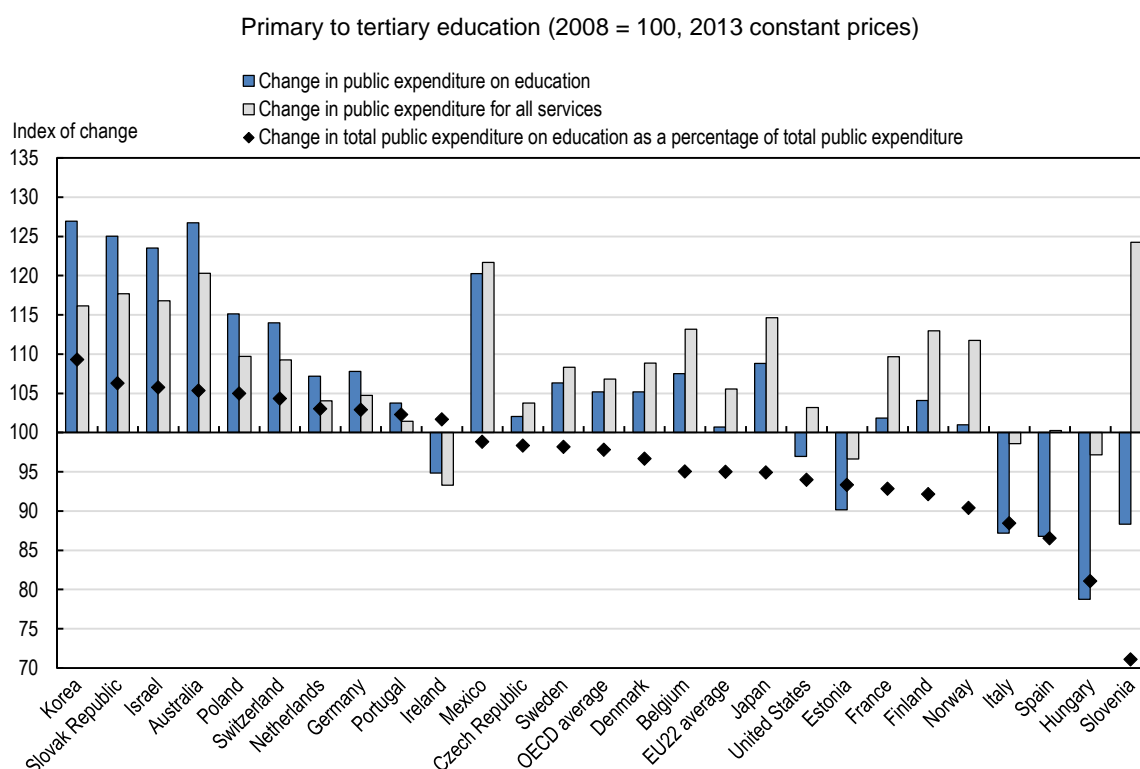
Since the economic crisis, public funding for school education has decreased in many countries

55. Despite the long-term continuous increase in educational expenditures as a share of GDP, public spending on education has come under pressure across the OECD and has lagged behind the growth of GDP in the years following 2009. From 2010 onwards, fiscal consolidation has led many countries to reduce their spending on primary and secondary education (OECD, 2013d). Between 2000 and 2012, the expenditure on school education in OECD countries rose from an average of 3.5% to 3.7% of GDP. Yet, between 2010 and 2012, 20 out of 31 OECD countries with available data reduced their expenditure on primary to post-secondary non-tertiary education as a proportion of GDP (OECD, 2015a: 234, Chart B2.4). Over the entire period from 2000 to 2012, 9 out of 25 OECD countries reduced their relative spending on primary, secondary and post-secondary non-tertiary education. Some of these countries faced severe austerity measures which included cuts in the public education budget. These measures typically involved salary cuts for personnel working in public education, the freezing of career progression in the public service, or the downsizing of educational administration (OECD, 2013d).

56. The 2008 financial crisis has intensified the need for efficiency in the use of public funds for education. Increasing educational spending is difficult to realise in the context of fiscal consolidation efforts that a range of countries face. With challenging financial circumstances, the emphasis turns to

achieving greater efficiency from the expenditure base. The recent pattern in education expenditures reflects a prioritisation of public expenditures between education and other public sectors, such as health, unemployment and social policy in general. Figure 1.4 shows this trend, although also including the expenditure in tertiary education. Governments willing to justify the use of additional funding for education have to justify their choices based on reforms targeted to increase the external efficiency of education systems.

Figure 1.4. Change in public expenditure on education as a percentage of total public expenditure, 2008 and 2013



Source: OECD (2016) Figure B4.2. Education at a Glance 2016: OECD Indicators, OECD Publishing, Paris.

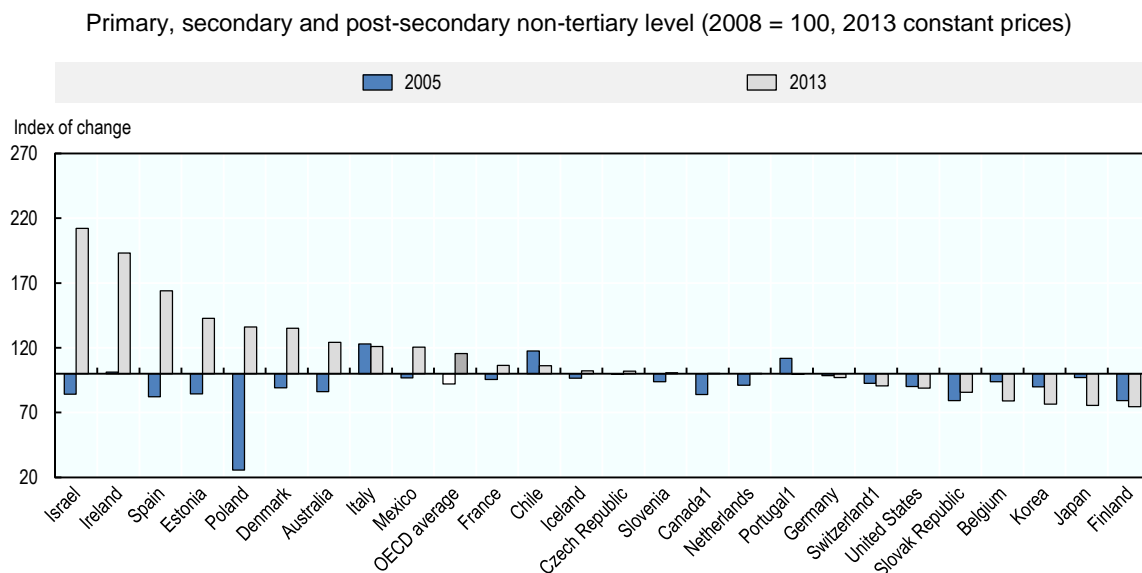
Private funding has increased relatively more after the economic crisis

57. Public funding still is the main source of funding in primary, lower and upper secondary education. On average, only about 7% of primary and lower secondary schools' funding in OECD countries comes from private sources (OECD, 2016a: 217, Table B3.1a). Nevertheless, the economic crisis changed the patterns in the distribution of these funds. While the amount of funding coming from private sources only increased 8%, between 2005 and 2008, the increase between 2008 and 2013 reached 16% across OECD countries (OECD, 2016a: 217, Table B3.2a) revealing an increased reliance on private sources in the years after the crisis. From the countries for which there is available data few countries, like Belgium, Finland, Germany, or the United States, decreased the reliance on private sources over the same period.

58. The distribution of funding sources varies considerably across countries. This variation reflects differences in the education systems' funding strategies for education. Availability of public resources, the efficiency of public institutions, the vitality of private sectors or specific cultural traits regarding the relation with public services may explain differences in strategic orientation. While in countries like

Australia, Chile, or Mexico most of the funding for school education comes from household expenditure, in countries like Austria, Denmark, Finland, Norway or Sweden, less than 5% of school funding comes from private sources, as of 2013 (OECD, 2016a: 213, Figure B3.2.).

Figure 1.5. Change in expenditure in educational institutions from private sources, 2005 and 2013



1. Year of reference 2011

Source: Based on Table B3.2a. from OECD (2016), "Financial and Human Resources Invested in Education", Education at a Glance 2016: OECD Indicators, OECD Publishing, Paris.

Funding strategies are increasingly being used to shape the incentives of school agents

59. The increasing reliance on market-based mechanisms in education, such as greater parental choice and performance-based rewards or sanctions for school, the increased focus on efficiency and the decentralisation of funding have led the trend for focusing on the design of incentive systems. This implies the use of funding schemes designed as active instruments for strategic steering, providing the signals and incentives for aligning individual action with given common objectives. Evidence from educational research has been suggesting that differences in success across education systems, as measured by student achievement, are systematically related to differences in organization and governance (Wößmann, 2016). Therefore, using funding mechanisms as instruments for shaping organization at all levels of the system is fundamental.

60. The trend towards incentives-based policy is often associated with the drift towards a New Public Management (NPM) policy frame. Educational policies within the NPM framework are those designed for shaping the incentives of agents at all levels of the education system (policy-makers, local authorities, school leaders, teachers, students, etc.). It implies increased budgetary and management authority and discretion given to the agents in terms of resource allocation, while a greater emphasis is given to centrally determined objectives (Fakharzadeh, 2016). One of the fundamental organizational features for funding to signal conformity with given objectives is that the returns on given financial choices accrue to the entities responsible for forgoing alternative funding choices. This means that the agents responsible for specific funding choices must also be the ones to deal with the opportunity costs of those choices.

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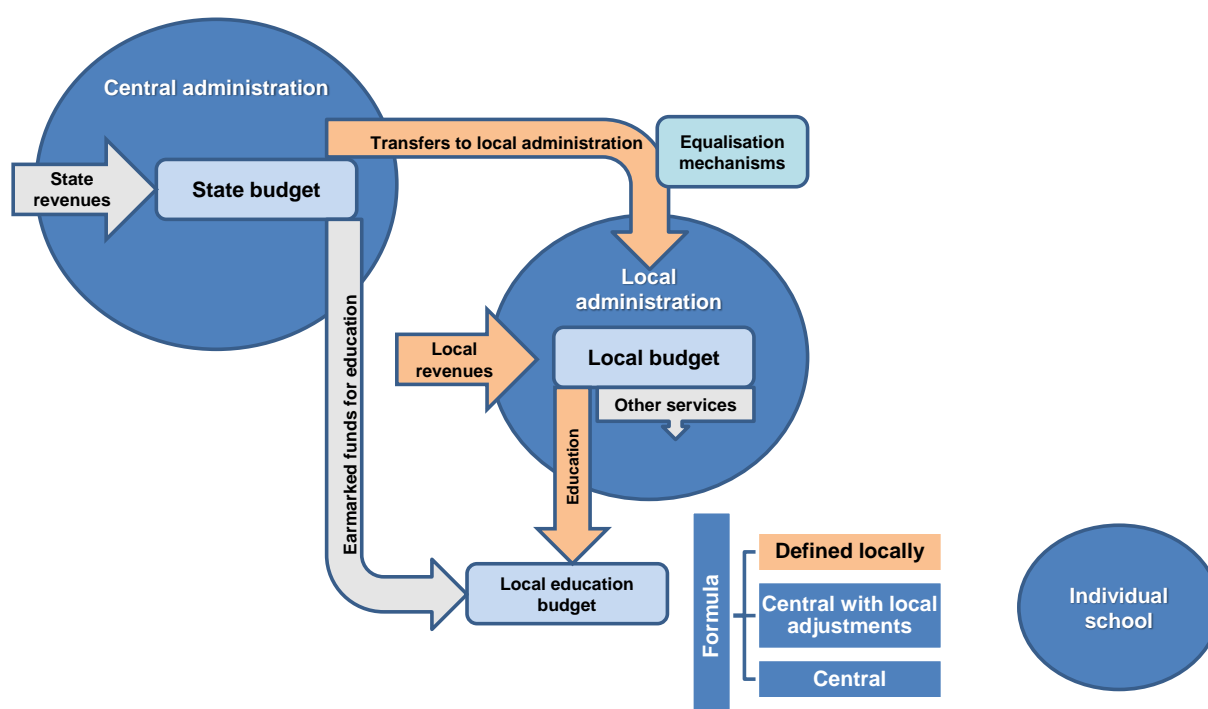
CHAPTER 2. GOVERNING THE USE OF FINANCIAL RESOURCES

61. This chapter is about the governance of school funding. It looks at the distribution of responsibilities for school funding across different actors, the level of discretion that these actors have in financial management and the capacities necessary to ensure an effective and equitable use of resources across school systems.

62. Developments in education administration structures influence the effective distribution, utilisation and management of resources at different levels of the school system. Responsibilities for school funding are typically shared among a range of different actors and levels of administration. As a result, school funding needs to be designed in ways that clearly define the respective responsibilities of different actors, encourage the co-ordination between different decision-making levels, build capacity at sub-national level and balance equity imperatives with the need to use local knowledge for the distribution of resources.

63. Figure 2.1 illustrates different aspects of the governance of school resources in a system with distinct educational jurisdictions. Given that most public funding for schools comes from the central government, a range of policy questions emerge about possible funding approaches: What level of discretion should regional and local governments have in funding individual schools? What type of capacity building is necessary so that all actors involved have the right skills to use resources effectively? When local authorities decide levels of spending or have distinct abilities to raise own revenues for education, should equalisation mechanisms be introduced? And if yes, what kinds?

Figure 2.1. Multi-level governance of school funding



Distribution of responsibilities for school funding

64. Over the past decades, there has been a broad trend towards more decentralisation and enhanced school autonomy. Most countries combine central direction over school policy development and standard-setting with a measure of devolved responsibility for the implementation of policy at the local and/or school levels. As a result, sub-central authorities such as regions and municipalities, as well as individual schools, have acquired greater responsibility in managing their own budgets, recruiting their own staff and organising school structures. In addition, in several countries responsibilities for school funding were devolved not only to sub-central jurisdictions but to a broader range of school providers or "school owners" including private providers and school boards administrating one or several schools.

65. The decentralisation and devolution of education and other public services is expected to increase responsiveness to the demands of local communities, raise the potential for innovation, adapt financial and human resource management to local conditions and generate trust, commitment and professionalism. Several studies also find that decentralisation leads to higher spending on education (e.g. Busemeyer, 2008). The arguments towards greater decentralisation and school autonomy are generally framed within the set of relations between schools and the environment in which these operate. These relations are of mutual influence: not only the context in which schools operate helps set the resources available for its activities, but the schools themselves also contribute to shaping the communities in which are integrated (Scheerens et al., 2011). Therefore, more autonomous schools and local administrations have the potential to use the available resources more effectively as they are better able to adapt these to their local conditions and manipulate the operating environment to their advantage (Scheerens, 2004).

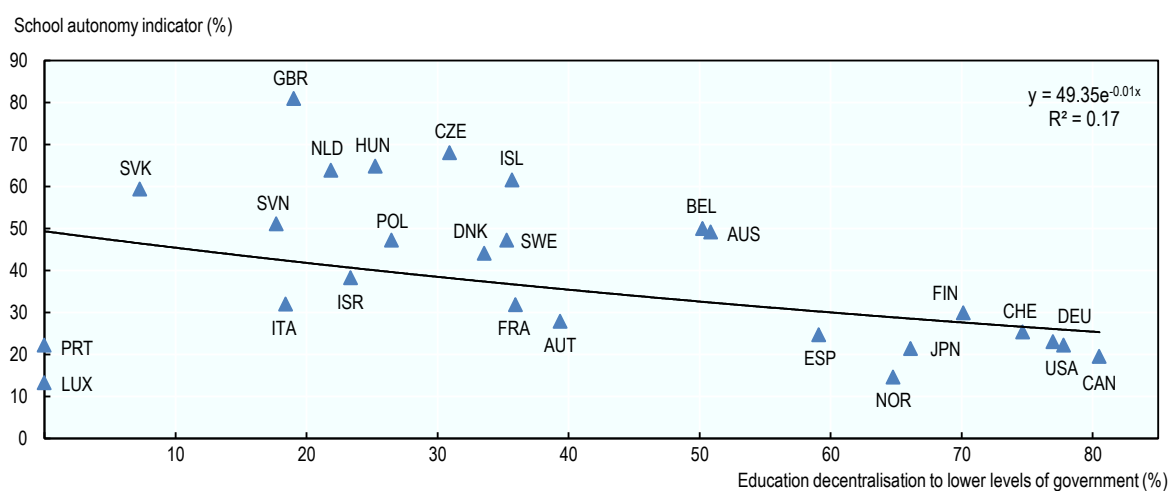
66. On the other hand, decentralised governance arrangements may raise concerns about the lack of systematic application of national directions, inconsistency of practices, ineffective or inequitable use of resources, and / or insufficient capacity for developing effective funding schemes at the local level. These concerns might be amplified by weak articulations between the different decision-making levels and limited collaboration between the actors involved. The measure of success of the delegation of responsibilities in managing resources depends on how these translate into enhanced learning environments and contribute to better teaching and learning outcomes.

67. Countries emphasise regional / local and school-based decision-making to varying degrees and not all countries pursue decentralisation and school autonomy as parallel strategies. Indeed, as shown by the OECD (2014), decentralisation and school autonomy appear to be alternative rather than complementary policies. As can be seen in Figure 2.2, countries where sub-central authorities have high levels of decision-making power (e.g. federal countries) typically grant less autonomy to schools, whereas countries with high levels of school autonomy tend to retain a higher share of decision-making at the central rather than at regional and local levels. This suggests that different driving factors may be behind the trends towards decentralisation and school autonomy: decentralisation of educational decision-making to different levels of government is more likely to be part of broader public sector reform, whereas enhanced school autonomy is typically prompted by more education-specific concerns about school management and performance (OECD, 2014).

68. In most countries, increased autonomy has been balanced by the strengthening of accountability requirements for local education authorities and schools. While further autonomy is given to the local level in many countries, other responsibilities are generally retained by central authorities (Levačić et al., 2000). These responsibilities are of a different kind, but still essential for the assurance of efficient allocations of school resources. Strategic steering, standard setting, support and capacity development are all activities which are typically performed at a central level. This allows benefiting from positive externalities at the system level and addressing coordination problems across different levels of decision making. Nevertheless, these developments require the elaboration of more sophisticated school funding strategies,

including in terms of the monitoring of funds' use at the local and school level (Chapter 5). In such contexts, the use of funding formulas appears as a compelling way to ensure equitable and efficient funding allocations in a context of greater autonomy at the local and school level (Chapter 4).

Figure 2.2. Levels of decentralisation and school autonomy, 2009



Note: Data compiled from OECD Education at a Glance Database and OECD National Accounts. Data for Belgium and the United Kingdom are averages of each countries' constituting communities (GBR: England and Scotland; BEL: Flanders and Wallonia).

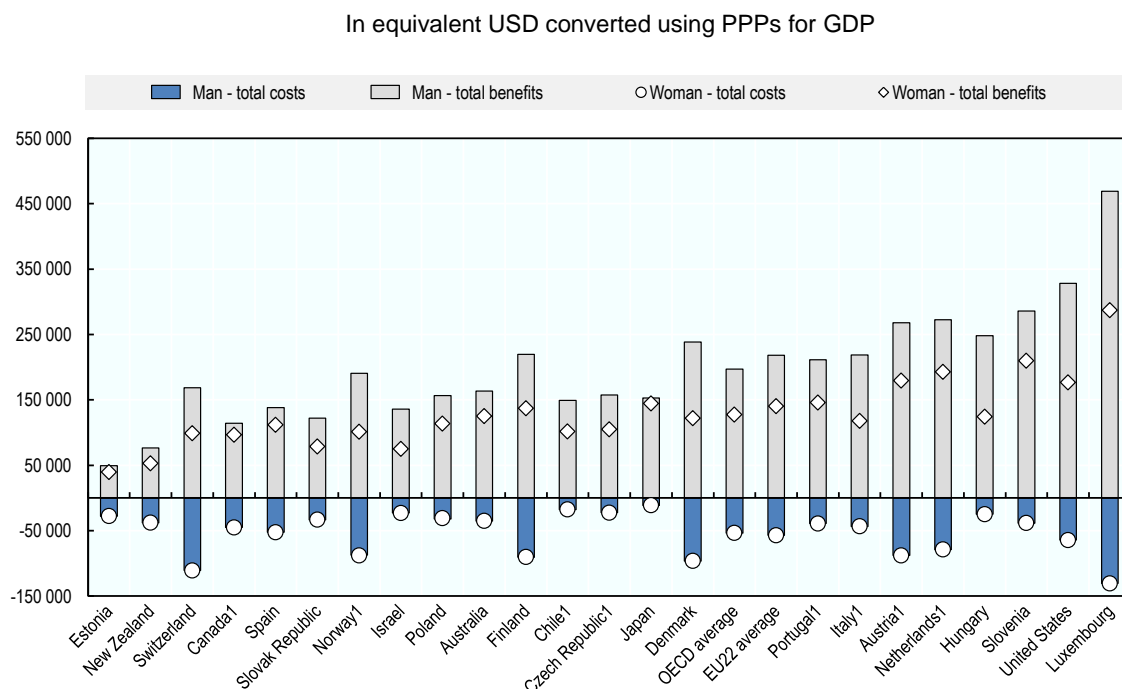
Source: OECD (2014), *Fiscal Federalism 2014: Making Decentralisation Work*, OECD Publishing, Paris, DOI: <http://dx.doi.org/10.1787/9789264204577-en>.

Sources of funding

The vast majority of school funding comes from public sources

69. In most OECD countries, governments provide by far the largest proportion of education investment. Governments subsidise education mostly through tax revenues (e.g. taxation upon earnings, property, retail sales, general consumption) collected at the different administration levels. On average across the OECD, almost 91% of the funds for schooling come from public sources, and in Norway and Sweden this is the case for the totality of funds for schooling. Chile is the only OECD country where the share of public funds in overall expenditure on schooling was below 80% in 2013. In providing public funding for schooling, governments guarantee universal access to basic education by ensuring free provision or reducing the financial contributions of parents to a minimum. Investing in an accessible, high-quality education system is a crucial means to provide people with the knowledge and skills they need to succeed in the labour market and to foster individual well-being as well as social cohesion and mobility.

70. There is also a clear economic rationale for the public funding of education. According to OECD analyses, the benefits of educational investments not only accrue to the individuals receiving it, but also to society at large, providing strong economic incentives for governments to engage in the public funding of education. More highly educated individuals require less public expenditure on social welfare programmes and generate higher public revenues through the taxes paid once they enter the labour market. Figure 2.3 shows the public costs and benefits associated with an average person attaining tertiary across OECD countries (OECD, 2016).

Figure 2.3. Public costs and benefits of education on attaining tertiary education, by gender, 2012

1. Year of reference differ from 2012, please see Tables A7.4a and A7.4b for further details.

2. Countries are ranked in ascending order of net financial public returns for a man.

Source: OECD (2016), Education at a Glance: OECD Indicators, OECD Publishing, Paris, Tables A7.4a and A7.4b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm). But private funding is on the increase.

But private funding is on the increase

71. While the vast majority of school funding is provided from public sources, private spending on schooling has grown more quickly in recent years than public spending. Between 2008 and 2013, private sources increased by 16% on average across the OECD, while public sources increased by only 6%. Private sources typically play a more important role in secondary than in primary education.

72. At the upper secondary level, there is a slightly stronger presence of private sources of funding in the vocational sector than in the general sector (OECD, 2016). Unlike general education programmes, the funding of vocational education and training (VET) often involves contributions from employers. Many countries have developed voluntary or obligatory cost-sharing arrangements, using mechanisms such as training levies to collect resources for VET from employers (Papalia, forthcoming). Given the direct benefits that VET provides to the industry, some countries let employers bear the cost of workplace learning through the provision of equipment and training staff or the remuneration of students. The school based components of VET is more commonly publicly funded. The German VET system, for example, is funded through contributions from all major stakeholders, as described in Box 2.1.

Box 2.1. Cost sharing arrangements in the German VET system

The German dual VET system is characterised by high levels of per student expenditure, a strong enrolment in apprenticeship schemes and a high level of involvement among employers, with more than 60% of firms taking part in the provision of initial vocational education and training. The funding of VET involves all stakeholders. Public resources are provided by federal ministries (Ministry of Education and Research, Ministry of Economics and Technology, and the Ministry of Labour and Social Affairs), central agencies such as the federal employment agency, as well as the states (Länder). Private sector resources are contributed by companies, unions, chambers as well as students and their families.

The school-based learning component (provided by vocational schools) is funded primarily out of the public budget of the federal states. The states are responsible for funding teaching staff and cover, on average, 80% of the expenses in vocational schools. Municipalities are the second main contributor, covering the largest share of material costs and investments out of their own revenue.

The workplace training provided through the apprenticeship system is self-financing and public authorities only indirectly contribute to its funding by providing students and employers with financial incentives to engage in training. German employers are required to contribute to the funding of workplace learning for their apprentices on the basis of collective agreements. The resources made available by employers include wages for the apprentice as well as material and human resources that are necessary to provide an adequate training for the apprentice. With the exception of the construction sector, employers do not engage in indirect funding through training levies.

Source: Papalia, A. (forthcoming), "The Funding of Vocational Education and Training: A Literature Review", OECD Education Working Papers, OECD Publishing, Paris.

Public funding may also benefit private providers

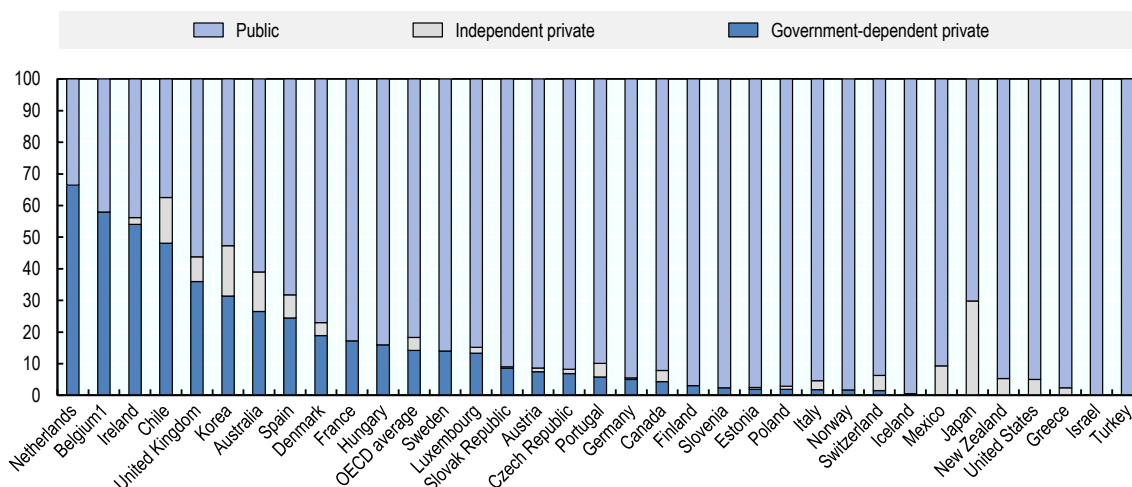
73. Over the past 25 years, more than two-thirds of OECD countries have introduced measures to increase school choice (Musset, 2012), often by publicly funding private providers and letting students decide which schools to attend. In an effort to stimulate competition between schools and encourage a greater diversity of educational providers, these measures have resulted in some countries developing a substantial publicly funded private sector, which enrolled more than 10% of 15-year-old students in 13 OECD countries by 2012 (see Figure 2.4). The regulations governing the public funding of private providers differ considerably across education systems. Some countries impose strict regulations on schools seeking to qualify for public funding, binding them to follow national curricula and assessment or restricting their ability to select students, charge additional fees and operate on a for-profit basis (Boeskens, 2016). Others use targeted funding schemes designed to exclusively apply or provide additional support for private school students with particular socio-economic characteristics (Musset, 2012).

A large proportion of school funding is channelled through sub-central levels of government

74. The governance of school funding varies between countries, with some countries allocating funding directly from the central level to schools while others transfer large amounts of funding between levels of government and leave school funding decisions to lower tiers of the administration.

75. While central government funding of public services depends mainly on taxes, the sub-central revenue mix includes both taxes (whether own taxes or those shared with other tiers of government) and transfers from higher levels of government. Sub-central governments may also rely on user fees, although these typically represent a small proportion of their revenue. Figure 2.5 shows the composition of sub-central government revenues across OECD countries. On average across the OECD, almost equal parts of overall sub-central government revenue came from taxes (42%) and from transfers (44%) in 2013. Fourteen percent came from user fees (OECD/KIPF, 2016).

Figure 2.4. Percentage of students at age 15, by type of institution, 2012



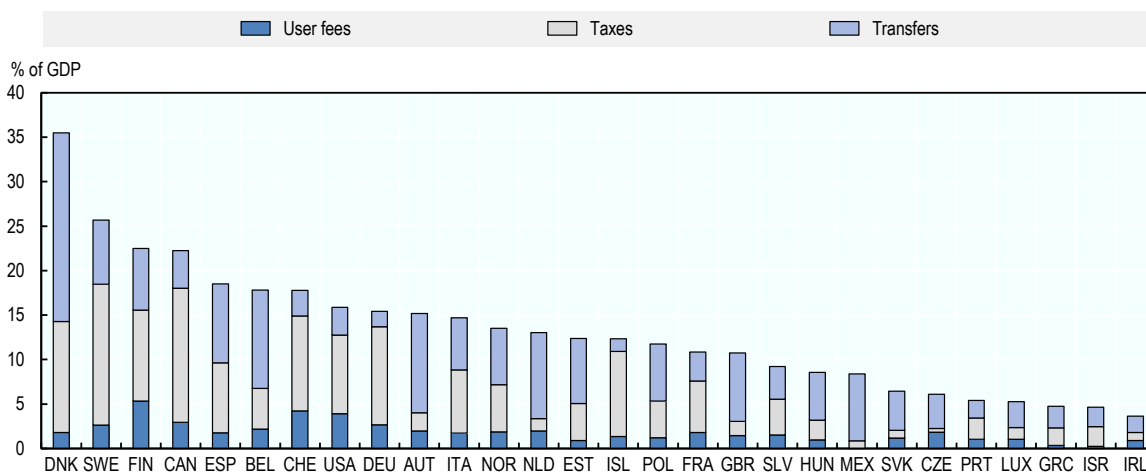
1. Excluding independent private schools

Note: Countries are ranked in descending order of the percentage of students enrolled in government-dependent private education.

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.

Source: OECD (2013a), PISA 2012 Results: What Makes a School Successful? (Volume IV): Resources, Policies and Practices, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264201156-en>.

Figure 2.5. Revenue composition of sub-central governments, 2013



Note: 2006 instead of 2005 for Greece. Australia, Chile, Japan, Korea, New Zealand and Turkey are not included because one or more of the relevant data points are not available.

Source: OECD/KIPF (2016): *Fiscal Federalism 2016: Making Decentralisation Work*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264254053-en>.

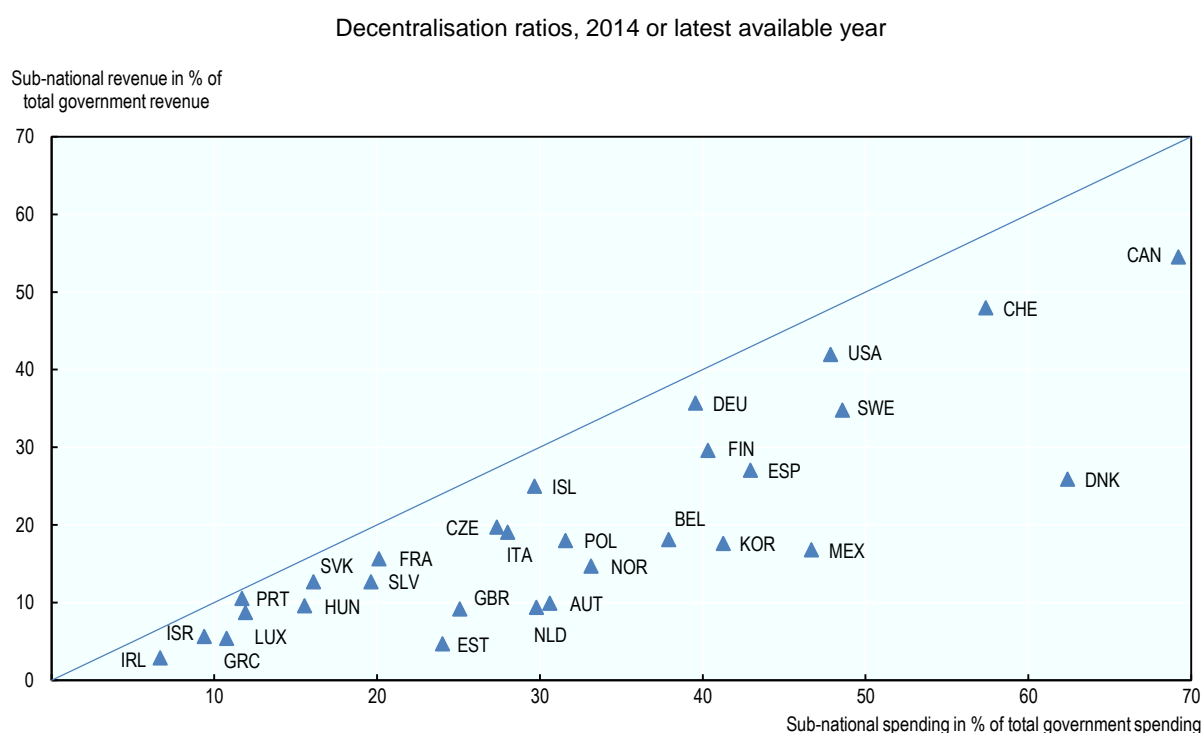
76. Across OECD countries, sub-central entities have varying degrees of autonomy over their own tax collection, such as the right to introduce or abolish taxes, set tax rates, define the tax base and grant allowances or relief to individuals and firms. Often the collection of particular taxes is not assigned to one

specific level of the administration but it is shared between different levels of government. In such cases, sub-central authorities often collectively negotiate the tax sharing formulas with the central government (OECD/KIPF, 2016).

Inter-jurisdictional transfers – or grants – are used to equalise sub-central revenues

77. Sub-central jurisdictions have acquired increasing powers both for the collection of revenue and for the spending of resources. But spending responsibilities have grown much faster than tax collection responsibilities. Figure 2.6 illustrates the relative shares of sub-central revenue and spending in total government revenue and spending. The gaps between the revenue and the expenditure of sub-central jurisdictions are referred to as "vertical fiscal imbalances". Such imbalances are typically addressed through vertical fiscal transfers – or grants – from the central level to sub-central levels. They may also be addressed through horizontal transfers between sub-central entities. Fiscal transfers aim to offset gaps between revenue and expenditure, equalise fiscal disparities across regions and ensure similar ability to provide public services across all sub-central governments. Fiscal transfers represent an important share of overall central government spending and they have grown in recent years, from 6% to 7% of GDP between 2000 and 2010 (OECD/KIPF, 2016).

Figure 2.6. Sub-national revenue and spending across OECD countries



Note: Sub-national expenditures include intergovernmental grants, while sub-national revenues do not. Latest available data for Korea are from 2012 and for Mexico from 2013. Australia, Chile, Japan, New Zealand and Turkey are not included.

Source: OECD/KIPF (2016): *Fiscal Federalism 2016: Making Decentralisation Work*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264254053-en>.

78. Fiscal transfers can also serve central governments in steering lower levels of the administration towards spending on certain purposes. Where central government grants are earmarked for a particular purpose, they allow the central level to exert considerable control over sub-central educational policy and spending (see Chapter 4 for more information on the design aspects of earmarked grants). OECD/KIPF (2016) report that across different public sectors, a slight trend from earmarked grants towards more non-

earmarked grants could be observed in recent years. At the same time, they noted a parallel increase in regulatory frameworks and output control, which is another way for central governments to steer the use of resources at the sub-central level towards particular standards and expected performance levels.

Schools may contribute to raising their own revenues

79. Public schools are financed mainly through funding allocations coming from the different levels of the educational administration. In addition, individual schools may also have the ability to raise their own revenues. This typically involves the sale of services, particularly in the vocational sector (e.g. catering, hairdressing), the rental of facilities (e.g. sports facilities) and funds raised from parents and/or the community through obligatory fees or voluntary donations. Where parental fees exist in the public sector, they are typically controlled centrally and capped at a low level. However, there are variations in the degree to which schools are able to generate their own revenue, which raises challenges for equity in some countries (more on this below under "Policy Challenges").

Responsibilities for funding allocation

Distribution of funding responsibilities according to type of cost

80. The involvement of different levels of the administration in public school funding depends on the type of costs that are being covered. Larger infrastructure investments are generally covered centrally or in collaboration between the central and sub-central levels. International data shows that decisions regarding the planning and structures of school provision (such as opening or closing a school) remain highly centralised in the majority of countries, with central authorities retaining the largest proportion of decision-making authority. At the same time, in more decentralised countries, local authorities play an important role in making decisions about planning and structures: in 16 out of 36 countries, decisions over the creation and closure of schools are made by local authorities (OECD, 2012). International actors such as the World Bank or the European Commission are also involved in funding school infrastructure through specifically dedicated structural funds in several countries participating in the School Resources Review (for more information, see Chapter 4).

81. Across OECD countries, the core funding for teaching costs is also more likely to be provided centrally, while operational costs are frequently covered locally. Such a distribution of responsibilities reflects that the latter are expenditures which cannot clearly be regulated in financial terms as they depend on diverse factors and on local prices. This includes maintenance of schools, energy, communal services and repairs. Therefore they are often financed from regional and municipal general revenues, including shared taxes, fees or equalisation grants. Such a division of education finance into teaching and operational costs is intended to create clarity of who is responsible for what function in the sector and to ensure that the main costs of the school, namely teacher salaries, will be adequately adjusted whenever the central level decides to increase them. It also allows regional and/or local authorities to plan the operational component of school budgets in a relatively simple and flexible manner.

82. However, where certain staff categories, such as administrative staff, are covered locally while other staff categories, such as school leaders and teachers are covered by higher tiers of government, this may also create perverse incentives at the local level. In countries where such a division of funding responsibilities is in place, this may raise concerns about local inequities in the distribution of administrative staff depending on the financial capacity and commitment of municipalities. This may be coupled with concerns about teachers— who are paid centrally — being compelled to take over administrative tasks.

Distribution of funding responsibilities according to levels and sectors of schooling

83. Although governance arrangements vary across countries, it can be observed that in most countries lower levels of government are responsible for managing and funding lower levels of schooling (mainly pre-primary, primary and sometimes lower secondary education) whereas responsibility for secondary, and in particular upper secondary, schooling is more often retained at provincial/regional or central levels.

84. This can be explained by the widely held assumption that schooling for young children needs to be provided at a reasonable distance from home in close collaboration with parents and the community, and that the benefits from small local schools are highest for students at a young age. At the secondary level, quite the contrary, it is assumed that bigger schools with larger catchment areas (beyond the boundaries of a local jurisdiction) provide many advantages for students, which outweigh the burden and cost of transportation. Larger schools managed by higher levels of government are likely to be able to provide a more diverse programme and course offer, more specialised teachers, a larger choice of extra-curricular activities and more attractive facilities and equipment (Ares Abalde, 2014).

85. Despite this general trend, in many countries the distribution of management and funding responsibilities is not that clear-cut and there are a number of challenges regarding the complexity of funding roles, including duplication, competition and overlap between the responsibilities of several levels of government (see below under "Policy Challenges").

Discretion over funding allocation at different levels of the school system

Discretion of sub-central levels in allocating funds

86. Over the past two decades, sub-central jurisdictions have acquired increasing powers in the funding of education across OECD countries, with almost 60% of school funding coming from regional and local governments (OECD/KIPF, 2016; OECD, 2016). However, there are wide variations between countries in the degree to which sub-central authorities have decision-making power over the distribution of funding between the individual schools in their jurisdiction (for more specific information, see Chapter 4). In the Nordic countries, municipalities typically have high levels of decision-making power. In Denmark and Sweden, for example, the local level receives a lump sum for public service provision and is free to distribute this funding between different public sectors such as education, health and other decentralised social services. Although the level and distribution of general school funding is at the discretion of the local level in such systems, the municipalities and/or schools may be able to apply for additional targeted funds from the central level, for example to address equity issues, special educational needs or teacher professional development needs.

87. In many other countries, the sub-central authorities (or other school providers, such as private foundations) receive a dedicated budget for the school sector, which can only be spent on this domain. But there are variations in the degree to which the national level calculates and specifies the resources destined for each individual school. In some systems, such as in Chile, Estonia and the Flemish Community of Belgium, school providers have autonomy in determining how to allocate the school funding they receive to individual schools. In this case, the larger jurisdictions or providers typically develop their own per student formulas to allocate funds to schools. In smaller municipalities, the allocation of funds is often done on a historical basis, with local governments making only marginal adjustments in school budgets from year to year. In practice, local formulas used to allocate funds to school may look quite similar to those of the national government. The central government may complement general block grants for schooling with a number of earmarked funds for specific purposes.

88. In some systems, sub-central authorities are required to allocate to each school most or all of the grant calculated centrally for that school. This is intended to protect schools from too strong a local control through the funding system, which limits the redistributing powers of sub-central authorities. In Lithuania, for example, municipalities should allocate to each school 93% (94% in the cities) of the grant calculated centrally for that school. The remaining 7% (6% in the cities) can be allocated by the local government to municipal educational services or reallocated to other schools. At the same time, the central level defines recommended (and minimum) per student amounts for certain expenses (Shewbridge et al., 2016a). The Slovak Republic also combines a centrally set funding formula with some flexibility at the local level to respond to specific local circumstances and difficulties of individual schools to finance all their costs from the amount calculated by the formula. Slovak school founders (municipalities and private providers) can redistribute funding between their schools – up to 5% of the salary normative and up to 20% of the operational costs normative. In addition, schools make requests to the founder and via them to the central level for financial assistance (Santiago et al., 2016a).

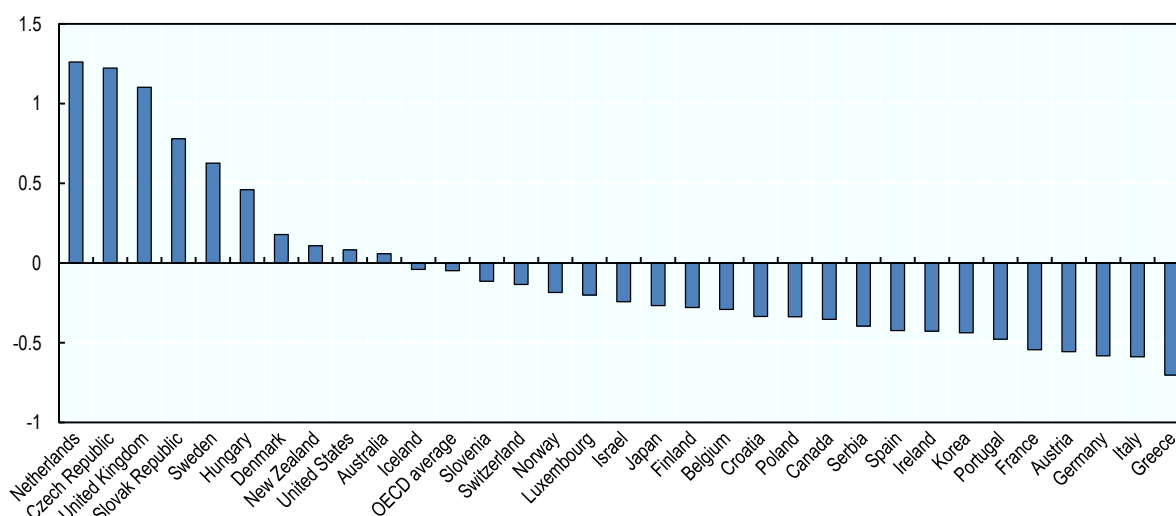
Discretion of schools in allocating funds

89. Some countries have a strong focus on school autonomy. In these cases, most resources going to schools are not earmarked, which gives schools flexibility to use resources to fit their specific needs. As a result, these schools are responsible for resource policy issues such as setting up budgeting and accounting systems, communicating with relevant stakeholders about resource use, recruiting and dismissing school staff, organising school leadership, making decisions about the use of teacher hours, maintaining the school infrastructure and establishing relationships with contractors and vendors. Autonomy in funding decisions provides the conditions for schools to use resources in line with local needs and priorities.

90. By contrast, in other countries funding arrangements are established in a context of little school autonomy. In these cases, schools typically need to follow strict rules to execute their budgets or they manage a very limited budget. They might also not be allowed to select their own staff or organise teacher hours the way they see fit. In addition, they might not be able to save up and transfer funds from one year to the next, take out loans, or generate own revenues. Also, in contexts of limited school autonomy, schools tend not to have their own accounts and, therefore, depend entirely on education authorities for support in maintenance and operating costs. In highly decentralised systems, such as Iceland, the level of autonomy of schools may vary from jurisdiction to jurisdiction, with schools in some municipalities having greater autonomy than in others (Iceland Ministry of Education, Science and Culture, 2014).

91. Figure 2.7 presents comparative data on the autonomy of schools from the OECD's Programme for International Student Assessment (PISA) 2012, which also surveyed school principals about their degree of autonomy regarding decisions about the local school environment. The Figure presents an index based on principals' responses regarding their autonomy in selecting teachers for hire, dismissing teachers, establishing teachers' starting salaries, determining the teachers' salary increases, formulating the school budget and deciding on budget allocations within the school (OECD, 2013: 131). As the figure shows, school autonomy in resource allocation was lowest in Greece, Italy, Germany, Austria, France and Portugal. On the opposite end of the spectrum, schools in the Netherlands, the Czech Republic, the United Kingdom, the Slovak Republic and Sweden had high degrees of autonomy in resource allocation.

Figure 2.7. School autonomy in resource allocation in OECD countries, 2012



Source: OECD (2013a), *PISA 2012 Results: What Makes Schools Successful? Resources, Policies and Practices (Volume IV)*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264201156-en>, p. 131.

Policy Challenges

Complexities in the governance of school funding risk leading to inefficiencies

92. Co-ordination is a very important and challenging aspect of governance in every system where sub-sectors of schooling operate under different political and administrative jurisdictions. The decentralisation processes developed in some countries have led to the emergence of increasingly autonomous and powerful local actors (regions, municipalities, schools) and raise the question of how to assure co-ordination in this new context of multilevel and multi-actor governance. The complexity of education governance might create inefficiencies in the use of resources due to duplication of roles, overlapping responsibilities, competition between different tiers of government and a lack of transparency obfuscating the flow of resources in the system (Chapter 5).

93. Efficiency challenges in using school resources may be linked with the potential isolation of sub-systems (pre-primary schools; primary schools; lower secondary schools; upper secondary schools; vocational education schools; special needs schools) managed by different levels of administration and the rather rigid boundaries between them. The relative isolation of sub-systems might also be accompanied by a low intensity of communication between the administrative authorities responsible for these sub-systems. In Estonia, for example, municipalities are the main provider and funder of general secondary education while the state is the main provider of vocational secondary education. As a result, the general and the vocational sub-systems are relatively isolated from each other. This makes it difficult for sub-systems to share resources (for example teachers, special education services or facilities) and to allow students to move easily between school types in line with their interests, talents and needs (Santiago et al., 2016b).

94. Challenges also arise when several sub-central tiers of government are involved in distributing central funding thus establishing a hierarchy between the different levels. In the Czech Republic, for example, regions act as intermediaries in the funding between the central level and municipalities, which complicates the flow of resources from the central level to the end users (schools) (Box 2.2). Intermediary actors and additional layers of decision-making can cause frictions and complicate assessment and evaluation mechanisms designed to ensure equity and effectiveness in school financing. In some countries,

there are considerable inefficiencies arising from a duplication of roles, with several tiers of government having overlapping responsibilities and funding similar types of schooling. Box 2.2 provides some illustrations from Austria, the Czech Republic, Estonia and the Flemish Community of Belgium.

Box 2.2. Challenges related to the distribution of responsibilities for school funding

In **Austria**, lower secondary education is offered both in New Secondary Schools funded by the provinces and municipalities and in academic secondary schools funded by the federal level. The two types of lower secondary education share a common curriculum and similar educational goals but the systematic management and coherent funding of lower secondary education remain challenging due to the fragmented distribution of responsibilities between the federal level and the provincial level.

In the **Czech Republic**, the regional level has 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 an education grant from the central budget for schools managed by the municipalities (basic schools), and then redistributing these funds among the municipalities 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. 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).

In **Estonia**, the municipal and the state owned schools engage in competition in general education, in special needs education and - to a lesser extent - in vocational education and training. This results in reduced clarity of the responsibilities for setting the funding rules.

In the **Flemish Community of Belgium**, there are three networks providing school education, of which two networks providing public education (Flemish Community schools and municipal and provincial schools). All networks maintain schools at the different levels of schooling from pre-primary through to upper secondary. Each of the three main educational networks has a central organisation employing administrative staff and each network operates its own pedagogical advisory services and student guidance centres funded by the Flemish government. Collaboration between networks remains relatively rare. The division of public education in two educational networks involves considerable overhead and administration costs and leaves great potential for efficiency savings.

Source: Nusche et al. (2016a); Shewbridge et al. (2016b), Santiago et al. (2016b); Nusche et al. (2015).

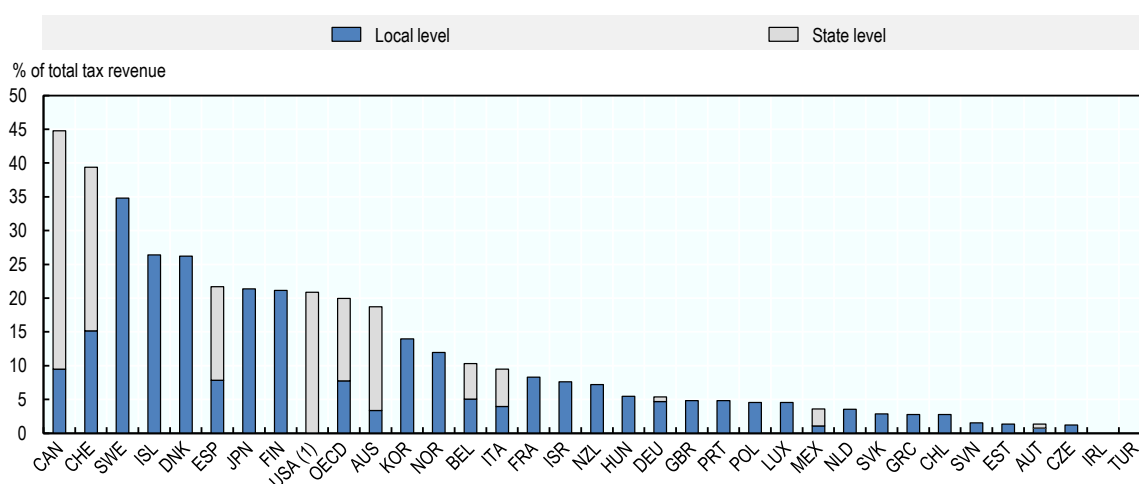
Decentralisation is likely to lead to inequities in sub-central revenue levels

95. The decentralisation of education funding is likely to result in differences in the availability of resources for education across jurisdictions. As can be seen in Figure 2.8, in several countries sub-central authorities have considerable taxing powers. According to the OECD/KIPF (2016), a higher sub-central tax share is desirable for several reasons related to efficiency and accountability: reliance on own tax revenue brings jurisdictions autonomy in determining public service levels in line with local preferences; it makes sub-central governments accountable to their citizens who will be able to influence spending decisions through local elections; it may enhance overall resource mobilisation in a country as local/regional authorities may tap additional local resources; and it creates a hard budget constraint on sub-central entities which is likely to discourage overspending.

96. At the same time, strong reliance on sub-central tax shares is likely to raise equity concerns. Where sub-national authorities generate their own revenue, wealthier jurisdictions will be in a better position to provide adequate funding per student in their local systems than others. In countries where school funding is heavily dependent on local tax bases, this may have adverse effects on matching resources to student needs, as areas with more disadvantaged students are likely to have fewer resources

available to meet student needs. In the Czech Republic, for example, 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, but there is no particular mechanism to equalise initial economic disparities between the regions.

Figure 2.8. Taxes over which SCGs have power to set rates and/or the base, 2011



1. Tax autonomy of local governments in the United States varies across the states and is not assessed.

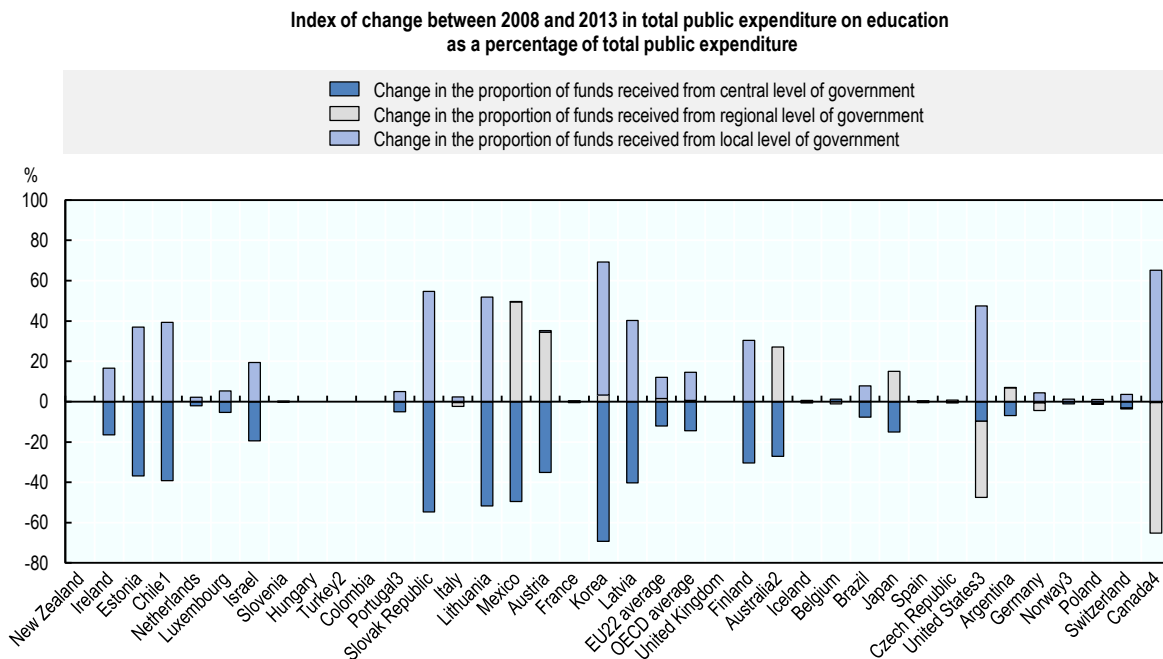
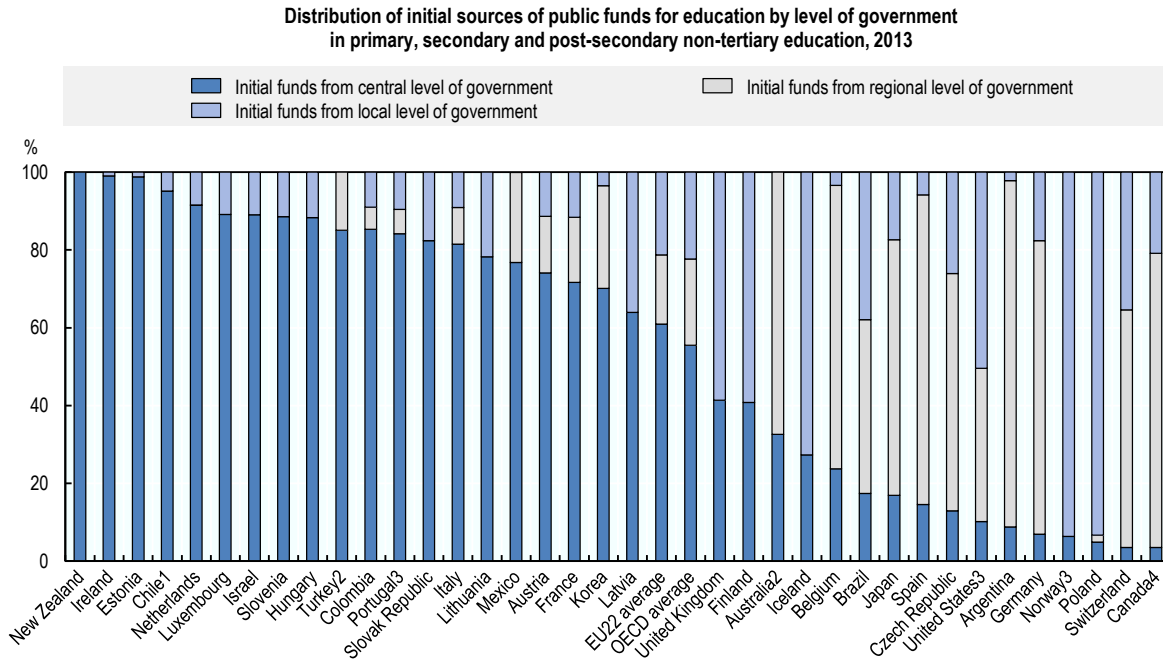
Source: OECD/KIPF (2016): *Fiscal Federalism 2016: Making Decentralisation Work*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264254053-en>.

Fiscal transfers – or grants – can equalise revenues but have a number of drawbacks

97. The operation of fiscal transfer systems can help provide regional and/or local governments with revenues to support similar levels of educational service provision at similar tax rates. Transfers from the national government to local authorities typically include mechanisms to equalise the ability of local authorities to offer similar public service levels within the country. Less advantaged sub-central authorities in terms of private income and with a challenging socio-economic composition of the population will typically receive higher grants from the national government.

98. The extent of transfers of public funds from central to lower levels of government varies widely between countries (Figure 2.9). The difference of funding power before and after transfers from central to lower levels of government represents more than 30 percentage points in Austria, Chile, Estonia, Finland and Hungary, and more than 40 percentage points in Korea, Latvia, Mexico and the Slovak Republic. In Austria, Canada and the United States, the difference after transfers from regional to local sources of public funds exceeds 30 percentage points (OECD, 2016).

Figure 2.9. Distribution of initial sources of public funds for education by level of government in primary, secondary and post-secondary non-tertiary education, 2013



1. Year of reference 2014
2. Funds from the local level included in funds from the regional level of government.
3. Some levels of education are included with others. Refer to "x" code in Table B1.1a for details.
4. Year of reference 2012
5. Countries are ranked in descending order of the share of initial sources of funds from the central level of government.

Source: OECD. OECD (2016) Figure B4.3. Education at a Glance 2016: OECD Indicators, OECD Publishing, Paris, Table B4.3. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

99. However, OECD/KIPF (2016) outline a number of disadvantages of strong reliance on inter-jurisdictional grants and equalisation transfers. First, while one might expect that grants help to stabilise sub-central revenue, empirical evidence indicates that the opposite is often the case. Indeed, central government grants may exacerbate fluctuations in the revenue of lower government tiers because such transfers are often pro-cyclical, i.e. in times of strong growth, they are likely to increase whereas in times of crisis, the amount of central transfers often decreases thus reinforcing sub-central resource challenges.

100. Second, grants may reduce the sub-central tax effort. For example, if grants are adjusted on the basis of local revenue, sub-central authorities might be discouraged from raising their own tax revenue because otherwise they might see their central grants reduced. In Estonia, for example, local governments have very limited revenue raising powers. The OECD's School Resources Review of Estonia found that this appears to encourage both local officials and their citizens to see any local financial difficulties as the result of insufficient national government support. The resulting "fiscal illusion" further depresses the willingness of both local officials and citizens to use local taxes to improve local services (Santiago et al., 2016b).

101. Third, research and experience from different countries indicates that a high reliance on central grants may encourage overspending and thereby increase deficits and debt. There is evidence that a central government's commitment to a certain grant level is not always credible and that sub-central authorities may overspend in the hope that this overspending will then be compensated via additional grants (OECD/KIPF, 2016). Busemeyer (2008) finds that giving lower levels of government the power to spend without forcing them to raise their own revenues (by granting them autonomy in setting tax rates) sets strong incentives for overspending. A large misalignment between financing and spending responsibilities is likely to lead to mistrust, lack of transparency and inefficiencies, as one actor – the central government – is responsible for most of the financing, whereas other actors – regions or localities – are in charge of expenditures. This creates worries about the misuse and waste of resources at higher levels of the administration while lower levels may see overspending as evidence that the grant level is insufficient or the transfer system unfair.

102. In Austria, for example, the vast majority of tax revenue is generated at the federal level (87% in 2014) rather than by the provinces and municipalities who are responsible for funding provincial schools. Through the Fiscal Adjustment Act, these funds are then partially redistributed among the provinces and municipalities based on quotas which are renegotiated among the different tiers of government every four years. This system creates a split of financing and spending responsibilities, typical for Austrian federalism (which is sometimes described as "distributional federalism"). There is evidence that this system has led to considerable additional spending on teaching staff. While the federal government and the provinces agree on annual staff plans, the provinces are free to hire more teachers than foreseen in these staff plans and the additional expenditures are partly covered by the federal level. Between 2006 and 2010, the number of teaching positions at general compulsory schools that were not included in the initial budget almost doubled from 1 039 to 2 063, leading to considerable costs for the federal level (Nusche et al., 2016a).

103. Finally, the determination of grant levels and calculation methods themselves may also be problematic. In Kazakhstan, for example, the OECD review team found that one of the main concerns related to school funding was the importance of budget negotiations on the calculation of central transfers and on defining education budgets at the sub-national level. The budget negotiations were found to lead to suboptimal allocations as objective indicators on potential revenues and expenditure needs were given little importance (OECD/The World Bank, 2015). Given the potential disincentives and risks inherent in central grants, it is very important that such grants are skilfully designed so as to facilitate adequate spending across all jurisdictions while reducing the risk of fiscal slippage across levels of government.

Variations in sub-central funding approaches may mitigate equalisation effects

104. Even if well-designed fiscal equalisation mechanisms are in place, decentralised systems may still be characterised by considerable differences in educational spending across jurisdictions. This might result from different levels of priority attributed by local authorities to education or different approaches to design local funding strategies. Where jurisdictions are autonomous to design their own funding approaches, there may be only weak mechanisms to share and spread the related expertise and experience systematically across sub-central authorities so as to optimise funding mechanisms.

105. In Denmark, for example, despite existing equalisation mechanisms, expenditure per student varies strongly across municipalities. More than half of the variations among municipalities can be explained by socio-economic conditions, with municipalities having more students from disadvantaged backgrounds spending higher amounts per student than other municipalities (Houlberg et al., 2016). However, there is still a large part of spending differences between municipalities that cannot be explained by socio-economic factors. This indicates a situation where some municipalities prioritise spending on education more than others, but also a potential for efficiency savings in some municipalities. The spending differences across municipalities are also likely to result from differences in the approaches to school funding across jurisdictions. Each of the 98 municipalities designs its own formula to fund local schools. These formulas typically include parental background characteristics in addition to the number of students and the number of classes at the different year levels. However, the ways in which socio-economic differences are taken into account in the funding formulas vary greatly across municipalities. This suggests that the models vary not only as a result of deliberate decisions or different priorities (Nusche et al., 2016b).

106. In Kazakhstan, also, there is evidence that regional and local differences in spending per students are not just related to objective cost factors. Expenditure per student varies greatly across regions – from 39% below the national average in the capital city to 50% above the national average in North Kazakhstan and marked differences in per student spending are also observed across school districts. The Ministry of Education and Science commissioned a report to UNICEF on the financing of 175 schools across Kazakhstan. The final report revealed important differences in spending per student between districts of the same region and between schools of the same type and size within the same district (UNICEF, 2012). Some sub-national governments spend significantly more of their resources on education than others and, while expenditure per student should not be equal across the country, the existing differences are not always associated to the costs of provision (OECD/The World Bank, 2015).

Financial decentralisation may raise capacity challenges, especially in small jurisdictions

107. While their knowledge of local conditions and needs may allow sub-central authorities to allocate resources more efficiently in line with school contexts, smaller authorities are very likely to face capacity challenges. Decentralised governance arrangements place significant demands on local authorities for budget planning and financial management. For example, they may be required to develop a funding formula, administer financial transfers, make decisions about investments in school infrastructure and maintenance and/or apply for a pool of targeted funding. But not all local authorities have sufficient capacity to implement sound budget planning and to manage their resources well. Administering a funding scheme requires considerable technical skills and administrative capacity and many school systems find it challenging to ensure these are available at the level of each educational provider.

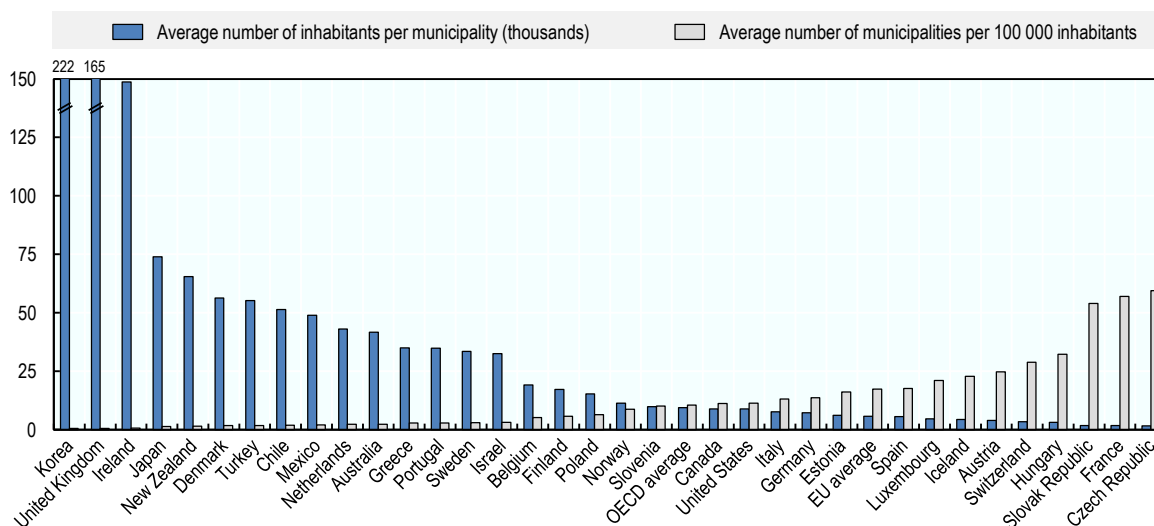
108. Capacity constraints at the local level also raise scope for inequities between individual authorities, in particular in countries that have a high number of small municipalities (Figure 2.10). In some countries, school providers (sub-central authorities or other school owners) are very small and responsible for only one or a few schools, which does not allow them to achieve the same extent of scale

economies, management capacity and support that can be offered by larger providers. Small providers typically have a very limited number of staff managing school services who do not necessarily have expertise regarding the design of effective resource management strategies. Some of the countries participating in the School Resources Review, such as Austria, the Czech Republic and the Slovak Republic, literally have thousands of municipalities involved in managing and funding their own schools, many of them with weak administrative capacity, which makes it difficult for them to maintain effective and efficient school services.

109. While school leaders are typically accountable to their providers, not all providers have the professional capacity to provide effective feedback and support to their leaders. It can, therefore, be difficult for local authorities to fulfil their responsibility for managing financial resources and to collaborate with their school leaders to make resource use decisions that improve learning. In contexts where responsibilities for resource management and the pedagogical organisation of schools are shared between local authorities and schools, education leaders and administrators must be able to establish good relationships and to align resource management decisions with pedagogical aspects and needs. One way for building the capacity of local authorities lies in the creation of networks and collaborative practices, but these are still underdeveloped in many contexts.

110. One of the specific challenges of educational decentralisation is that while key decisions (e.g. distribution of financial resources, quality assurance) are typically transferred to regional or local authorities, most of the information and knowledge management capacities are retained by the institutions of the national administration. Therefore, many of them might require active support from the relevant national institutions to take and implement decisions.

Figure 2.10. Municipal fragmentation in international comparison, 2014/15



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

There are variations in access to funding, financial autonomy and resource management capacity*In many countries, schools have inequitable access to resources*

111. Sub-central discretion in the allocation of funding may lead to inequitable resource levels not only across jurisdictions (see above) but also across schools *within the same jurisdiction*. While local discretion over the distribution of funding allows sub-central actors to develop resource strategies in line with identified needs, it also raises concerns regarding the equity of resource distribution between their schools. In Chile, for example, it was noted that local autonomy regarding the allocation of basic grants to schools creates the opportunity for sharp differences in per student spending within municipalities, as well as a lack of transparency that may benefit schools with well-connected principals (Santiago et al., 2016c). Also, in the Flemish Community of Belgium, where funding for operational costs is attributed to school boards and then further distributed among the schools, there is evidence that school boards responsible for several schools use their own weightings and strategies to allocate financial means to schools. As a result, there is no guarantee that central funding (which weighted for socio-economic disadvantage of each school's student body) will indeed benefit the schools with the most challenging socio-economic characteristics (Nusche et al., 2015).

112. Another source of inequity may arise from schools' ability to generate and use their own revenues. While the generation of own income can help complement school-level resources, it raises a number of equity concerns. First, in some countries not all types of schools have the same revenue generating powers. In Austria, for example, schools that are run and funded directly by the federal level have a certain degree of budgetary autonomy as they are able to rent out their school facilities and have control over their own accounts. On the other hand, schools that are run and funded by the provinces and municipalities do not have such autonomy in financial matters, thus presenting an inequity in the system. They cannot generate additional income and depend entirely on their municipality for support in maintenance and operating costs (Nusche et al., 2016a).

113. Second, the capacity of schools to generate additional revenue is generally influenced by the socio-economic composition of the immediate community that they serve. To highlight socio-economic gaps in the ability of schools to raise funds, it is helpful to look at patterns in school systems which routinely collect the relevant income data, as is done in some school systems. In Western Australia, for example, it was shown that among schools of similar size, parental contributions rise in line with socio-economic status, while multiplying 16 times from the smallest and lowest SES schools to the biggest and highest SES schools. It is often small schools and those located in socio-economically disadvantaged areas that experience the greatest pressure of need, due to the concentration of multiple disadvantages in them. But these schools typically also have lowest ability to generate additional revenue and thus the least flexibility in budget terms (Teese, 2011).

114. Third, in many countries the relevant school income data is not collected, thus leading to a lack of transparency regarding the real resource levels of individual schools. In the Slovak Republic, for example, financial contributions from parents in state schools are not sufficiently transparent with respect to the items they fund and how they are recorded. According to a study published in 2007 and cited in Santiago et al. (2016), between 70% and 90% of parents pay for various services, such as school events, extracurricular activities or teaching materials. There is also some anecdotal evidence that suggests that some schools place pressure on parents to pay such contributions, which is inequitable. Households in the Slovak Republic contribute 15% of pre-primary education expenditure and 10% of primary and secondary expenditure. While private contributions to public services can have many benefits, they require increased attention to integrity and equity considerations (Santiago et al., 2016a).

Limited resource autonomy may constrain strategic development at the school level

115. The relationship between school autonomy in managing own resources and performance outcomes is not clear cut. Evidence from PISA indicates that while giving schools greater autonomy over curricula and student assessment seems to be related to higher student performance, granting them autonomy over resource management does not appear to impact on performance across OECD countries (OECD, 2013a). The effect of delegating more autonomy for resource management to schools is likely to depend on schools' ability to make use of this autonomy in a constructive way and thus requires a strengthening of school leadership and management structures (more on this below). Furthermore, autonomous schools need to be embedded in a comprehensive regulatory and institutional framework in order to prevent adverse effects of autonomy on equity across schools. The results from PISA suggest that when autonomy and accountability are intelligently combined, they tend to be associated with better student performance (OECD, 2013a).

116. Findings from the OECD's School Resources Reviews indicate that an absence of resource autonomy at the school level risks constraining schools' room for manoeuvre in developing and shaping their own profiles and may create inefficiencies in resource management. In Uruguay, for example, schools have very limited autonomy over the management or allocation of their budget. Not only do central authorities manage school budgets, the recruitment of teachers and the allocation of infrastructure and equipment but they also retain decision-making power over less fundamental aspects of school operation such as the acquisition of instructional materials, ad hoc repairs at schools and the approval of schools' special activities. Little local and school autonomy hinders effectiveness in the use of resources as local authorities and schools are unable to match resources to their specific needs, and in consideration of their conditions and context. Also, responses from central educational authorities to an emerging school need can prove very slow. In addition, limited autonomy disempowers school and local actors and makes it more difficult to hold local players accountable, in particular school leaders, as they do not have the responsibility to take most of the decisions (Santiago et al., 2016d).

Devolution of financial management to schools requires adequate leadership capacity

117. As part of a general move towards greater school autonomy, many countries have attributed greater resource responsibilities to their school leadership teams. While offering potential for effective strategic management at the school level, such budgetary devolution creates new challenges for financial management in schools. School leaders in such contexts are increasingly asked to fulfil responsibilities that call for expertise they may not have through formal training. Where financial management responsibilities are sharply increasing without additional support for leadership teams, it will be difficult for schools to establish robust management processes where resources are directed to improvement priorities and support learning-centred leadership (Plecki et al., 2006; Pont et al., 2008)

118. Where schools have financial autonomy, they must be able to link the school's education priorities with its spending decisions, for example by making connections between school development planning and budget planning (Chapter 3). In particular where targeted funding is available to provide disadvantaged schools with additional funding (Chapter 4), this is often tied to the requirement to develop a school improvement plan deciding how funds are used for the benefit of disadvantaged students and with accountability requirements. Administrating and allocating such additional funding effectively requires time, administrative capacity and strategic leadership within schools. Evaluations of targeted programmes show mixed results and indicate that the success of these programmes depends on whether conditions for effective allocation and use of funding are in place at the school level (Scheerens, 2000). If compensatory funding is distributed to schools without further guidance and support, school staff may not know how to fit these special initiatives into their school development plans or they may use the additional money for measures that have not demonstrated to be effective (Kirby et al., 2003; Karsten, 2006; Nusche, 2009).

119. A further challenge at the school level in countries with a large degree of school autonomy for resource management concerns the tension between pedagogical and administrative/managerial leadership. On the one hand, school autonomy in resource management can be part of strategic learning-centred leadership as it allows aligning spending choices with the pedagogical necessities of schools. But on the other hand, school autonomy places an administrative, managerial and accounting burden on school leaders which may reduce their time available for pedagogical leadership (e.g. coaching of their teaching staff), which has been identified as having a considerable impact on teaching and learning. This tension is also relevant for the training and evaluation of school leaders, which need to prepare school leaders for their financial and administrative responsibilities, but within a framework of pedagogical leadership (Pont et al., 2008).

Policy Options

Streamline fragmented governance structures

120. Fragmented, overlapping and/or unclear governance structures risk obfuscating resource flows, creating inefficiencies and reducing overall trust in the management of school systems. While governance structures have often been considered as a fixed feature of school systems, many countries are no longer willing or able to afford an inefficient distribution of responsibilities which may lead to costly duplication, overly complex funding formulas or waste of resources. Individual country reports of the OECD Reviews of School Resources clearly indicate that well-functioning governance arrangements are a key condition to allow for an effective and equitable distribution of resources across school systems.

121. It is impossible to provide generic recommendations on effective governance arrangements that can be applied to all countries as such strategies need to be developed with an understanding of national contexts, traditions and circumstances. However, countries share some common governance and funding challenges, which provide opportunities for peer learning about the available policy options. This section provides a set of examples of how different countries participating in the School Resources Review have addressed or are contemplating to address inefficient and/or overly complex distributions of responsibilities for school funding (Box 2.3). There is little evidence regarding the impact and effectiveness of such reforms, but sharing experience from different contexts can help inform national policy dialogue and peer learning across countries. It should be noted that any reforms of school governance arrangements will have implications beyond the area of school funding and even beyond the school sector itself. Therefore, they can only be developed as part of a broader reflection on education and public sector reform.

- **Defining a clear division of labour between different levels of the administration.** Where several tiers of government are funding schools at the same level of education and competing with each other for students, this may create conflicts of interests, barriers to collaboration and/or ineffective services for students who may not be able to transfer easily between sub-sectors run by different authorities. One option to address these challenges and reduce inefficiencies is to focus on developing a clearer division of labour, which clearly assigns funding responsibilities for particular sub-sectors and /or particular types of resources to each tier of school administration. Box 2.3 provides examples of reform intentions in this direction from Estonia and Austria.
- **Reducing the number of tiers involved in channelling resources to schools.** In countries where funding is channelled through several intermediary tiers of government before arriving at the school level, this might increase bureaucracy, reduce possibilities for central steering and dilute accountability for effective school funding. In such contexts, central governments could consider reducing the complexity of resource flows by introducing direct transfers for schooling to those levels of the administration which are directly responsible for managing and financing

each education level. However, the precondition for such an approach is that the administrative units responsible for managing schools at each level have sufficient capacity to manage and distribute school funding. Box 2.3 provides an example of relevant recommendations suggested by the OECD review team in the Czech Republic.

- **Merging providers to consolidate capacity and achieve scale economies.** In countries where the high number and small size of providers limits their capacity for effective resource use, school funding could be rationalised by merging several small educational providers and thereby consolidating capacity for effective resource management. This would help ensure a more efficient and equitable administration of resources for a larger number of schools. Providers with adequate size and capacity will be better able to provide professional support for budgeting, accounting and other tasks to school leaders as well as offering regular leadership appraisal and feedback, thereby strengthening the strategic and pedagogical leadership at the school level. Box 2.3 provides relevant examples from Denmark and the Flemish Community of Belgium.
- **Recentralising the management and funding of educational sub-sectors.** Another option considered by countries facing size and capacity challenges at lower tiers of the administration is to re-centralise provision and funding of one or several sectors of schooling, either by moving responsibilities to higher levels of the administration or by creating new bodies to administrate a larger number of schools. Re-centralisation of education services entails risks of weakening the links between education and local development planning. As a result, an important aspect to such re-centralisation processes is the establishment of mechanisms that ensure that local development objectives remain a relevant dimension in defining approaches to school funding. In countries where a decision for recentralisation has been made, it is important that schools remain responsive to local needs and that decision-making involves consultation with the relevant local stakeholders. Systems that are re-centralising should also consider introducing flexible approaches to implementing such administration reform, which would recognise differences in capacity and performance between local providers. This could involve the possibility for willing municipalities or other providers to seek certification and continue operate their local school system within a strengthened accountability framework. Box 2.3 provides relevant examples from Chile and Estonia.

Box 2.3. Reform reflections on school governance and funding in participating countries

Working towards a clearer division of labour between levels of the administration

In **Estonia**, where the municipalities and the state provide competing services at most levels of education, the government is aiming to transfer responsibilities among tiers of government so as to provide greater clarity of funding and management responsibilities for each sector. The central government has a medium-term intention of establishing a more streamlined division of labour within public education, whereby municipalities should provide funding for pre-primary, primary and lower secondary education while the state should take responsibility for the entire upper secondary sector (both general and vocational schools) and special education schools. This is expected to reduce unnecessary duplication; provide the potential for better co-ordination within education levels (or school types); establish closer linkages between funding, school management and accountability; facilitate the alignment between education strategic objectives and school level management; reduce ambiguities in defining who is responsible for what; and assist with school network planning. For example, having the state take responsibility for both vocational and general upper secondary education is likely to facilitate bridges between the two sectors and allow upper secondary education to be managed as a unified sub-system.

Box 2.3. Reform reflections on school governance and funding in participating countries (cont.)

In **Austria**, where lower secondary schooling is currently offered by both the federal level (first stage of academic secondary schools) and the provincial level (within so-called New Secondary Schools), the government is also seeking ways to streamline the governance and funding of its school system. Current reform proposals include the creation of a more unitary governance structure, which should overcome the formal division between federal and provincial schools that currently hinders integrated and strategic policy making at the lower secondary school level. Teacher preparation and employment conditions should be governed by the same regulatory regime independent of school type, with both school types following similar educational objectives and curricula. Given the history of political struggles between the federal and the provincial governments, the whole-sale delegation of funding for teachers, operational costs and infrastructure to either the federal or the provincial government will be politically difficult. Any future arrangement will most likely have to be a political compromise in the sense that both levels will continue to be involved. Given this state of affairs, a clear division of labour, e.g. putting provincial governments in charge of all investments and maintenance and leaving the federal government in charge of the funding and allocation of teachers through new Education Directorates based in each province could be a feasible compromise.

Addressing the involvement of multiple tiers of government in funding flows

In the **Czech Republic**, where the regions currently act as intermediaries in funding flows for pre-primary and basic schools from the central to the local level, direct transfers between the ministry and the municipalities that manage the schools could help promote policy dialogue and enable the central level to improve the central understanding of the challenges 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. A solution could be to entrust funding 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, would 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.

Merging school providers to address capacity challenges and achieve scale economies

Denmark reorganised its public sector through a Local Government Reform in 2007. This reform reduced the number of municipalities from 271 to 98 and abolished the 14 counties replacing them with five regions. Except for some smaller islands, most of the 98 municipalities have a minimum size of 20 000 inhabitants. The reform also redistributed responsibilities from former counties to municipalities, leaving the municipalities responsible for most welfare tasks, and reduced the number of levels of taxation from three to two as regions were not granted the authority to levy taxes. Regional revenues consist of block grants and activity-based funding from the central government and the municipalities. In addition, to ensure that the local government reform would not result in changes in the distribution of the cost burden between the municipalities, the grant and equalisation system was reformed to take into account the new distribution of tasks. The reform sought to primarily improve the quality of municipal services, but also to address efficiency concerns (e.g. by creating economies of scale). Many of the 271 municipalities that existed prior to 2007 were considered too small to provide effective local services, in particular in the health sector.

In the Flemish Community, which has a particular governance context with three educational networks (one private and two public networks) managing schools, there has been discussion about creating a single network that would cover all public schools, both the Flemish Community schools and the schools managed by the municipalities and provinces. The potential merger of the two public networks deserves review and serious consideration as it would help reduce overhead and administration costs across the two smaller networks. In the context of reforms to optimise the structure of school administration, the OECD review team in the Flemish Community of Belgium also recommended reviewing the size of school boards within the different networks, with a special focus on determining the potential for merging school boards.

Re-centralising the management and funding of schools

In **Chile**, a 2015 reform proposal intends to remove management of public schools from the 47 municipalities and create a new system of public education. The draft law proposes the creation of a National Directorate for Public Education (within the Ministry) which will co-ordinate 67 new Local Education Services, each of which will oversee a group of schools with powers transferred from the 347 municipalities). Prior to this reform, a number of different options for reforming the municipal school system were envisaged and a central concern was to ensure adequate accountability mechanisms to monitor the effective, efficient and equitable use of resources at sub-central levels.

Box 2.3. Reform reflections on school governance and funding in participating countries (cont.)

In **Estonia**, as part of a new division of labour suggested by the government, the Ministry of Education is aiming to re-centralise general upper secondary education which is currently managed by the municipalities. The OECD review team emphasised that such a re-centralisation needs to be done in recognition of the established experience and capacity, especially for larger municipalities, to provide general upper secondary education. One option would be development of a state-level regulatory framework for general upper secondary education where room exists to delegate the provision of the services to those municipalities with enough capacity and experience. This should lead to a more efficient consolidation of the network of general upper secondary schools

Source: Nusche et al. (2016a); Santiago et al. (2016b); Shewbridge et al. (2016b); Nusche et al. (2016b); Nusche et al. (2015); Santiago et al. (2016c).

Align revenue raising and spending powers

122. As discussed above, increasing the revenue raising power of sub-central jurisdictions has a number of advantages in terms of autonomy, accountability and overall resource mobilisation. In particular in countries where sub-central authorities have large spending powers, consideration could be given to increasing, at the margin, their own revenue raising powers. Indeed, in systems where local choice remains a key principle of schooling, a case can be made for expanding the available choices for local governments by increasing their fiscal autonomy. For example, many of the finance systems in Nordic countries give local governments substantial control over personal income tax rates. Some Central and Eastern European countries have also started to do this (e.g. Croatia, Montenegro) by giving local governments the right to impose a local surcharge - within limits set by law - on the national government's rate, while others are considering it (Santiago et al., 2016b). It should also be considered to accompany such an extension of revenue generating powers of local governments by some jurisdictional consolidation to decrease the incentive such taxation might create for people to move from one jurisdiction to another - particularly from urban to suburban ones. At the same time, this would require strengthening the equalisation system for those local governments whose fiscal capacities are weaker (more on this below). It is recognised, however, that moving in this direction requires considerations that go beyond the education system and need to be embedded in broader reflections on fiscal relationships across tiers of government.

Design adequate mechanisms to equalise resource levels across jurisdictions

123. Despite the advantages of raising the proportion of own revenue in sub-central education budgets, such an emphasis on using local tax bases for schooling also entails important risks to create inequities in the availability of funding for schools across different localities. Typically, wealthier jurisdictions will be in a better position to raise their own revenues and to be able to provide adequate funding per student in their local systems than others. In such contexts, the operation of fiscal transfer systems can help provide all jurisdictions with the necessary revenue to provide equal opportunities for their students. Such mechanisms aim to ensure that regional / local authorities are able to provide similar services at similar tax levels. Box 2.4 provides examples from different countries that introduced equalisation schemes alongside decentralisation reforms which shifted responsibilities for school funding to the local level.

124. While the design of the inter-jurisdictional relationships goes beyond the education sector, getting the system right is particularly important for education as it often accounts for the largest share of the local budgets. Chapter 4 discusses key design principles to be considered when establishing effective fiscal transfer systems. In terms of governance, it is important to strike a balance between the need to reflect stakeholder views in the design of the grant system and the risks of rent-seeking approaches and political distortions. A number of OECD countries have developed measures to limit the influence of special interests, for example through the establishment of independent agencies and bodies to limit

political bargaining and approach resource distribution from a technical rather than political perspective. Also, a two-stage budget procedure by setting the overall budget for equalisation and then negotiating the distribution formula may help reduce rent-seeking pressures (OECD, 2014).

125. But even where well-designed equalisation schemes are in place, there may be marked differences among sub-central authorities in the level of funding they provide to schools and in the methods used for allocating these funds. To ensure a basic level of funding for all schools, one option is to introduce a funding approach whereby a part of central funding is earmarked for schools based on assessed needs while another part can be used at the discretion of sub-national authorities. In systems where each educational jurisdiction creates its own funding approach, the sharing of experiences among sub-national authorities should be encouraged and facilitated to create synergies and avoid duplication of efforts in designing optimal funding formulas.

Box 2.4. Introduction of equalisation funds in Brazil, Iceland and Poland

When **Brazil** devolved authority from a highly centralised system to states and municipalities in the mid-1990s, it created FUNDEF (Fund for the Maintenance and Development of Basic Schools and the Valorisation of the Teaching Profession), to reduce the large national inequalities in per-student spending. State and municipal governments were required to transfer a proportion of their tax revenue to FUNDEF, which redistributed it to state and municipal governments that could not meet specified minimum levels of per-student expenditure. FUNDEF has not prevented wealthier regions from increasing their overall spending more rapidly than poorer regions, but it has played a highly redistributive role and increased both the absolute level of spending and the predictability of transfers. There is evidence that FUNDEF has been instrumental in reducing class size, improving the supply and quality of teachers, and expanding enrolment. At municipal level, data show that the 20% of municipalities receiving the most funds from FUNDEF were able to double per-pupil expenditure between 1996 and 2002 in real terms.

When **Iceland** moved responsibility for compulsory education to the municipalities in 1995, the cost of compulsory schooling was determined to be 2.84% of the total income tax received by the state. That percentage was decided by using the capital city, Reykjavík, as a zero point – calculating by how many percentage points the local income tax would have to go up for the city to cover the cost of operating the compulsory schools, which came to 2.07% of the states total income tax. In 1995, 2.07% of the state's annual income tax was therefore permanently transferred to the local income tax which the state collects centrally and transfers to the local communities in order to even out salary costs in the compulsory schools and to cover other costs due to transference of the schools from the state to the local communities. Following the calculations for the City of Reykjavík, the total cost of operating all the compulsory schools in the country was then determined, which came to a total of 2.84% of the states income tax. The difference between the 2.84% and 2.07% - or 0.77% - was then allocated by the state to The Local Governments' Equalizations Fund. The role of the fund is to even out the difference in expenditure and income of those local communities with a specific or a greater need, through allocations from the fund, based on the relevant legislation, regulation and internal procedures established for the operation of the fund. A part of the 0.77% is earmarked to cover proportionally the operational cost of the fund itself but the main part is reallocated to the local communities. 71% of that amount goes towards general support but the rest is earmarked for specific purposes.

In **Poland**, education decentralisation was part of the overall decentralisation process of the country initiated in 1990. The main transfer from the central to local budgets is called "general subvention" and is composed of a few separately calculated components. Two main ones are the education component and the equalisation component. The education component is calculated on the basis of student numbers (with numerous coefficients reflecting different costs of providing education to different groups of students), and thus reflects different costs of service provision. The equalisation component is based on a formula and equalises poorer jurisdictions up to 90% of average per capita own revenues of similar local governments. It thus reflects revenue equalisation.

Source: OECD/The World Bank (2015); Iceland Ministry of Education, Science and Culture (2014).

Build capacity for financial management at the sub-central level

126. In countries where local authorities play a key role for providing education, the capacity building of local actors should be a priority. Such capacity building should include a focus on resource management if this is a local responsibility. Competency frameworks for local leaders and administrators should reflect the related skills and be used to guide recruitment processes as well as training and professional development.

127. Part of the strategy involves professional development programmes to be made available to the staff employed by regional / local authorities and other school providers. These could emphasise quality assurance in education (including interpretation of performance data), managing local school networks, engagement with community members, communication and consultation processes, school development, financial planning and human resources management. But it is important to keep in mind that the professionalisation of local management does not depend only on the personal preparedness of local actors. In a wider professionalisation framework, the institutional settings within which local actors operate (e.g. co-ordination and co-operation among local authorities), the professional support provided, and the access of local actors to key information are important aspects to consider in improving capacity at the local level. For example, relevant training offers could be complemented by the establishment of a network of advisors to support the education work of local authorities. The central level and/or an association of local authorities could play a key role in this process.

128. Capacity for local education management can also be strengthened by encouraging local authorities to collaborate and share their administrative and managerial resources, e.g. jointly employing specialised staff for budgeting, financial control and the use of performance data, and working together to identify and disseminate effective practice (see Box 2.5 for an example from Norway). Associations of local authorities can take on a leading role in encouraging such collaborative practices and networks and in spreading good practices. Initiatives to develop and disseminate knowledge and tools for different levels of the school administration can support the implementation of effective processes for financial resource management. This could include support in areas such as planning resource use, budgeting and accounting, reporting on the use of financial resources, purchasing education materials and establishing contracts.

Box 2.5. Municipal networks for efficiency and improvement in Norway

Policymaking in Norway is characterised by a high level of respect for local ownership. In such a decentralised system, it is essential that different actors co operate to share and spread good practice and thereby facilitate system learning and improvement. Networking is a common form of organisation among municipalities in Norway and there are a range of good examples where networks and partnerships have been established between different actors as a means to take collective responsibility for quality evaluation and improvement. In Norway, there are many examples of localised collaboration initiatives launched and developed by small clusters of municipalities. As an example, in 2002, in Norway, the Association of Local and Regional Authorities (KS), the Ministry of Labour and Government Administration, and the Ministry of Local Government and Regional Development set up “municipal networks for efficiency and improvement” that offer quality monitoring tools for municipal use and provide a platform for municipalities to share experience, compare data and evaluate different ways of service delivery in different sectors. For the education sector, an agreement was established between KS and the Directorate for Education and Training to allow the networks to use results from the user surveys that are part of the national quality assessment system.

Source: Nusche, D. et al. (2011), OECD Reviews of Evaluation and Assessment in Education: Norway 2011, <http://dx.doi.org/10.1787/9789264117006-en>.

Provide the necessary conditions for effective financial management at the school level

129. Giving schools autonomy in managing their resources can be an important tool that helps to achieve both quality and equity goals, provided that the right conditions are in place. For example, being able to make budget decisions and recruit personnel allows schools to more effectively shape their profiles and respond to local challenges. Some countries have taken steps to improve the conditions for schools to make decisions regarding the allocation of their operational budgets, for example by allowing them to have their own bank accounts and permitting a degree of carryover of funds to the next financial year (for more information, see Chapter 3). Others are aiming to replace earmarked funding for schools by more general grants in order to allow school-level decision-making power in allocating such funding. To avoid that increased autonomy results in widening inequities across schools, it is important to develop framework conditions that ensure adequate levels of capacity, support and accountability for school leaders.

130. First, increased school autonomy requires investment in school leadership and management capacity. The effects of school autonomy largely depend on the ability of schools to make use of this autonomy to manage their resources effectively. If schools hold considerable autonomy for resource management, education policies need to focus particularly on developing school leadership capacity and strengthening school management. This should be part of broader strategies to develop the school leadership profession such as the establishment of school leadership frameworks, the recruitment of qualified candidates, their preparation, induction, professional development, performance evaluation and career development over time (OECD, 2013b).

131. Second, depending on the tasks delegated to the school level, schools also require adequate administrative support staff, such as secretaries, accountants and/or financial managers who are based at the school or shared between several schools. Depending on the context, this does not necessarily mean an overall increase in staff numbers, but could involve a reflection of how human resources can be shifted to better meet schools' needs. It could also involve testing out innovative and cost-effective ways of organising schools and administrative support (e.g. through collaboration of schools or local authorities). In a number of countries, the responsibility for the maintenance of schools, including the provision of administrative staff, lies at the local level, which means that the availability of administrative support staff may depend on the willingness and resources of the responsible local authority. In such contexts, central authorities could consider the introduction of central guidelines regarding a minimum number of administrative staff for schools of a certain size, coupled with instruments to address resource inequities between local authorities (e.g. through an equalisation mechanism, see above). Adequate support structures with administrative staff and distributed leadership arrangements are important to reconcile administrative and managerial tasks with pedagogical leadership (Pont et al., 2008).

132. Third, schools may benefit from external support with financial management tasks. Local education providers (e.g. the municipal education offices) can provide their school leaders with various degrees of help with the more technical aspects of school budgeting such as accounting and bookkeeping, allowing school leaders to focus more on strategic and pedagogical organisation of the school. They can also play an important role in the delivery of services and can help their schools achieve scale economies, for example by buying materials and services for several schools at the same time. In addition, several countries have created consulting and advisory services that work with schools and provide support if needed, for example in the development of strategies to use targeted funds to improve learning for disadvantaged students. This is, for example, the case in the Flemish Community of Belgium, Denmark and Estonia (Box 2.6). Schools may also benefit from external advisory services, as is the case in Chile (Box 2.6).

Box 2.6. Structures to support school-based financial management

In the **Flemish Community of Belgium**, the financial autonomy of individual schools varies across school boards. School leaders, however, typically plan their budgets in collaboration with their providers. Some providers also provide support to schools in the more technical aspects of budgeting and accounting, allowing school leaders to focus attention to more strategic tasks.

In **Denmark**, the municipal education administration similarly provides their school leaders with various degrees of help with the more technical aspects of school budgeting such as accounting and bookkeeping, allowing school leaders to focus more on strategic and pedagogical organisation of the school

In **Estonia**, school accounts are typically maintained by the education departments of municipal governments. These departments are generally staffed by people who have been involved with the sector for most of their professional careers.

In **Chile**, schools that receive public funding can seek support from technical-pedagogical advisors (Asesores Técnico-Pedagógicos, ATP) that are organised within the Ministry's Education Provincial Departments (DEPROVs). Technical-pedagogical advisors work with schools, for instance, to support the effective implementation of the curriculum, the planning of improvement strategies and the identification of instruments and tools to assess the implementation of the school improvement plan. Schools can also contract independent private consultant services which also provide advice on resource management issues.

Source: Nusche et al. (2015), Nusche et al. (2016), Santiago et al. (2016b); Santiago et al. (forthcoming).

133. Fourth, increased responsibility of schools over their own budget further needs to be accompanied by effective school self-evaluation and accountability mechanisms. Requiring schools to develop school improvement plans connected to resource strategies can help inform resource allocation. Performance agreements with principals can also help holding school leadership to account. Information generated through school evaluation needs to be systematically connected with future resource decisions. Additional support should be provided to schools identified as struggling with increased autonomy. School boards representing parents and the local community can provide horizontal accountability by reviewing school budgets. In Denmark, for example, there is involvement of local stakeholders in budget decisions via the work of the school boards and school boards have a formal role in monitoring results and approving school budgets, thereby offering a degree of horizontal accountability to school-based resource management (for more information, see Chapter 3).

134. Finally, a critical school size is also necessary in order for schools to be able to effectively use their autonomy. If schools are too small, delegating more responsibility to the school level may overwhelm leaders with additional workload. Considerations about school autonomy in managing their resources should therefore go together with discussions about desired school size. Asking schools to group together and share financial resources in a rational way can help achieve scale economies and efficient use of resources. In Portugal, for example, where educational policy is generally carried out at the central level, a 2010 Agreement on the Reorganisation of the School Network established the organisation of schools in clusters, giving them the opportunity to sign autonomy agreements (OECD, 2015c). Box 2.7 provides an example from the Flemish Community, where additional resources are provided jointly to associations of schools with the intention to incentivise the sharing of resources, rationalisation of course offers and overall cost-savings.

Box 2.7. School associations in Belgium (Flemish Community)

In the Flemish Community of Belgium, school associations for primary and secondary education have been promoted by the government, starting in 1999. The objective was to make schools work in collaboration by sharing resources, rationalise the supply of courses and promote cost savings across schools. The government's aspirations were that this new system would enable the enhancement of student guidance systems, particularly in relation to their educational career trajectories; the lessening of the managerial-administrative burden on school directors so that they become pedagogical leaders; the increased use of ICT; and the rationalisation of resource use both in relation to staff recruitment, functioning and evaluation and in relation to co-operation in curriculum. The government incentivises participation of schools in these associations by allocating additional staffing and other resources (e.g. "envelopes" of teaching hours) specifically to be used through collective decision making processes established freely by the communities of schools.

Source: Pont, B., D. Nusche and H. Moorman (2008), *Improving School Leadership, Volume 1: Policy and Practice*, <http://dx.doi.org/10.1787/9789264044715-en>.

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CHAPTER 3. BUDGETING AND PLANNING THE USE OF FINANCIAL RESOURCES

135. This chapter analyses the planning of resource use. It discusses how countries define priorities and targets, forecast resource needs, align funding strategies with policy objectives and develop budgeting procedures at different levels of the school system.

Budget planning procedures

136. Budgeting, i.e. the development and execution of financial plans, is a cornerstone of resource use in the education sector. Given their importance in governing the level, distribution and use of expenditure, budgeting procedures are critical for ensuring that resources are employed efficiently and effectively to meet education objectives. The development of education budgets for different levels of the education system involves a variety of actors from across all levels of government and sharing different responsibilities over the course of the process, from the initial planning phase to the budget's execution.

Stages of the budgeting process

137. In the most general terms, the budgeting process can be described as a succession of five stages consisting of *i*) the budget preparation, *ii*) its review and adoption, *iii*) the budget implementation and execution, *iv*) parliamentary control of the budget implementation and the final stage of *v*) financial reporting and external audit (OECD, 2004). Although the budgeting process involves different administrative levels contributing to and sharing decision-making responsibilities at each of these stages, a Central Budget Authority (CBA) is usually responsible for coordinating the budgeting process at the central level, providing its timeframe, procedural rules and guidelines. In most OECD countries, the CBA is also charged with overseeing the development and submission of the final budget and is located in the Ministry of Finance or Economy. Exceptions to this rule include Australia, Canada and Ireland, where authority over the budgeting process is shared between several government entities, the United States, where it is located in the President's office and Belgium, where the CBA is part of the Federal Public Service Budget and Management Control (OECD, 2014).

Budget preparation and negotiation

138. The annual preparation of central education budgets conventionally requires education ministries to submit a budget proposal that is subject to negotiations with the CBA before it can be approved and implemented. Prior to the budget's initial draft, finance ministries may impose expenditure ceilings on line ministries using a top-down approach, limiting the level of resources which education ministries have at their disposal when preparing their budgets, as is the case in Sweden or Denmark. By contrast, in countries following a strict bottom-up approach, ministries and agencies submit budget requests and new spending proposals first, which the ministry of finance then takes into account when determining the ministries' final budget allocations (Fakharzadeh, 2016: 12).

139. Few OECD countries, including Hungary, the United States and France, report to provide no ceilings for the initial budget requests of their line ministries (OECD, 2014: 56). Imposing top-down ministerial budget ceilings is seen as a convenient and proactive way for the finance ministry to ensure that aggregate spending targets are not exceeded due to bottom-up spending pressures from individual ministries. It may also involve a greater responsibility among line ministries to use their operational

knowledge to determine the most efficient allocation of resources while the CBA takes the responsibility of controlling the aggregate spending level and may provide line ministries advice and technical support, such as performing expenditure projections to inform line ministries how programme spending might evolve over time (OECD, 2014: 50). When defining ministerial budget ceilings, finance ministries may take into account executive policy priorities and forecasts alongside information such as previous spending levels. The resulting spending ceilings vary in their flexibility, sometimes allowing for the subsequent reallocation of resources between ministries once their requests and policy proposals have been taken into account (Robinson, 2013).

140. Once ministries have drafted and submitted their budget proposals, negotiations with the ministry of finance begin, which may deal with issues such as aggregate ministerial spending levels, specific programme allocations, strategic priorities and the termination or introduction of new budget lines. This process may be governed by formal rules or established conventions and the relative power, responsibilities and procedural roles of education and finance ministries vary across budgeting systems. Budget negotiations in systems following a bottom-up procedure usually last longer than those relying more heavily on a top-down approach, since they require the finance ministry to negotiate details of individual ministries' proposals in order to meet aggregate fiscal expenditure targets. Across OECD countries, these budget negotiations last between a few weeks to multiple months, depending on country-specific procedures. During these negotiations, various forms of information including macroeconomic and fiscal estimates and, to varying extent, performance measures may be brought in to inform allocation decisions (see below for details on this process). Although most disputes arising during the budget formulation process are resolved in lower-level negotiations, the ultimate authority to settle allocation disagreements typically rests with the Cabinet Office, the ministry of finance (e.g. Denmark, Slovenia and Spain) or the Chief Executive (e.g. Chile, Australia and France). Less frequently, the power to resolve disputes is shared between more than one of these actors or, in the case of Belgium, a ministerial committee (OECD, 2014: 56).

Budget review and adoption

141. Following the budget negotiations, the ministry of finance usually presents its draft budget to the legislature for discussion and proposed amendments. The parliamentary review process can involve a range of accountability and scrutiny mechanisms, including hearings, plenary debates and reviews by dedicated committees. OECD countries increasingly entrust Budget or Finance Committees to coordinate the Parliamentary review process, ensuring consistency in the legislative budget actions and drawing on the expertise of other sectoral committees (Schick, 2003). To allow enough time for public scrutiny, parliamentary review and debate, draft budgets are submitted to the legislature at least two months before the start of the fiscal year in the great majority of OECD countries, allowing as much as four months in countries like Denmark and eight months in the United States (OECD, 2014: 91).

142. The legislature's influence over the budgeting process and its relative authority vis à vis the executive varies across countries. In most systems, Parliament needs to adopt budgets before they can be implemented, yet in countries such as Greece or Ireland, its role is confined to approving or rejecting the budget proposal. Most OECD legislatures enjoy some power to amend the budget and demand spending to be reallocated at least within the executive's overall expenditure ceiling, although the use of this power may be limited by convention and parliamentary restraint in practice (OECD, 2014: 90). Chapters 4 and 5 provide detailed information on the execution and monitoring of the budget's implementation.

Budget planning at the system level

143. Throughout the budgeting process, the actors involved may draw on a wide range of information, consultation procedures and planning tools to guarantee that education budgets meet future resource needs.

In most OECD countries, the ministry of finance establishes the procedural framework for the budgeting process in a budget circular which it provides to line ministries. The budget circular outlines the rules and timeline for the different budgeting procedures. In addition, it may provide guidelines for the use of fiscal projections, contain expenditure ceilings or targets and inform education ministries of specific government priorities.

144. In countries where the ministry of finance sets budget ceilings before line ministries draft their budget proposals, it may take into account factors such as fiscal targets for the aggregate budget, economic forecasts, past expenditure levels and policy priorities whereas the ministerial budget proposals that initiate bottom-up budgeting procedures tend to be more expenditure-driven, placing less emphasis on overall economic forecasts or system-wide policy priorities. In either case, some finance ministries offer education ministries their horizontal support during the budget preparation, providing them with procedural guidance as well as relevant financial and accounting documents (Curristine, 2005). Most education ministries also have a dedicated unit that is tasked with budgetary and funding matters, such as the Office of Information and Financial Affairs situated in the Icelandic Department of Education or the Finance Department within the Lithuanian Ministry of Education and Science (Fakharzadeh, 2016: 10). These organisational units can play an important role in setting up budgeting and accounting systems and often take a lead in negotiating education budgets with the finance ministry.

145. Countries report to draw on a wide range of information during the central budget preparation, including administrative and demographic data, macroeconomic and fiscal forecasts, information on student flows and past expenditure data. Additional qualitative information that is consulted in some countries includes evaluation results concerning the impact of programmes and policies, performance information and education policy priorities included in strategic documents. Not all countries have a systematic approach to the way this information is brought to bear on the budget planning process and the relative emphasis placed on different types of data during the formulation of initial spending ceilings, budget proposals and the subsequent negotiations may vary considerably, not least in light of the often highly politicised context in which budget negotiations take place.

146. The main types of education expenditure pertain to staffing, operating and infrastructure costs. Given the distinct characteristics of capital investment projects and current expenditure, the majority of OECD countries operate separate budgets for both at the central level and may use distinct planning tools for each of the expenditure types: In 2012, 20 of 33 surveyed OECD countries used separate budgets for capital and operating expenditures at the system level (up from 15 countries in 2007). Even though some systems use “integrated budgets” containing both current and investment spending, they might still be separately accounted for before they are merged for allocation purposes (OECD, 2014: 44).

147. Particularly the planning and execution of spending on multi-year capital projects involves distinct budgeting procedures in many OECD countries. More frequently than is the case for operating expenses, decisions on the funding of capital projects are accompanied by ex-ante value-for-money assessments, which will be discussed in greater depth below. Nearly half of OECD countries reported funding the entire cost for capital projects up-front, while another 12 countries provided spending agencies with their capital funding appropriations incrementally over the course of multiple years. The remaining countries, including Austria, the Slovak Republic and the United Kingdom, determined the appropriate funding procedure on a case by case basis (OECD, 2014). In many countries, investment expenditure is also subject to distinct regulations concerning the carry-over of unspent appropriations across budgetary years and the permissibility for ministries to borrow against future appropriations.

Budget planning procedures at the regional and local levels

148. Given the trend towards decentralisation in many OECD countries, the relationships between central governments, ministries and local actors as well as their respective responsibilities in the education budgeting process have been subject to change as the process of resource planning increasingly involves local authorities. Although local actors may enjoy greater allocation and budgeting responsibilities for funds raised at their level of administration, resource raising and budgeting power do not necessarily align and some countries provide regional and local authorities with considerable responsibility for administering central grants. Local and regional actors may thus be responsible for developing budget proposals that outline the use of financial resources or their further distribution among lower levels of administration and schools.

149. Not all decentralised systems issue prescriptions concerning the use of particular budgeting and accounting procedures at the local or school level. In Denmark, for instance, each school and municipality is responsible for devising and implementing its own budget planning approach (Nusche et al., 2016a). In other cases, regulations and requirements for local budgeting procedures are inscribed in national legislation, Education Acts and other statutes. Guidance and requirements may be communicated through different methods, such as budget circulars, budget laws, generally accepted accounting standards, charts of accounts, and budget classifications. Furthermore, ministries of education and their budget planning units or ministries of finance may provide intermediate authorities with guidelines concerning financial management in education as well as budgeting and accounting practices (Fakhzadeh, 2016).

150. In Iceland, local municipalities are responsible for developing budgets for pre-primary and compulsory schools in consultation with local school leaders (Mennta- og menningarmálaráðuneytið, 2014: 49). In the aftermath of the financial crisis, Icelandic municipalities administered significant real term cuts to their education budgets, impacting operational expenditure as well as funding for the maintenance and development of facilities (Mennta- og menningarmálaráðuneytið, 2014: 46). The municipalities' responsibility for deciding when and how to reduce school funding and which services to prioritise or protect in the short- and medium-term underlines the need to develop the capacity for complex planning and funding strategies where such decisions are taken at the local level.

Budget planning procedures in schools

151. As discussed in Chapter 2, school-level authorities across countries enjoy varying degrees of autonomy in planning their budgets and allocating resources, depending on the systems' extent of decentralisation. While staff and operating expenditure are centrally controlled in countries such as Uruguay, others afford school directors extensive control over their budgets including the ability to hire and dismiss teachers or determine their salaries, as is the case in Estonia. Within countries, the discretion over resource allocation and budgeting responsibilities can also vary across school types, levels of education and types of resources.

152. In the case of Estonia, leaders of municipal schools submit their budget proposals to be approved by the municipal authorities, while the central education authority is responsible for approving state school budgets. Internal school boards play a more active role in the budget planning process in countries such as Lithuania, where they are responsible for drafting school budgets before submitting them to the school leadership for approval. By contrast, in highly centralised systems, actors at the school level may not have any direct involvement in budgeting procedures since budgets are drafted and managed directly from the central level. Similarly, for most public primary and secondary schools in Chile, with the exception of municipal schools, school budgets are managed by school administrators and are indirectly defined through funding allocations transferred from the central level.

153. In the Flemish Community of Belgium, school boards, which are responsible for the governance of one or multiple schools, enjoy a high degree of autonomy concerning most aspects of resource use and are responsible for setting up their own budgeting and accounting systems in compliance with the rules and procedures pertaining to their educational network. In general, the school boards of public providers need to follow the same budgetary rules that are imposed on public services while private school boards enjoy more flexibility and in some cases only have to follow the budgeting rules that apply to private enterprises or foundations. However, given that they receive public funding, recent changes to EU legislation have mandated private school boards to adopt some of the budgetary rules that apply public services as well (Flemish Ministry of Education and Training, 2015: 54).

154. In many countries where school leaders or school boards are responsible for planning their own budgets, the type of information they use in the process is at their discretion. It often involves a combination of identified resource needs, student flow and enrolment data. To facilitate strategic budget planning at the school level, some countries require school authorities to provide strategic development plans linking the school's education objectives to proposed expenditures. Particularly if they are integrated into a wider multi-annual budget framework adopted at different levels of the system, school development plans can play an important role in facilitating system-wide approach to educational resource planning. Specifically, they can help local actors in making strategic spending decisions and provide an additional source of accountability, complementing the schools' annual financial reports, which detail their sources of revenue and use of funds, with tangible objectives against which their progress can be assessed. While some countries, such as Estonia, apply the same multi-annual budgeting approach across all levels of the education system, others, including Uruguay and Iceland, use annual budgets at the school level while engaging in multi-annual planning procedures at higher levels of the system. Lithuania and the French Community of Belgium, by contrast, rely on single-year budgets at all levels of the education system, and countries like Sweden give schools discretion over the time period covered by their budgets.

155. Different horizontal and vertical support mechanisms may be in place to assist schools in their budget preparation, to review and approve expenditure proposals or development plans alongside the regular inspection process and to provide additional accountability in the school-based management of resources. In Denmark, for example, school boards play a formal role in monitoring school results and approving school budgets (Nusche et al., 2016a: 118). In Estonia, school boards exercise an advisory function in the preparation of school budgets and municipalities relieve schools of accounting responsibilities, which allows them to focus on other aspects of their resource responsibilities (Santiago, 2016b: 132). Giving school leaders greater responsibility during the budget development and planning process can promote their ownership of the budget and enhance their flexibility to effectively respond to local challenges and needs and use their operational knowledge of the local context to employ resources efficiently. Enabling them to adequately perform this task requires a commitment to developing capacity at the school and local levels, which will be further discussed below.

Multi-annual budgeting frameworks

156. Over the past decades, an increasing number of OECD countries have adopted medium-term expenditure frameworks (MTEFs) to carry out the budgeting process with a multi-year perspective. Budgeting based on MTEFs typically involves setting expenditure ceilings for a period of three to five years, rather than issuing them on an exclusive year-by-year basis. The ceilings prescribe limits of varying detail pertaining to aggregate and ministerial spending or, less frequently, expenditure levels for specific policy areas and line items. An expenditure framework can be updated on a rolling basis (as in Austria, Germany and Sweden) by adding a new ceiling each year at the end of the framework period. Alternatively, MTEFs can be updated periodically (as in France, the United Kingdom and Uruguay), which involves drawing up a new multi-annual sequence of ceilings once a certain number of years has passed or a new cabinet period started. The individual ceilings of a multi-year framework may be fixed or subject to

regular adjustments and MTEFs with budget ceilings of any kind may be complemented by “descriptive forward estimates” of government expenditure and revenue levels under different economic or policy scenarios (OECD, 2014: 37).

157. By 2012, 29 of 33 surveyed OECD countries reported the use medium-term expenditure frameworks which, in most cases, need to be approved either by the Cabinet Office or Parliament before coming into force. Countries exhibit significant variation in the legal basis and authority of MTEFs, the compliance mechanisms used to enforce their budget ceilings, the entities charged with monitoring their execution and whether the respective decisions-making powers rest with the legislature or the executive (OECD, 2014). In addition, countries have taken different approaches to balancing predictability and flexibility in their multi-annual budget frameworks. Most countries, such as the Czech Republic, treat budget ceilings beyond the first year of the multi-annual framework as indicative and allow for regular revisions of the ceilings to account for unforeseen events or unexpected fiscal developments such as significant deviations from inflation targets, although a variety of restrictions and procedural hurdles may apply. Other countries, such as the United Kingdom, provide fixed ceilings for each year of the multi-annual budget. Assigning fixed multi-year ceilings requires forward estimates of particularly high quality to ensure the ceiling’s medium-term credibility (Robinson, 2013). MTEFs also afford varying degrees of flexibility for ministries to reallocate funding between years or organizational units and while some MTEFs only provide aggregate expenditure ceilings at the system level, other countries formulate them for ministries, agencies and individual programmes (OECD, 2014: 39). Box 3.1 provides an example for system-level multi-annual budgeting practices in the case of Uruguay.

Box 3.1. Multi-annual budget planning in Uruguay

Uruguay uses a multi-annual budget planning process based on a 5-year time horizon and prepared in negotiations between the institutions responsible for executing the budget and those which grant and monitor it. At the start of the budget negotiations, the Central Governing Council (CODICEN) of the National Public Education Administration (ANEP) is responsible for preparing a 5-year draft budget covering the expenditures of the ANEP, which executes the majority of public spending on school education. The draft budget is then submitted to and negotiated with the Ministry of Economy and Finance (MEF). During the negotiations, the four Education Councils responsible for different school sectors (CEIP, CES, CETP and CFE) are invited to submit their specific spending proposals based on guidelines established by the CODICEN. The CODICEN negotiates with MEF until a five-year budget is agreed for ANEP’s activities. Typically, only part of the budget requested by ANEP is granted by the MEF and once the five-year budget is established, the CODICEN reviews expenditure plans for all education councils and assesses the availability of resources to finance the proposed expenditures.

After the budget’s adoption, the MEF transfers the allocated resources to the ANEP based on three types of expenditure (staff compensation, operating expenses and capital expenditure). The ANEP has some leeway in reallocating these funds from one type of expenditure to another, transferring the designated funds for staff compensation and up to 10% of the funds for capital expenditure to cover operating expenses. Following discussions with the Education Councils, the CODICEN executes part of the budget itself (10.4% in 2013, mainly involving capital expenditure) and allocates the remaining budget, primarily for staff and operating expenditure to be executed by the four Education Councils of the ANEP (INEEd, 2015).

The multiannual nature of the budget induces stability in the allocation of funds and allows for spending authorities to plan expenditures over a longer time period. Although the allocations received by the councils have a degree of inertia, the budgeting process also allows for some flexibility to annual education budgets in response to emergencies, reassessments of priorities or unforeseen circumstances. For example, a recent drop in student enrolment has prompted the transfer of surpluses generated in the budget of the CEIP to the budget of CETP (Santiago et al., 2016c: 136).

Box 3.1. Multi-annual budget planning in Uruguay (cont.)

Although the multi-annual budgeting process provides a good basis for medium-term planning, the 5-year budgets in Uruguay have not been strongly linked to strategic documents as a means to connect spending decisions with corresponding medium- and long-term strategies and education priorities. In addition, the budget planning procedures in each of the four Education Councils are carried out relatively disconnected from each other, which limits the potential for align their budgets with a clear strategic vision encompassing the entire education system. Seeking to address these shortcomings, the ANEP has accompanied its 2015-19 Budget Plan with a set of annual targets covering 61 indicators for the period 2016-20.

Source: Santiago, P., B. Ávalos, T. Burns, A. Morduchowicz and T. Radinger (2016c), *Reviews of School Resources: Uruguay*, OECD Publishing, Paris.

158. Multi-annual expenditure frameworks may be adopted to guide budget planning procedures at different levels of the education system. Some countries require spending authorities at the regional and local levels to formulate their budget proposals in line with the time-frame adopted at the central level (e.g. in Iceland, Estonia and Slovenia). This serves to increase the local capacity for strategic budgeting, coordinate budgeting procedures and ensure that all levels of the system actively contribute to central targets and priorities. Even schools may be encouraged to prepare multi-annual development plans in accordance with the multi-annual perspective adopted at higher levels.

159. MTEFs are widely acknowledged as an effective tool to assist strategic budget planning. They help ministries of finance and education ministries alike to maintain fiscal discipline by ensuring that policy proposals and programmes are backed by a medium term budget and that varying costs at different stages of their implementation are adequately accounted for. In addition, MTEFs can give spending agencies the resource security necessary to strategically plan their operations and assist stakeholders in identifying the trade-offs and spending choices necessary to adapt to the level of funding they can expect to receive for the upcoming years. Adopting a multi-annual perspective on the budgeting process can be particularly helpful to develop implementation plans for large capital projects whose operating costs are expected to change over time or reform projects whose full cost does not immediately unfold due to their late implementation in the budget year (OECD, 2014: 37).

Fiscal rules and control mechanisms

160. Rules and control mechanisms pertaining to expenditure and revenue, deficits or debt accumulation play a role in the budgeting process of nearly all OECD countries. Designed to ensure long-term fiscal sustainability, they impose constraints on the spending decisions of executives, ministries, legislatures or local authorities and specify potential sanctions in the case of their violation. Fiscal rules can derive their authority from different sources, including national legislation, executive commitments, constitutionally guaranteed instruments or international treaties.

161. Practices regarding fiscal rules vary widely across national contexts and the policy goals they serve to support. While there is no consensus on their most effective design, fiscal rules should be simple, transparent and based on appropriate summary indicators in order to facilitate resource planning and monitoring procedures. In addition, they should involve different levels of government and, as some have argued, be responsive to cyclical fluctuations in order to allow for counter-cyclical spending policies (OECD, 2014: 21). The effectiveness of fiscal rules also depends on their linkage with other budgeting practices and procedures including MTEFs, fiscal projections, effective monitoring and enforcement mechanisms (Schick, 2003).

162. An important development contributing to the increased use of fiscal rules among OECD countries has been the European Stability and Growth Pact, which limits the budget deficit European Union member states are allowed to run at 3% of GDP and their gross national debt at 60% of GDP while also mandating the development of convergence or stability programmes outlining their strategy for meeting medium-term budgetary objectives. Since the Treaty on Stability, Coordination and Governance in the EU (the Fiscal Compact) came into force in 2013, members of the Eurozone have also been mandated to adopt fiscal rules for a balanced budgets into their national legislation (OECD, 2014: 22).

163. One example for fiscal budgeting rules established in the aftermath of the financial crisis and in light of the European Stability and Growth Pact is the Budget Law passed in Denmark in 2012, which institutionalised a sanctioning mechanism that had been in operation since 2010. Following negative GDP growth in 2009 and a budget overrun of almost 5 billion DKK among Danish municipalities, the government introduced a sanctioning regime the following year which took effect in 2011. The Budget Law introduced binding multi-annual expenditure ceilings at the central, regional and municipal levels and introduces automatic sanctions. In case municipalities fail to remain below the annually determined aggregate expenditure ceiling, sanctions amounting to 3 billion DKK will be partly deduced from the grants of overspending municipalities (60%) and the municipalities collectively (40%). Between 2011 and 2013, in the years following the Budget Law's introduction, municipalities consistently remained below their budgets, reducing expenditures by 4-6 billion DKK (Houlberg et al., 2016: 26).

Forecasting long-term and short-term resource needs

164. Strategic thinking and long-term planning are central to the successful governance of complex education systems (Burns, Köster and Fuster, 2016). Forecasts and projections of future resource needs can be used by different entities throughout the stages of the budgeting process to support this objective, to ensure the education system's long-term fiscal sustainability and develop clear implementation paths for educational reforms. At the central level, 73% of OECD countries employ long-term fiscal projections covering more than ten years to inform the budgeting process. The simulation models used for these prognoses tend to be provided by the CBA, other core ministries or by government-independent institutions (OECD, 2014: 15). Long-term fiscal projections need to be regularly revised, which tends to occur regularly in annual or multi-annual intervals or following elections. Around half of OECD countries mandate annual budgets or medium-term expenditure frameworks to be consistent with these projections (OECD, 2014: 15).

165. Typically, the ministry of finance will use prognoses and forecasts to establish expenditure ceilings for line ministries, while the education ministry may use them to prepare and justify its expenditure requests during the budget negotiations. Some intermediate and school level authorities also use forecasting tools to estimate their future expenditure, prepare budgets and allocate resources. Forecasts and simulations can also be employed as a strategic planning tool to estimate revenues and expenditure under different scenarios. The Norwegian Ministry of Finance, for example, requires the education ministry to provide a baseline expenditure projection assuming no policy change along with its policy proposals. These scenarios then form the basis for political discussions on ministerial revenue and expenditure limits as well as resources available for new policy initiatives (Anderson, Curristine and Merk, 2006).

166. Forecasting resource needs in the education sector involves anticipating developments in the demand for services across different education levels and sectors as well as their implications for human, pedagogical, physical and financial resource needs. The precise methodologies used to project expenditures are not always publicly available and vary across countries as well as authorities within countries. At the system level, baseline data on demographic projections of the school-age population and information on previous budget allocations may be combined with parameters of varying complexity to

arrive at an estimate of education expenditure. These can include estimated enrolment rates and student flows, different modalities of resource utilisation and macro-economic or budgetary indicators (Chang and Radi, 2001: 16). Models can be purely extrapolative or take into account policy changes and normative targets (Fakharzadeh, 2016: 40). Within schools, the use of forecasting tools tends to be at the discretion of school boards and school leaders.

167. The effective prediction of resource needs across education levels tends to require both vertical and horizontal collaboration and the mobilisation of data from various sources within the education system. In Spain, for example, schools are requested to provide education authorities with admission forecasts which serve as guidelines for subsequent resource planning and management activities. In addition, enrolment levels in pre-school services as well as municipal registers are used to inform demographic projections in coordination with local and regional authorities (INEE, 2016: 83). Budgeting for vocational education and training (VET) may necessitate additional efforts to predict future labour market trends and the demand for skills in different sectors by employing systematic forecasts or drawing on consultations with employers and unions. For example, Estonia's Qualification Authority has recently developed and implemented a system, OSKA, that seeks to provide the Ministry of Education and Research with 10-year labour market and skills forecasts on an annual basis to inform the planning of VET resources (Santiago et al., 2016b: 135).

Linking funding strategies and policy objectives

168. As policy objectives evolve, countries face the challenge of aligning their funding strategies to best support these goals. Typical education objectives whose emphasis and priority varies across countries and time include educational quality (e.g. improving overall achievement, improving the teacher workforce), equity and inclusiveness (e.g. integration of special needs students in mainstream schools, additional support for students from a low socio-economic background), expansion (e.g. provision of pre-primary education, diversity of offerings in secondary education) and excellence (e.g. targeting high performers). As a means to aligning their funding strategies with these objectives, countries have – to varying extent – integrated strategic considerations into their budgeting procedures. This alignment may involve the use of strategic documents to guide the budgeting planning process and the development of expenditure frameworks that connect spending decisions to education priorities. To facilitate the integration of education strategies into the budgeting process, some countries have placed particular emphasis on developing clear targets, corresponding indicator frameworks and structures to report on the system's progress towards these goals.

Formulating priorities and objectives

169. Effectively using education objectives to inform spending decisions involves creating a shared understanding of educational quality and priorities to guide the budgeting process as well as the development of targets and reference standards against which its effectiveness can be assessed. Particularly in school systems with decentralised responsibilities for resource management, the definition of clear, prioritised and measurable goals that can be translated into concrete targets at the local and school level has been central to guiding educational improvement and driving reform processes (Nusche et al., 2016a: 117). Box 3.2 provides an example from Denmark, showcasing the formulation of education priorities as a means to support reform in a decentralised budgeting system.

Box 3.2. National targets guiding reform in Denmark

As a school system characterised by a high degree of decentralisation in spending decisions, Denmark has developed an approach to educational steering that relies on the definition of clear education goals that translate into measurable targets at the local and school level. For the 2014 Folkeskole reform, three core objectives pertaining to student achievement, equity and well-being along with a range of corresponding measurable indicators were defined. The progress on all of these indicators was monitored for every school and reported to the municipalities. Similarly, the 2012 inclusion reform was guided by a clear target of an overall inclusion rate of 96% which provided a common objective for actors at all levels and appears to have been well-understood and taken on board by municipalities and schools to inform their local education planning.

Another noteworthy example for the formulation of clear national targets is the Danish government's policy for teacher competency development and specialisation, which is part of the 2014 Folkeskole reform. The government established the target that 95% of teachers should be certified in all the subjects that they teach by 2020, including the short-term objectives of reaching 85% by 2016 and 90% by 2018. To facilitate the achievement of these objectives, the Ministry for Children, Education and Gender Equality has provided additional funding of 1 billion DKK for teacher competency development along with evidence-based recommendations on how this funding could be spent. In order to apply for these funds, municipalities are required to develop a plan for its use, report back on their progress and repay any unspent money from this fund to the ministry by 2020.

Source: Nusche, D., T. Radinger, T. Falch and B. Shaw (2016), OECD Reviews of School Resources: Denmark, OECD Publishing, Paris.

170. Many countries face challenges in establishing a shared understanding of educational quality that is suited to inform the evaluation and planning of efficient resource use. In some countries, for example, the use of idiosyncratic criteria, conflicting definitions or a failure to raise awareness of existing standards among all actors of the education system has created a lack of agreement over standards for educational quality. Although Lithuania, for example, provides a framework for external school evaluation that sets out a detailed list of quality standards and 67 corresponding indicators, the planning and self-evaluation process within municipalities and schools is largely guided by idiosyncratic criteria (Shewbridge et al., 2016: 77). Similarly, countries differ in the extent to which educational objectives are provided with a target date for their completion as well as the use of these timeframes in the subsequent evaluation of spending decisions (Santiago et al., 2016: 59).

Connecting spending decisions to targets and priorities

171. Education targets and priorities can be used to inform different stages of the budgeting process across administrative levels to ensure that the use of resources is aligned with education priorities. An increasing number of OECD countries are making use of strategic documents to inform budget planning procedures and connect spending decisions to policy priorities. Developing these linkages between budget and strategy frameworks can provide governments with a clearer picture of where public finances are spent, facilitate the allocation of resources according to policy priorities and make it easier to track spending against the achievement of policy outcomes, particularly where goals and priorities are formulated in concrete terms (IIEP-UNESCO, 2010).

172. Although countries increasingly integrate annual budgets into strategically oriented MTEFs, not all medium expenditure frameworks are guided by concrete targets and priorities. For example, the five-year education budgets used in Uruguay were weakly linked to medium- and long-term strategic goals until annual targets and 61 corresponding indicators were introduced with the most recent 2015-19 Budget Plan (Santiago et al., 2016c). Austria is another country that has taken significant steps to strengthen the link between spending decisions, performance and policy priorities by moving towards a performance oriented budgeting approach at the national level. Building on a comprehensive reform launched in 2009, Austria introduced new budgeting principles in 2013 which led to the inclusion of performance targets in the federal budget as well as the concrete actions envisaged to achieve these targets and the criteria used

for measuring their success. Two of the goals included in the 2015 budget were to improve gender equality in education and raising the level of education. Each goal was accompanied by three indicators whose progress is evaluated as part of the country's monitoring framework for educational quality (Nusche et al., 2016b: 72). The broad goals are then linked and referred back to by specific budget programmes such as the one for “compulsory schooling – primary and secondary level” (Bruneforth et al., forthcoming: 20).

173. As is the case in Austria, performance- or outcome-oriented budgeting norms followed at the national level are not always adopted at lower levels of administration. A lack of technical capacity at both the central and local level can constitute a challenge for involving lower levels of administration in the implementation of strategic budgeting plans (IIEP-UNESCO, 2010). Some countries, by contrast, mandate all levels of the education system from the central to the school level to develop their budgets and justify their spending decisions in light of a shared set of priorities. This may involve drafting their own medium- and short-term strategic plans and budgets in line with the central level expenditure framework or at least actively contributing to the preparation of local expenditure frameworks prepared at the central level. Estonia provides an example, where horizontal co-ordination within and between ministries and different levels of administration are used to promote widespread awareness and understanding of the country's education goals and their effective integration into the budgeting process (see Box 3.3).

Box 3.3. Strategic education budgeting in Estonia

Estonia has taken important steps to integrate its annual budgeting processes into longer-term strategic frameworks at all levels of governance. By law, the national government, local governments and schools must have Strategic Development Plans. For local and national governments, these plans must be linked with four-year medium-term expenditure frameworks (MTEF). These frameworks establish the parameters around which annual budgets are made, but are then adjusted in light of those budgets.

At the national level the most important strategic document is the National Reform Programme “Estonia 2020”, adopted in the context of the Europe 2020 strategy. It identifies 17 major challenges facing the country and divides them into four basic fields, one of which is education. The priorities in education are then further defined by the Estonian Lifelong Learning Strategy 2020, which in turn serves as the platform for financial planning in the sector between 2014 and 2020. Strategic priorities and goals are expressed in concrete financial terms in the Ministry of Education and Research's four-year MTEF. The strategic priorities and goals are implemented through nine programmes.

This framework is subject to inter-ministerial discussion and debate before being integrated into the Government's broader MTEF. In March of every year the Ministry of Finance uses economic forecasts and the Government's MTEF to give all line ministries a budget ceiling for the following year. By April, line ministries must fit their priorities into these ceilings in accordance with their stated objectives and adjust their MTEFs accordingly. Negotiations between high level civil servants produce further modifications in each ministry's budget and in September the Government submits its general budget proposal for the next fiscal year to Parliament for debate. Local governments are also required to align their annual budgets with both four-year expenditure plans, and longer-term Strategic Development Plans.

School directors are responsible for developing school budgets. At the national level, most local governments operate according to well defined budget calendars and in the spring provide school directors with budget ceilings for the next fiscal year. These figures are then adjusted in the fall when enrolment becomes clearer. In municipal schools, school budgets are reviewed by democratically elected Boards of Trustees composed of parents, teachers and students before receiving final approval by the local government. In state-run schools, budgets are also reviewed by Boards of Trustees or Advisory Bodies (in VET schools), but these boards contain not only teacher and parent representatives, but external experts and, for VET schools, representatives of industry. The Ministry of Education and Research grants final approval for the budgets of state schools.

Source: Santiago, P., A. Levitas, P. Rado and C. Shewbridge (2016), OECD Reviews of School Resources: Estonia, OECD Publishing, Paris, www.oecd.org/edu/school/schoolresourcesreview.htm.

174. Kazakhstan provides an example for strategically informed budgeting in a highly centralised planning system driven by an extensive system of norms which ensure that decisions issued at the central level filter down to local and school authorities. Strategic documents guiding the short-, medium- and long-term strategy contain specific indicators and targets which are translated into local implementation plans by intermediate authorities and regularly monitored for progress (OECD/World Bank, 2015: 64). Centralised top-down approaches provide clear expectations and priorities, ensure policy continuity and facilitate the monitoring of progress towards policy goals. On the other hand, limited spending discretion at the local level and a lack of consultation with stakeholders in the budgeting process can constrain the ability of school and local authorities to employ the mix of inputs deemed most appropriate to meet their local needs and efficiently deliver quality education. The engagement of a broad set of stakeholders and opportunities for participation are key to facilitating meaningful exchange, designing long term reforms and ensuring that education strategies adequately reflect resource needs across geographic and administrative areas of the system.

Developing local capacity and providing support for strategic budgeting

175. Giving more resource management autonomy to schools or local authorities and involving decentralised levels in the implementation of strategic budgeting frameworks requires capacity at both the central and local level. While school and sub-system authorities require technical skills to prepare and monitor plans, the central level requires the capacity to oversee and provide effective guidance for the decentralized planning process (IIEP-UNESCO, 2010). This may involve integrating training on financial resource management and goal-oriented budgeting into the professional development of leadership skills. Particularly smaller communities may lack the training or resources to engage in strategic budget planning. Making budgetary autonomy work may therefore require an investment in local administrative personnel as well as effective self-evaluation and accountability mechanisms (see Chapter 2).

176. Even in systems with extensive local budgeting autonomy, the national or regional level can play an important role, not only in planning, triggering and steering education reform with a longer term systemic vision, but also in assisting local actors in the planning of their budget. Central education authorities can develop guidelines to assist with school finance and management procedures, provide feedback on the progress towards education goals, and co-ordinate the cooperation of actors across education levels for a whole of system approach to budgeting (Burns and Cerna, 2016: 229). Box 3.4 describes how such forms of vertical and horizontal cooperation in Denmark support local actors in assuming their responsibility for strategic budgeting. Several countries have now advanced the development of central consulting and advisory services that act as knowledge brokers that offer their services to schools and support them in making strategic spending choices.

Box 3.4. Supporting budgeting and resource management in Danish schools and municipalities

Danish school leaders enjoy extensive responsibility for the development of school budget plans and a high level of autonomy in their spending decisions since the largest part of school funding is not earmarked. To support school leaders in their resource management decisions, the Danish education system provides a number of support and accountability mechanisms.

Municipal education offices in Denmark help school leaders with technical aspects of school budgeting such as accounting and bookkeeping, which allows principals to concentrate more on the strategic and pedagogical organisation of the school. In addition municipalities cooperate with schools in the delivery of services and can help them achieve scale economies, for example by buying materials and services for several schools at the same time.

School boards play a formal role in approving school budgets, adding a degree of horizontal accountability to the budgeting process and the 2014 Folkeskole reform has provided the national parents' association with 12 million DKK to raise the competences and professionalism of school boards so they can exercise this role effectively.

Box 3.4. Supporting budgeting and resource management in Danish schools and municipalities (cont.)

If the biannual quality reports prepared by the municipalities provide evidence of consistent underperformance in some schools, the central level can provide additional support and recommend municipalities and schools to work with central learning consultants to improve of processes and outcomes. In addition, the Ministry of Children, Education and Gender Equality has created a “resource centre for the Folkeskole” which mobilises knowledge to complement local expertise with research evidence.

Source: Nusche, D., T. Radinger, T. Falch and B. Shaw (2016), *OECD Reviews of School Resources: Denmark*, OECD Publishing, Paris.

Using performance data, research evidence and evaluation results in the budgeting process

177. The effective planning of education funding strategies and reform initiatives requires not only the identification of future resource needs, but also the systematic mobilisation of knowledge generated from research, programme evaluations, monitoring activities and performance audits (Fazekas and Burns, 2012). Chapter 5 provides a detailed description of different approaches to collecting and report data on resource use as well as country practices with regards to monitoring activities and information management systems. This section is concerned with the way information on previous budget executions, evaluation results and research evidence are employed to support ministries at the budget preparation stage, increase the efficiency of spending decisions and inform future reform initiatives during both the design and the implementation phase.

Strategic employment of evaluation results, value-for money analyses and spending reviews

178. Evaluation results can be used to inform decisions throughout the budgeting cycle and serve as a basis for professional discussions among stakeholders concerning future reform initiatives. According to an OECD survey, approximately half of OECD countries reported the use of policy, programme or project evaluation results during budget negotiations between line ministries and the ministry of finance in 2005 (Curristine, 2005). Even more often than for the budget formulation itself, evaluation activities are commissioned and used internally by line ministries or national audit offices to inform their strategies and targets (Curristine, 2005). Not all evaluation activities explicitly assess the impact of programmes or policies relative to a set of previously established objectives, which can diminish their potential to help ministries in their spending decisions, in prioritising among programmes and influencing their design or operation (Santiago et al., 2016a).

179. Two evaluation techniques that explicitly aim to support effective spending decisions in the planning of educational resources are cost-benefit analyses (CBA) and cost-efficiency analyses (CEA). Both constitute value for money analyses that weigh the expected or observed benefits of education programmes, policies or investments against the costs of their implementation in order to ensure the efficient and effective use of resources and increase the transparency of the budgeting decisions. CBA and CEA can take a variety of forms and be employed *ex ante* to compare the anticipated consequences of alternative spending proposals or *ex post*, as a means to evaluate the impact of implemented programmes and policies (Fakharzadeh, 2016: 52). Both CBA and CEA procedures can, under certain circumstances, provide spending authorities with valuable information to inform budget planning procedures, help them choose between projects and policy options, determine the scale and timing of investments and decide on the expansion or continuation of existing projects.

180. While CEA takes a particular outcome or target as its starting point and compares the relative cost of different ways to achieve it, CBA aims to provide a holistic comparison of policy options, taking into account all of their associated costs and outcomes by expressing both inputs and benefits in explicit

monetary terms. In most OECD countries, CEA and CBA are used primarily to evaluate system-level investments in capital projects, with 17 of 32 countries reporting to use some type of value for money analysis in the evaluate of all capital investments, another 11 countries using it for capital projects that exceed a certain cost and 9 employing it on an ad hoc basis (OECD, 2014). Cost-benefit and cost-effectiveness analyses are less consistently used to inform the budgeting process for other types of education expenditure. Given the difficulties involved in translating the benefits of education programmes from social mobility and reduced drop-out rates to better employment prospects into monetary values (see Chapter 1), cost-benefit analyses in particular are less frequently used in the education sector than they are in other policy areas (Münich and Psacharopoulos, 2014).

181. Given the uncertainty and complexities involved in value for money analyses, most decision makers use them to complement, rather than substitute for other sources of information during the budgeting procedure, acknowledging their limitations and underlying assumptions (Münich and Psacharopoulos, 2014: 6). Although the scope to perform rigorous CBA and CEA in the education sector may be restricted by data limitations and other constraints, elaborating frameworks for value for money evaluations alone can help stakeholders develop a clearer idea of the costs and benefits associated with specific proposals, which stakeholders they might accrue to over time and whether any side effects or unintended consequences should be taken into consideration (Münich and Psacharopoulos, 2014: 7).

182. Ever since the financial crisis in 2008 and the increased fiscal consolidation pressures that followed, spending reviews have gained importance as another tool to implement strategic savings through the budgeting process, offering a procedure for “developing and adopting savings measures, based on the systematic scrutiny of baseline expenditure” (Robinson, 2014: 3). Rather than evaluating new policies and expenditure proposals, spending reviews are primarily designed to identify potential areas for savings in existing budget lines and recurrent expenditure, either through improved efficiency or reductions in services and transfer payments. Spending reviews may be conducted with a pre-defined savings target, as a means to set MTEFs or to define sectoral expenditure ceilings during the budget preparation. The nature of the reviews varies considerably across countries with regards to their scope, frequency, and the types of saving measures they propose, yet in 2012, half of the surveyed OECD countries reported to be engaged in a review process and most of these opted for a comprehensive format, identifying saving measures across a wide range of governmental expenditures.

183. Spending reviews in OECD countries are usually initiated and designed by the finance ministries and political leaders who decide on the review’s scope, timeframe and saving targets. Depending on country specific factors, such as the composition of review teams, education ministries often play a central role when it comes to developing the final set of savings options to be proposed for implementation (Fakharzadeh, 2016: 54). In order to identify areas for efficiency improvements, review teams rely on high-quality information generated through their own evaluation activities or drawn from existing data on educational efficiency. Routinely carrying out evaluation activities can therefore be an important factor contributing to the quality of spending reviews if their results are relevant, reliable and effectively integrated into the process (Robinson, 2014).

184. While spending reviews used to largely be conducted on an ad hoc basis in the past, they are increasingly integrated into the budget preparation process (Fakharzadeh, 2016). This implies coordinating the frequency and timing of spending reviews with that of the country’s ministerial budget allocations. In some cases, reviews are also timed so as to ensure that concrete saving options can be presented to the political leadership alongside the cost of newly proposed policy initiatives, which allows them to make a direct contribution to budget planning process (Robinson, 2014: 35). The simultaneous consideration of spending and saving options makes it possible for governments to adopt new high-priority spending proposals without increasing aggregate expenditure by implementing corresponding saving measures identified in the review process to balance their budget. This process encourages governments to engage in

a direct comparison between the merits of new spending proposals and their baseline expenditure (Robinson, 2014: 7).

Use of performance information in the budgeting process

185. Although there has been a general trend towards a greater emphasis on output criteria and performance information in the budget preparation and planning process (see Chapter 1), there is no consensus on the optimal use of performance data and the way it is employed to inform spending decisions varies considerably across systems (OECD, 2014). Broadly conceived, performance budgeting implies using information on what spending agencies are expected to accomplish with the resources they are allocated. As described above, this approach can entail the specification of measurable objectives and performance indicators for government programmes, the inclusion of targets and expected outcomes alongside expenditure information in budget documents as well as measuring, reporting and evaluating the results of government expenditure and using this information for strategic planning and budgeting (de Jong et al., 2013: 4). Even among countries that routinely integrate performance targets into their budget documents, the use of performance information as a basis to decide future spending allocations is less frequent and often limited.

186. The information used for performance budgeting purposes can originate from multiple sources and take a variety of forms including operation and performance reports generated through evaluation practices, findings from spending reviews as well as various indicators pertaining to resource inputs, outputs and efficiency (Fakharzadeh, 2016: 26; OECD, 2014: 78). The means by which performance data influences spending decisions varies, ranging from its merely presentational use to direct links between performance measures and resource allocation (Currstine, 2005). Most commonly, the link is indirect and performance data serves as one of multiple types of information which decision-makers consider for planning and allocation purposes. In theory, performance-based planning and allocation procedures can be used at different levels of the education system and at various points during the budgeting process.

Central-level use of performance data

187. Many OECD countries employ central-level frameworks that specify guidelines for the use of performance data during their budgeting process. In most cases, the link between performance data and central-level spending decisions is flexible, suggesting in that performance information is used to inform budget allocations alongside fiscal considerations and policy priorities, rather than being used directly to allocate resources. In 2011, line ministries reported to draw on performance data for a variety of purposes during their budget negotiations with the CBA, including decisions on funding allocations to specific programmes, strategic planning and prioritisation, increasing or reducing spending and, more rarely, terminating existing programmes. Still, around a third of OECD countries reported that line ministries make no use of performance information during the budget negotiations at all (OECD, 2014: 77).

188. Correspondingly, systems differ in their response if performance goals are not met. In a few cases, the failure to meet targets can have direct funding consequences, resulting in the decrease, increase or freezing of the programme's budget. In other cases, poor performance is made public or initiates the intensified monitoring of organisations or programmes. In some systems, missed performance targets entail consequences for a programme's leadership evaluation or prompt the allocation of additional staff and training to agencies, yet few countries have automatic response mechanisms in place (OECD, 2014: 78; OECD, 2013b).

189. Multiple reasons account for the limited use of performance data in the central level budgeting process. Given the difficulty involved in formulating appropriate performance indicators for the education sector alone, producing performance data or evaluation outputs that allow for strategic comparisons across

programmes and ministries is complicated. This can also involve trade-offs between the comparability of evaluation results across sectors and their relevance for the resource decisions faced within the respective ministries. Even in countries with a strong evaluation culture, the decentralised way in which performance evaluations are conducted with a view to informing budgeting practices within specific ministries and agencies can therefore limit their use for budgeting processes at higher levels of authority (Shaw, 2016: 5). Furthermore, using performance data to inform the budget preparation can be difficult in systems whose budget documents and procedures are organised along the lines of inputs, rather than output or outcome measures (see the section on programme budgeting below).

School-level use of performance data

190. Performance data can also inform spending decisions at the regional, local or school levels. The use of performance data for budgeting purposes and its impact on educational quality and efficiency is subject to debate and highly dependent on the context and details of its implementation. While performance-based allocation mechanisms have the potential to bring improvements to institutions' efficiency, increase accountability and encourage educational improvement, tying the allocation of resources to performance measures can have undesired and unintended consequences. Besides the risk of exacerbating existing imbalances in the distribution of resources, performance-based components in the funding of individual schools can set perverse incentives resulting in lower quality standards or risk-avoiding behaviour among teachers and school leaders (Santiago, 2016b: 135).

191. For example, funding vocational education and training programmes based on output criteria like completion rates, as is the case in Estonia, may encourage institutions to improve student retention and increase their efficiency. However, performance-based funding criteria need to be designed with great care to avoid undesired consequences such as encouraging an excessively narrow focus on easily attainable and measurable outputs, the provision of short and easy-to-pass qualifications, a lowering of examination standards or cream-skimming practices that remove services from the students who need them the most (Papalia, forthcoming). Introducing performance-based funding components at a small scale, such as 2-5% of funding, may suffice to draw attention to output measures and provide institutions with the desired incentive to improve educational quality without encouraging an excessively narrow focus on specific performance measures (Santiago et al., 2016: 29).

192. The so-called taximeter system used to allocate education resources to municipalities in Denmark constitutes an activity-based budgeting tool that provides incentives for schools to increase their performance and efficiency while affording them a high level of budgetary autonomy. Grants for vocational and upper secondary schools are provided, among other criteria, based on annual student enrolments figures. In addition, municipalities receive grants for the successful completion of students in upper secondary education, incentivising schools to improve their student retention and reduce dropout rates (Houlberg et al., 2016: 173).

Developing capacity for the use of data and research evidence across the system

193. Many OECD countries lack effective mechanisms for strategically integrating education research into the process of evidence-based budget planning (OECD, 2007; Santiago et al., 2016c: 143). Systematic weaknesses in the ability to use data and research evidence have been noted to appear at every level of governance (Burns and Cerna, 2016: 229). As many systems devolve planning and budgeting powers to lower levels of authority, some have taken active measures to support principals and local actors in assuming these new responsibilities effectively.

194. The effective integration of research evidence into the policy-making and budgeting processes can be facilitated by developing fora that bring together researchers and local policy makers to share

relevant research evidence and discuss its application to policy needs, as well as institutions that assess the legitimacy and rigour of research evidence, build trust and increase the cooperation between the policy and research communities (OECD, 2007; Santiago et al., 2016c: 106). This may involve strengthening the capacity and mandate of existing evaluation bodies to assume a more active role as knowledge brokers and tasking them with strategically consolidating evidence from across the system and disseminating it to support policy development, assessment and budgeting procedures (Santiago et al., 2016c: 106).

Budgeting techniques and budget structures

195. The structure of education budgets and the corresponding procedures for their planning, negotiation and execution differ considerably across countries. One way to distinguish different budget structures is the extent to which expenditure is allocated to line items or programmes – a distinction that tends to correspond with budget's orientation towards input or outputs. Both techniques can in theory be adopted for budgeting procedures from the central to the school level and a variety of hybrid approaches exist which combine elements of line item and programme budgeting. Some countries use line item classifications alongside programme-based methods for different purposes during the budgeting process, sometimes distinguishing between the classifications used to allocate resources and the way budget information is presented to policy makers and stakeholders. In the United States, for example, funding is usually allocated to schools on the basis of line items while programme budgeting is used for planning purposes (National Center for Education Statistics, 2003).

Line item budgeting

196. Line items constitute the lowest level of mandated spending in a given budget, detailing the use of allocated funds with varying degrees of specificity. Traditional line item budgets in education are organised along the lines of organisational units and objects of expenditure, allocating funding based on educational inputs such as personnel, infrastructure investments or maintenance. Country practices vary widely with respect to the number of line items contained in their budgets, the amount of detail with which allocations are specified and the levels of administration at which this budgeting technique is applied (OECD, 2014: 62). The structure of line item budgets mirrors the organisation of authority and spending responsibilities within the administrative units that implement it. This – together with the separate listing of individual expenditure components – affords spending authorities a relatively high degree of oversight and input control. It also allows expenditure data to easily be summarised and monitored based on organisational units or item categories (NCES, 2003). Due to their intuitive structure and the relative ease of preparing them, line item budgeting remains the most widely used budgeting technique, particularly at the school level (NCES, 2003).

197. The fact that line item budgeting methods are focussed on inputs rather than the services or results that they are intended to deliver makes it more difficult to link the cost of line items to specific services or performance outcomes. Other than for programme and activity-based budgets, the justification or expected impact of specific expenditures may therefore not be readily apparent based on the budget documentation alone. Some systems therefore supplement line item budgets with programme or performance information for presentational purposes and to allow decision makers to relate education spending to specific activities or purposes (NCES, 2003: 16).

Programme budgeting

198. Some countries have moved from the use of line item budgets towards programme-oriented budgeting methods that assign funding to programmes of work and their associated outputs, rather than educational inputs. Conceived in the 1960s, programme budgeting “lays stress on estimating the total financial cost of accomplishing objectives” (Wildavsky, 1997) and promised to support the alignment of

spending and education objectives, for example by facilitating the integration of cost-effectiveness analyses into the budgeting process.

199. There is no consensus on the kind of unit that should constitute the basis of a programme budget, which could be anything from the accomplishment of a specific educational objective to the implementation of an education reform or a certain type of activity. Identifying a set of appropriate programmes under which expenditures can be subsumed is key to designing effective programme budgets and gives rise to great variation in the approaches taken across education systems. Defining mutually exclusive and collectively exhaustive programmes is far from trivial at any level of aggregation and involves dealing with the mutual dependencies between different government activities as well as those which contribute to multiple objectives at once (Wildavsky, 1997).

200. The use of programme over line item budgeting involves important trade-offs that policy makers need to take into account. Most importantly, while programme budgeting allows for establishing more direct links between spending and outputs, line item budgeting gives spending authorities' a higher degree of control over individual line item inputs. Furthermore, as a consequence of their condensed format, programme-budget documents may not provide comprehensive information on all aspects considered relevant by individual stakeholders, which means that programme budgets may have to be supplemented with additional financial documentation to ensure effective accountability (de Jong et al., 2013: 19). Further challenges arise in administering the budgets for programmes that span multiple organisational units responsible for different parts of the associated expenditures (NCES, 2003: 17).

201. Nevertheless, under the right conditions, a programme-oriented approach to budgeting can facilitate the alignment of budgetary planning with performance targets and policy objectives. It has also been suggested to make it easier to identify opportunities for consolidation or coordination between activities and programmes that pursue similar goals. Line item budgets, on the other hand, are rarely organised in a way that allows policy makers to identify the cost of specific interventions and programmes or to disentangle the incremental cost of education reforms from that of regular school operations. Although carrying out cost-effectiveness analyses remains empirically and methodologically challenging (Belfield, 2015: 145), programme budgeting can facilitate the process. Programme classifications can also be used to guide spending reviews in the identification of strategic savings options and to present performance information alongside expenditure data as a means to facilitate subsequent evaluations (Robinson, 2014: 28).

202. Whether countries adopt line item, activity- or programme-based budgeting methods, it is important to maintain coherence and clarity in the budget structure and establish clear spending responsibilities. A large number of separate programmes, activities and budgetary lines can make the regular review of allocations and priorities challenging and may reduce flexibility in the use of allocated resources (for other factors conditioning budgetary flexibility, see below). Particularly when expenditure responsibilities for individual budgetary lines are unclear, a dispersed budget structure can give rise to inefficiencies due to misalignments of spending and policy objectives or missed opportunities for synergies. This challenge has, for example, been observed in the case of Chile (Santiago et al., 2016a: 68).

Budget flexibility and incentives for efficiency

203. Relaxing central input controls and increasing budget flexibility has been a common feature of reforms aimed at enabling education authorities to pursue their objectives more efficiently and effectively. Measures to increase flexibility can be applied at the level of the executive, education ministries, local administrations, or schools. On the one hand, they are often based on the premise that the leaders at lower levels of administration are best placed to allocate their budgets in a way that maximises their effect in line with their education objectives. This strategy tends to combine top down budget constraints with an

increased responsibility and accountability for the use of these funds at the local level, often in combination with efficiency incentives. On the other hand, more flexibility in the budget planning and execution process can serve to increase its responsiveness to unforeseen circumstances and changing priorities.

Budget flexibility and reallocations

204. Within multi-annual budgeting processes, regular revisions are commonly employed to adjust the expenditure ceilings adopted as part of MTEFs to account for unforeseen economic and fiscal developments or changing policy priorities. Even within a single year's budgetary cycle, though, some countries allow for budget allocations to be adjusting upwards or downwards after their adoption a means to respond to circumstances that were not foreseen or unforeseeable at the planning stage. Adjustment rules and procedures vary across countries and different regulations may apply to spending cuts and increases, as well as to different types of expenditure, such as investment, operational and mandatory spending. The majority of OECD countries allow the executive to increase ministerial budgets after they were approved by the legislature, with the exception of countries such as Chile or France, which prohibit any spending increases. Most OECD countries also allow the executive to cut operational, investment and discretionary spending after the ministries' budgets have been approved, while cuts to mandatory spending tend to be more restricted with countries such as Denmark, Austria, Belgium and Estonia prohibiting the practice entirely while permitting reductions in other spending categories (OECD, 2014: 66). With few exceptions, increases and cuts after the budget's adoption stage are limited by thresholds or contingent on their ex-ante approval by the CBA or the legislature for reallocations exceeding a given sum.

205. A whole of system approach to education planning needs to reconcile the importance of longer-term budgetary frameworks and the predictability they afford with a sufficient degree of flexibility to respond to unforeseen circumstances in the short term. In addition, the nature of the budget preparation schedule is often such that educational resource needs, particularly at the local level, are only imperfectly known by the time at which budgets need to be approved. Adjustment mechanisms can help to ensure, for example, that budget appropriations reflect the upcoming year's enrolment levels even if the initial adoption of the budget precedes the beginning of the new school year. Most local governments in Estonia, for instance, provide their school directors with budget ceilings for the upcoming fiscal year as soon as spring. Once enrolment levels become clearer towards autumn, budget allocations are adjusted accordingly, allowing schools to plan ahead without compromising budget flexibility (Santiago et al., 2016b: 123).

Carry-over of unused appropriations

206. Since budget appropriations are typically granted for a given fiscal year, carry-over rules regulate the extent to which actors at different levels of the education system can use unspent financial resources beyond this point. The right to carry over savings from one year to the next can be subject to both quantitative and qualitative restrictions. These may include a ceiling for the amount that can be carried over in any given year or for the total accumulation of unspent resources. In other cases, requests to retain unspent funds may be subject to the evaluation and approval of the respective budgetary authority. At the ministerial level, the majority of OECD countries permit the carry-over of discretionary, operational and investment funding, usually subject to prior approval by the CBA, the legislature or both (OECD, 2014: 71). Chile and Belgium are among the countries that do not permit any ministerial carry-overs, while the Slovak Republic restricts the practice to discretionary and investment budgets (OECD, 2014: 70).

207. There are arguments for and against the permission of budgetary carry-over practices (OECD, 2014: 71). Carry-over rights have been argued to provide spending authorities with additional flexibility to compensate for rigidities in the budget execution. Allowing educational providers to use savings for the

funding of other priorities beyond the budgetary cycle also sets organisational incentives to improve the use of resources and engage in efficiency-increasing innovations (OECD, 2015: 61). In addition, prohibiting providers from retaining savings between budget years may lead to inefficient spending patterns towards the end of the fiscal year. Rigid restrictions on carry-over practices can also compound other sources of inefficiency and exacerbate common shortcomings in national planning procedures. For example, it is estimated that 20% of infrastructure investments in Chile are lost to the education sector due to delays in the execution of national programmes and the failure to spend appropriated funds within the approved period (Santiago et al., 2016a: 68). By contrast, unrestricted carry-over rights may lead schools to accumulate excessive surpluses and reduce the executive's control over the timing of expenditures. For example, carry-over practices can cause spending fluctuations and the allocation of resources to student cohorts for whom they were not originally intended.

208. The rules regulating carryover at the school level vary across countries and may not apply universally across different school types or regions within a system. In Iceland, for example, each municipality decides whether their pre-primary and compulsory schools are permitted to carry over surpluses and losses to the next financial year while upper secondary schools governed by the state are authorized to retain unused funds and subtract debts from the upcoming year's allocations (Mennta- og menningarmálaráðuneytið, 2014: 57-58). In Lithuania, on the other hand, annual school budgets are based on their expenditure in the previous year and any surpluses are refunded to the state budget at the end of the year, creating no incentives for educational institutions to reduce their cost or save funds for future expenditures. Likewise, targeted state grants transferred to municipalities can only be used for education purposes during the year in which they were allocated (National Agency for School Evaluation [NASE], 2015: 12).

209. Even where the retention of funds across budget years is permitted in principle, the failure of many schools to do so (as seen, for example, among municipal schools in Estonia) highlight that carryover procedures need to be transparent and easy to navigate for schools with limited administrative capacity (Santiago et al., 2016b: 140). Otherwise, problems in the carryover process can lead school authorities to engage in inefficient expenditures at the end of the budgetary year and discourage them from saving for larger investments and mobilising additional revenues through donations, asset income or the sale of goods and services.

Policy options

Adopt a multi-annual approach to budget planning

210. Adopting a multi-annual approach to planning education expenditure and making effective use of budgeting tools such as medium-term expenditure frameworks (MTEFs) is key to ensuring the efficiency and financial sustainability of high-performing education systems. MTEFs constitute a strong framework to combine medium-term economic and fiscal estimates with projected resource needs in order to assist spending authorities in making informed and sustainable budgeting choices. In order to achieve and maintain fiscal discipline, multi-annual expenditure plans should be adopted with a view to ensure that policy proposals and programmes are backed by a medium term budget and that varying costs at different stages of their implementation are adequately accounted for.

211. Adopting a multi-annual budgeting process can provide spending agencies with a means to strategically plan their operations, take into account the longer-term expenditure implications and potential trade-offs between alternative spending options and provide them with additional security when planning longer-term investments. The development of multi-annual budgets should be guided by high-quality forecasting mechanisms to ensure the reliability of indicative spending ceilings or create the conditions necessary to commit to longer-term allocations. In order to maximise their value for strategic planning,

MTEFs should integrate budgeting processes at different levels of the education system by encouraging actors across administrative levels to align their spending proposals with central expenditure frameworks.

Strategically link spending decisions to policy priorities

212. Aligning funding strategies with policy objectives is important to ensure that financial resources are effectively employed to drive educational improvement and reforms. This requires both the formulation of clear targets and their connection to budget planning procedures. Central-level educational targets should be prioritised, measurable and – particularly in school systems with decentralised resource planning responsibilities – translatable into concrete objectives at lower levels of administration. Fostering widespread awareness and a shared understanding of this strategic vision for education among different stakeholder groups and levels of authority can increase the coherence of budget planning activities across the education system. In addition, educational objectives should be accompanied by a clear time horizon and target dates for their achievement to promote accountability, increase their value for strategic resource planning and facilitate the subsequent evaluation of spending decisions against education results.

213. Countries should ensure that these targets and policy priorities are linked to the planning of financial resources by integrating them into strategic documents and the procedural mechanisms guiding the budget preparation at different levels of the education system. Particularly when combined with multi-annual budgeting procedures, strategic frameworks containing short- and medium-term objectives should be used to inform negotiations and decisions on medium-term expenditure frameworks. Information on policy objectives and expected outcomes should also be presented alongside budget allocations in order to facilitate the distribution of resources according to policy priorities, provide authorities with a clear picture of the purposes that expenditures serve and facilitate the subsequent evaluation of spending decisions against the achievement of policy outcomes. Countries should also seek to establish these links between strategic objectives and educational expenditure beyond the central level, for example by encouraging the alignment of spending decisions with school development plans. This may require a commitment to building technical and strategic capacity where local actors and school authorities play an active role in the budgeting process.

Strategically use evaluation and research evidence in the budgeting process

214. The effective planning of educational resource use relies on the systematic mobilization of evidence generated through research, evaluations and monitoring activities. Evidence on the efficiency of spending decisions should be used to inform discussions among stakeholders and help the responsible authorities in making informed decisions throughout the budget preparation process. To effectively inform evidence-based budget planning, the data generated by evaluation activities should explicitly assess the impact of programmes and policy initiatives, ideally relating it to previously established objectives and expenditure information. If they are well-coordinated with the budgeting process, spending reviews can prove another important source of information to support efficient spending choices. To this end, the timing and frequency of spending reviews should be aligned with the central-level budget planning procedures to ensure that the concrete saving options identified through the review are presented to the political leadership to be considered alongside the cost of newly proposed policy initiatives.

215. Education systems should also promote the creation of fora that foster cooperation between researchers and policy makers as well as institutions that can act as knowledge brokers and strategically consolidate, evaluate and disseminate evidence to facilitate its integration into the budgeting processes. Particularly in decentralised systems, school principals and local authorities should also be encouraged and enabled to use data and research evidence for budgeting purposes through training as well as vertical and horizontal support.

Provide sufficient budget flexibility and incentives for efficiency

216. Introducing an appropriate degree of flexibility into the budgeting process can improve its responsiveness to unforeseen circumstances and promote more efficient spending decisions at lower levels of authority. Particularly in the context of multi-annual budgeting procedures, countries should seek to reconcile the importance of the long-term reliability and stability of funding allocations with their responsiveness to changing conditions in the short term. Allowing for the regular adjustment of multi-annual budget ceilings to take into account changing resource forecasts and permitting funding to be shifted across budget items in response to emergencies or reassessed priorities can significantly improve the allocation of educational resources if appropriately regulated.

217. Likewise, school-level allocations should be flexible enough to reflect changing circumstances – such as student enrolment levels – beyond the adoption stage, without compromising their indicative value for planning purposes. Schools and local authorities should also be provided with some room to carry over unused appropriations from one budget year to the next. This can discourage inefficient expenditures towards the end of the budget year and provide schools and local authorities with incentives to mobilise additional revenue or improve the efficiency of their operations, although appropriate regulations should prevent the accumulation of excessive surpluses or fluctuations across years.

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CHAPTER 4. DISTRIBUTING FINANCIAL RESOURCES

Overview of different approaches to distribute funding to schools

218. This Chapter presents an overview of how different countries distribute funding. The focus is on the design of different mechanisms used to allocate funding, whether this is between different levels of education administration or between individual schools.

219. There are three major approaches to determine the level of funding allocated to schools: administrative discretion; incremental costs; and formula funding (Box 4.1). These may be more appropriate for particular types of funding, e.g. formula funding is well suited for the distribution of current expenditure, but not for the distribution of capital expenditure. An overview of how countries use different mechanisms to distribute current and capital expenditure is presented below. A profile of funding transfers between different administrative levels and to schools is provided for countries participating in the OECD review in Annex 4.A1.

Box 4.1. Approaches to school funding

There are three main methods to determine the annual allocation of resources that schools receive (OECD, 2012):

- **Administrative discretion**, which is based on an individual assessment of each school. Although it can serve schools' needs more accurately, it requires extensive knowledge of each school and measures to prevent misuse of resources. While it might involve the use of indicators, it differs from formula funding because the final allocation might not necessarily correspond to the calculations.
- **Incremental costs** is another type of school funding scheme, which takes into consideration the historical expenditure to calculate the allocation for the following year with minor modifications to take into account specific changes (e.g. student numbers, school facilities, input prices). Administrative discretion and incremental costs are often combined, and usually these are used in centralised systems.
- **Formula funding** refers to a formally defined procedure (a formula) used by government authorities and/or state/regional/local authorities to determine the level of public funds allocated based on a set of predetermined criteria, which in most cases are input-, output- or performance-oriented. These predetermined criteria are impartially applied to each recipient (e.g. sub-central authority or school). Formula funding relies on a mathematical formula which contains a number of variables, each of which has a coefficient attached to it to determine school budgets (Levačić, 2008). Formulas typically contain four main groups of variables (Levačić and Ross, 1999): (i) basic: student number and grade level-based, (ii) needs-based, (iii) curriculum or educational programme-based, (iv) school characteristics-based.

It is common to combine a per student formula funding for some expenditures and other approaches for others (e.g. incremental costs, administrative decisions); for example, capital costs are rarely included in a per student formula.

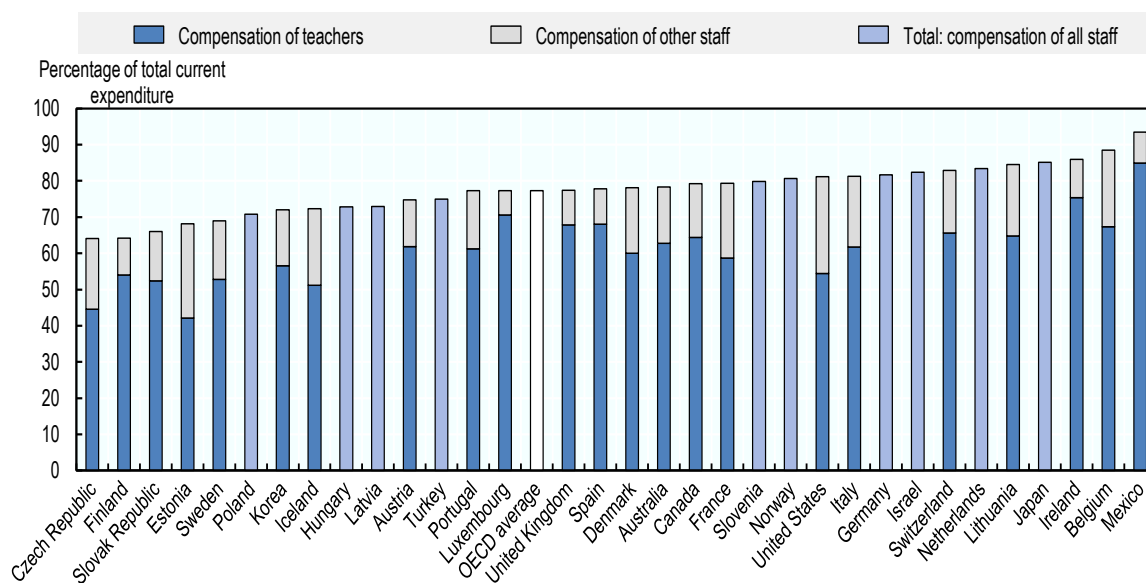
Source: Levačić, R. and K. Ross (1999), "Principles for designing needs-based school funding formulae "Needs-Based Resource Allocation in Education: Via Formula Funding of Schools, UNESCO International Institute for Educational Planning, Paris; OECD (2012), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264130852-en>.

Distribution of current expenditure

220. International data show that over 90 percent of annual expenditure by educational institutions (from public and private sources) is spent on school resources used each year to operate schools, including staff salaries, teaching materials and school building maintenance (see full definition in Box 4.2). In turn, the vast majority of current expenditure is used for the compensation of staff: 77% for both primary and secondary education in 2013 on average in the OECD (OECD, 2016, Table B6.2). While staff compensation primarily comprises salaries for teachers, compensation for other staff exceeds 20 per cent of total current expenditure in Belgium, Estonia, France, Iceland and the United States (Figure 4.1). In contrast, compensation of other staff forms less than 10% of total current expenditure in Luxembourg and Mexico. The cross-country differences likely reflect the degree to which staff, such as school principals, guidance counsellors, bus drivers, school nurses, janitors and maintenance workers are classified as "non-teaching staff" (OECD, 2016).

221. However, there is sometimes significant variation within a country in terms of the proportion of current expenditure allocated to staff salaries. In Kazakhstan, payroll expenses account for 79% of urban school budgets and 93% of rural ones (UNICEF, 2012, in Pons et al., 2015). Small class schools and primary schools in rural areas are particularly affected in this sense. On average, 99.6% of their budget is dedicated to salaries (Sange-SFK, 2012, in Pons et al., 2015).

Figure 4.1. Compensation of staff as a share of total current expenditure in primary education, 2013



Source: OECD (2016), Education at a Glance 2016: OECD Indicators, OECD Publishing, Paris. <http://dx.doi.org/10.187/eag-2016-en>.

Box 4.2. Definitions of capital and current expenditure

Capital expenditure refers to spending on assets that last longer than one year, including construction, renovation or major repair of buildings, and new or replacement equipment. The capital expenditure reported here represents the value of educational capital acquired or created during the year in question – that is, the amount of capital formation – regardless of whether the capital expenditure was financed from current revenue or through borrowing. Neither current nor capital expenditure includes debt servicing.

Current expenditure refers to spending on goods and services consumed within the current year and requiring recurrent production in order to sustain educational services. Current expenditure by educational institutions other than on compensation of personnel includes expenditure on subcontracted services such as support services (e.g. maintenance of school buildings), ancillary services (e.g. preparation of meals for students), and rental of school buildings and other facilities. These services are obtained from outside providers, unlike the services provided by education authorities or by educational institutions using their own personnel.

Source: OECD (2016), Education at a Glance 2016: OECD Indicators, OECD Publishing, Paris. <http://dx.doi.org/10.187/eag-2016-en>.

Central transfers to different administrative levels and/or direct to schools

222. The OECD Review of School Resources has revealed a variety of different distribution mechanisms among participating countries. These vary according to the governance context and the distribution of responsibilities for schools (Chapter 2). Box 4.3 presents an overview of the key terminology used in this report to describe different funding transfers between different administrative levels and to individual schools.

223. Uruguay provides an example of a system where funding is distributed directly from the central level to schools. There are four central Education Councils, each with responsibility to transfer funds to schools in a particular sector. However, in many participating countries there is an initial distribution between different administrative levels and the conditions stipulated for such transfers may vary:

- In Sweden, Denmark and Belgium there is a transfer of a lump sum from central authorities to sub-central authorities and this can be used for any type of expenditure on public services, including education. The sub-central authorities (municipalities in Sweden and Denmark; the Flemish Community and the French Community in Belgium) are then responsible for transferring funds to schools.
- In Iceland, the equivalent transfer of funds from the central level to sub-central authorities (municipalities) is in the form of a block grant for compulsory education; whereas for upper secondary education the bulk of the central transfer in the form of a block grant goes direct to schools (the central authorities are responsible for operating costs in upper secondary schools).
- In Estonia, the central authorities transfer a set of different earmarked funds to sub-central authorities (municipalities) for specific educational purposes, the major funding transfer being for general education and covering teacher and school leader salaries and professional development, study materials and school lunches. Similarly, in Lithuania the central authorities transfer an earmarked grant for "teaching costs" to sub-central authorities (municipalities) calculated for each individual school, comprising teacher salaries, management, administration and professional support staff, textbooks for students and some school materials, teacher in-service training and pedagogical and psychological support services provided by local authorities.

- In the Slovak Republic and Chile, the central authorities transfer funds to "school owners" (in the Slovak Republic, regional authorities for upper secondary education, municipal authorities for compulsory education and private education providers; in Chile municipal authorities and private education providers). In the Slovak Republic, this is primarily via a set of school-specific grants, the major funding transfer being a "block grant" for salaries and operational costs. In Chile, the major funding transfer is a block grant for general education, but this is complemented by a series of earmarked funds and school-specific funds, e.g. to support students with special educational needs or to reward top performing schools, respectively.
- In the Czech Republic, the central authorities transfer an earmarked grant to the higher tier of sub-central authorities (regions) to cover the "direct costs of education", including teacher and learning support staff salaries, textbooks and teaching aids and teacher further professional development. Regions are responsible for distributing these funds to their own schools (mainly providing upper secondary education) and to schools operated by the lower tier of sub-central authorities (municipalities) (mainly providing primary and lower secondary education).

Box 4.3. Overview of the key terminology used for funding transfers

Different types of grants

Transfers between different administrative levels

Lump sum mechanism leaves discretion to lower level authorities over the proportion allocated to pre-school and school education.

Block grant consists of funds that lower level authorities are required to use for current expenditure in pre-school or school education at their own discretion.

Earmarked grant consists of funds that lower level authorities are required to use for specific elements/items of current expenditure in pre-school or school education (e.g. teacher salaries).

School-specific grant consists of funds that lower level authorities are required to use for current expenditure in specific schools (i.e. the grant specifies the public funding to be spent on each school).

Transfers to individual schools

A **block grant** may be used at the school's full discretion across all areas of spending.

A **restricted block grant** may be used at the school's discretion but within given areas of spending (e.g. non-teacher-salary spending; operating costs).

An **earmarked grant** is for specific expenditure items (e.g. extra funds for special needs, teacher professional development), which the school is required to respect in its administration of the funds.

A **dedicated grant** is for a specific use which is not administered by the school (e.g. teacher salaries which are directly paid by the relevant authority; operating costs directly paid by the relevant authority). In this case, funds are not transferred to individual schools.

224. The degree of discretion that sub-central authorities hold over the distribution of the major part of school funding (current expenditure), as can be seen, varies significantly. The highest degree of discretion is found in Sweden and Denmark, where each municipality is free to determine the proportion of the lump sum central grant that it allocates to school education. This poses challenges to identify how much of the variation in expenditures across municipalities can be attributed to differences in municipal income

(despite some equalisation via the central allocation), differences in socio-economic contexts and differences in how much public education is prioritised. The OECD review in Denmark noted that there are differences in expenditure levels across municipalities that can be explained by differences in the decided level of service or by differences in productivity (Nusche et al., 2015).

The choice of different types of grants: political tensions and administrative efficiency

225. As explained in Chapter 2, systems with different levels of decentralisation and school autonomy will vary in the degree to which central authorities determine and specify the design features of school funding. In Sweden, it is specified that local school funding should be based on student numbers and reflect different needs. England specifies mandatory criteria to be included and promotes "simple formulas" (for more information on the English approach, see Box 4.4). In the Czech Republic, there is a high degree of complexity in funding formulas, which reflects the complexity of the national regulatory framework (analysis of two regional funding formulas revealed inefficiencies linked to the support of historical funding allocation in certain educational programmes).

226. Fazekas (2012) noted a growing concern in the United States and the United Kingdom that even if public authorities can determine and allocate the adequate amount of resources, it is unclear how schools spend the resources, particularly in settings where they are free to manage the allocated block grants. A high level of or complete discretion at the school level, thus, brings its challenges and frustrations. Fazekas (2012) pinpoints the phenomenon of an increase in use of targeted funding programmes – external to the main allocation mechanism – as a direct result of high level authority frustration at not knowing how the allocated funding has been used at the school level. Another approach is to earmark the funding in the main allocation for specific purposes, which constrains the school's room for manoeuvre. Levacic et al., (2000) warn that the accretion of numerous targeted funds can lead to a piece-meal re-centralisation of funding and undermine the advantages of formula funding.

Box 4.4. Changes in governance and funding distribution: England

The Education Funding Agency is a non-departmental public body that is responsible for distributing funding to local authorities. There are several types of local authorities in England – with currently 353 local authorities. A major reform to local government in 1972 saw the introduction of two tiers of local government, with the upper tier (county) responsible for education. Since then, there have been a series of reforms and mergers into "unitary authorities" which has been contingent on government policy or local initiative at a given time, rather than considerations for local economy or identity (Sandford, 2016). "Counties" remain responsible for education, including special educational needs, adult education and pre-school – there are currently 27 county councils and 125 unitary authorities (which carry out all local government functions) (Sandford, 2016).

In an overview of governance and funding distribution changes over the period 1988 to 2007, Levačić (2008) distinguishes three main periods: establishing local management of schools (1998-1997), New Labour and consolidation (1997-2002) and centralising Labour (2002-2007) (Labour being the major left-wing political party). From 1998 to 2002 schools were delegated greater financial responsibilities, while local authorities remained responsible for distributing central funding to schools with a high degree of discretion (local authorities received a block grant). Over this period there were increasing tensions between central and local authorities surrounding the distribution mechanism and this culminated in the introduction of a centrally determined Dedicated Schools Grant in 2006/7, replacing the traditional block grant to local authorities. Levačić (2008) argues that these local-central tensions hindered the development of a rationally based and stable allocative system and uses four major criteria to evaluate the evolution of the allocation system up to 2007:

- Transparency: this increased due to the introduction of formula funding and the requirement for local authorities to publish school budgets and school and local authority expenditures. Central authorities advocated the use of simple formulas to further support transparency. However, increased use of multiple funding streams from the central level added to the overall complexity of school funding.

Box 4.4. Changes in governance and funding distribution: England (cont.)

- **Efficiency:** an increasing proportion of overall funding was delegated to schools between 1998 and 2002 and this became institutionalized, with only major capital expenditures and a few local services excluded from the main funding allocation. There is also a requirement that the major proportion of local funding formula is driven by student numbers and characteristics.
- **Adequacy:** from 1997, funding was judged to be inadequate for meeting political objectives to reach higher educational standards. Accordingly, funding increased, but with greater use of centrally controlled grants, which increased the complexity of the funding system. The proposed introduction of a needs-based formula to allocate the dedicated schools grant met with tough political opposition. As such, the government committed to ensuring each school received at least the national average and based this on historical funding (per student expenditure in 2005/06) – thus negating any of the expected benefits for equity and efficiency from a national needs-based funding formula.
- **Equity:** The use of formula funding ensures horizontal equity within local authorities, but not across local authorities – the national funding formula remains based on local authority historical spending. Central government advocated that local authorities design funding formula to address vertical equity, but there were marked differences in the adjustments included within formulas to address this. In general, equity was not a prominent goal of funding reforms.

The funding allocation approach in 2016 remains broadly unchanged: the national formula to allocate to local authorities is based on how much each student received in the previous year (the baseline year remains 2005/06) and each local authority applies a local funding formula. National data illustrate the unfairness of a funding allocation based on historical spending: local authorities with similar challenges in terms of proportions of students from deprived backgrounds and/or with low attainment receive very different levels of funding (Department for Education, 2016). As an initial step, the government has allocated an additional grant in 2015/16 to the "least fairly funded" local authorities (Roberts, 2016). Also, there have been attempts to simplify the overall allocation system: the dedicated schools grant is split into three notional, non-ring-fenced blocks (schools block; early years block; high needs block) and most separate grants have been incorporated into this major grant; and local authority funding formulas have been simplified, including two mandatory factors (minimum amounts per primary and secondary student; deprivation – using either an income deprivation index or free school meals data) and up to twelve other optional factors (e.g. sparsity/rural areas, prior attainment).

However, the major proposal to address the inequities resulting from the national allocation being based on historical spending is to introduce a needs-based national formula to allocate funding directly to schools. This would be based on four major elements (Roberts, 2016): per student costs (basic per student funding); additional needs (deprivation; low prior attainment; English as an additional language), school costs (lump sum; sparsity; rates; premises; growth) and geographic costs (area cost adjustment). There was an initial consultation with stakeholders and this revealed broad support for the proposed reform (Department for Education, 2016). However, implementation has been delayed until 2018/19 as announced by the Education Secretary to underline "the importance of consulting widely and fully with the sector and getting implementation right" (Greening, 2016).

Source: Department for Education (2016), Schools and high needs funding reform: The case for change and consultation summary, (March 2016); Greening, J. (2016), "Schools funding", Written statement to Parliament, by The Right Honourable Justine Greening Member of Parliament, Department for Education and the Education Funding Agency, delivered on 21 July 2016, www.gov.uk/government/speeches/schools-funding; Levačić, R. (2008), "Financing Schools: Evolving Patterns of Autonomy and Control", *Educational Management Administration and Leadership*, Vol. 36/2, pp. 221–234, <http://dx.doi.org/10.1177/1741143207087774>; Roberts, N. (2016), "School funding in England. Current system and proposals for "fairer school funding"", *House of Commons Library Briefing Papers/06702*, pp. 1–34 www.parliament.uk/commons-library; Sandford, M. (2016), "Local government in England: structures", *House of Commons Library Briefing Papers/07104* www.parliament.uk/commons-library.

The use of incremental costs and administrative discretion poses efficiency and equity challenges

227. The distribution of funding on a discretionary or incremental basis may raise both efficiency and equity challenges, and tends to be associated with low levels of budget transparency (Pons et al., 2015). When funding is allocated on a historical basis, this funds existing staff year after year and typically

involves the payment of invoices submitted by schools for supplementary costs (Levačić and Ross, 1999). Schools have no incentives to reduce their expenditures or increase their efficiency. As noted in the OECD Review of School Resources in Kazakhstan, schools have incentives to run into deficits with the hope that others absorb them and to inflate their expenditures with the aim of obtaining larger allocations in subsequent years – a practice known as "deficit budgeting" in many post-Soviet societies (Pons et al., 2015). Negotiation processes are driven by the relative priorities and strengths of local actors. Such perverse incentives lead to extensive regulation with a system of "norms" used to lower the expected allocation.

Funding formulas can be designed to address a mix of different policy functions

228. Any funding distribution mechanism should be designed to fit the governance and policy context for the school system. There may be different goals that are more important than others depending on the overarching policy objectives. Box 4.5 outlines the key questions to be considered when designing a funding formula.

Box 4.5. Key questions in designing funding formulas

How much funding should be allocated among or delegated to schools?

A greater delegation to schools would support: a policy context wishing to promote the subsidiarity principle (that decisions are best taken at the furthest distance from the centre by those actively engaged in providing the service) on the grounds of efficiency and effectiveness; a policy context with a strong emphasis on market regulation.

Arguments for retaining funding at the central level: short term or emergency expenditures with uneven incidence across schools (e.g. structural repairs, early staff retirement); whether the central level owns the school buildings; earmarked grants for certain central projects; statutory responsibilities for the central/local authorities for certain programmes; central provision would allow significant economies of scale; situations where it is judged that schools would not make adequate provision (e.g. in-service training for staff).

Setting restrictions on how each school may spend its delegated budget: schools may not have the authority to hire and dismiss staff and the central authority remains the employer; stipulating which service providers schools can use or the types of contract they can establish; setting financial regulations on the authorization, recording and reporting of expenditure and income.

Which unit of funding should the funding formula include?

What is being funded: the student, teaching group/class, school or school site? A formula may contain a number of different units.

Which major components should a funding formula include?

There are found main components which are the building blocks of a formula. Each component relates to a main purpose for allocating funds to schools. Different weightings assigned to each of the major components below will be crucial in balancing the relative importance of the different policy functions for a funding formula (market regulation; promoting equity; directive function).

A basic allocation: This could be an allocation per student or per class. If the unit is class, then the formula will include assumptions about the maximum permitted class size before an extra student demands the forming of two classes. There would be a grade-level supplement differentiated according to the school year (grade level) or stage of schooling (e.g. primary, lower secondary, etc.). Setting a fixed amount per student in a particular grade uses the assumption of the costs of educating a student with normal educational needs. This requires an analysis of expenditure requirements. This – particularly with a per student unit – strongly supports the market regulation function.

Box 4.5. Key questions in designing funding formulas (cont.)

An allocation for curriculum enhancement: This component would adjust for the costs of providing a specific educational profile and would only apply to selected schools or students. For example, this could be the offer of a specialised curriculum such as a focus on the arts, sports or different vocational fields. It could also be the offer of an adjusted curriculum designed to meet specific educational needs of the school's student group. This allocation can support the directive function, helping to promote areas of the curriculum favoured by policy makers.

An allocation for students with supplementary educational needs: This would aim to adjust for different student characteristics which would require additional resources to ensure the same level of access to the required curriculum. This allocation plays a major role in supporting the equity function.

An allocation for specific needs related to school site/location: This would aim to adjust for structural differences in school site operation costs that are generally beyond the school management's control, e.g. schools located in rural or remote areas with significantly lower class sizes, schools with higher maintenance costs (linked to local economic factors and/or specialised equipment needs). School size is an important determinant of unit cost. Fixed costs (e.g. school leadership, premises, providing a selection of subjects) do not diminish with the number of students. Here it is key to define the "minimum efficient size" which represents the minimum size of a school at which average cost per student approaches its lowest feasible value. This involves a judgement about the extent to which small schools should be supported by additional allocations. This allocation can support the equity and directive functions.

*Source: Levačić, R. and K. Ross (1999), "Principles for designing needs-based school funding formulae", in *Needs-Based Resource Allocation in Education: Via Formula Funding of Schools*, UNESCO International Institute for Educational Planning, Paris.*

229. There are three broad functions that funding formulas can aim to support (Levačić and Ross, 1999):

- promoting equity (both horizontal equity, i.e. the like treatment of recipients whose needs are similar and vertical equity, i.e. the application of different funding levels for recipients whose needs differ, see Chapter 1). This is one of the most important functions of a funding formula. To ensure horizontal equity it is crucial to ensure the same basic allocation per student differentiated by grade level. Differential amounts can be added to the basic allocation according to the assessed degree of educational need to promote greater vertical equity;
- a directive function to promote certain behaviour in funding recipients. This can be a tool for central or local authorities to set certain incentives and support particular policies. For example, an additional amount can be added to the basic allocation to support schools with lower student enrolments or to support the provision of teacher professional development in policy relevant areas;
- or market regulation (supporting broader school choice policies). The more this function is emphasised, the greater the proportion of total funding to schools is allocated on a per student basis. The formula can establish the per student amount for each child and depending on the system this would be channelled directly to parents as a "voucher" to purchase school education or directly to the school.

230. A funding formula can be designed to support a balance of these different policy functions. For example, when Lithuania introduced a reform in funding distribution in 2001 (including a central funding formula to allocate funding for teacher and other pedagogical staff salaries), specific goals included an emphasis on eliminating rural-urban disparities (equity), enhancing parental school choice and the development of the private school sector (market regulation) and promoting the optimisation of local school networks and adjustment to the decreasing number of students (directive) (Herczynski, 2011). The

specific policy objectives will dictate the different weightings given to each of the main components included in the funding formula (Box 4.5). An overview of the funding mechanisms in Lithuania and an evaluation of how well they are meeting policy objectives is provided in Box 4.6.

231. In addition, funding formula can incentivise greater efficiency at the school level. If the per student amount is allocated as a "fixed price contract" the school has incentive to use funding more efficiently and to spend savings in other areas (Levačić and Ross, 1999).

Box 4.6. School funding formula in Lithuania

Policy context

Lithuania has seen steady emigration over the past 20 years. Between the official censuses in 2001 and 2011, the overall population declined by 12.6%. The population decline has dramatically impacted the school-age population in all school years from primary through upper secondary education and continues to exert pressures on schools. For example, in Years 6 and 7 (lower secondary education) there were almost half as many students in 2014/15, compared to in 2004/05. This demographic phenomenon has presented considerable challenges to the efficiency of the school network.

The vast majority of Lithuanian students are in public schools (just under 3% of students follow general education in the private sector). In Lithuania, the 60 municipalities are responsible for public schools providing general education; the state is directly responsible for vocational training institutions. The provision of public education is, therefore, highly decentralised (in 2014, 84% of students following regular compulsory education or upper secondary education attended a municipal school).

Policy functions emphasized in the funding formula

In 2001, Lithuania introduced an education finance formula which aimed to increase the efficiency of resource use in education and improve education quality. As well as creating a transparent and fair scheme for resource allocation, the reform aimed to promote the optimisation of local school networks and constant adjustment to the decreasing number of students.

Importantly, the funding allocation makes a clear distinction between "teaching costs" (state grant) and "school maintenance costs" (local funds). This design allows the state to directly influence the quality of education provided, as the central grant for "teaching costs" comprises salaries for teachers, school leadership, administration and professional support staff, textbooks for students and some school materials, teacher in-service training and pedagogical and psychological services. "School maintenance costs" cover salaries for maintenance staff, student transportation, communal and communication expenses (utilities), material expenditures and repair works to maintain school facilities. It is important to note that both parts of the school budget include some salary and some non-salary expenditures.

Choice of components within the funding formula and relative importance given to these

The major determinant of funding within the central grant is the number of students in the school. The grant is calculated as a fixed per-student amount ("student basket") multiplied by the number of "equivalent students" to give a weighted sum of students. This allows for cost differentials in teaching different students. The standard reference student (1.0) studies in a class of 25 students with a weekly number of lessons equal to the average in Years 1 to 10. In 2014, the funding formula contained 67 weighting coefficient values. The major student characteristics are school year, special educational needs and ethnic minority status. However, the funding reform also aimed to eliminate rural-urban disparities and as such the formula includes weights for the size, location and type of school. As a general rule, the final student weighting is the product of the weighting coefficients. For example, a student in a small, rural basic school would receive a weighted coefficient of 1.90, but a student with special educational needs in the same school would receive 2.60, that is 1.90 x 1.35 weighting for special educational needs. Schools exclusively providing specialised education receive an additional special weighting factor.

Box 4.6. School funding formula in Lithuania (cont.)**Evaluation of how well the funding formula meets policy objectives**

The allocation of a fixed per student amount has promoted greater efficiency. However, the per-student amount differs from a pure student voucher system in three ways:

- The grant is transferred to the municipality and not directly to the school. The municipality has the right to redistribute a certain proportion of funding across schools. In 2001, this was 15%, it was gradually reduced to 5%, but now stands at 7%. Municipal reallocation may weaken incentives for schools to compete for resources, as municipalities can choose to support “struggling schools”.
- The grant takes into account school size. This aims to acknowledge that some smaller schools (with higher costs) have lower enrolment rates due to their rural location. However, school size also depends on municipal decisions to consolidate the network.
- The grant includes some specifications on minimal levels of required expenditure such as on textbooks and in-service teaching training.

The 2001 funding reform has helped to stop the declining efficiency of the school network. For example, the student teacher-ratio in primary education plummeted from 16.7 in 2000 to 11.0 in 2004, but was stabilised around 10 students per teacher from 2007 on. The annual adjustments over the exact weighting coefficients used in the funding formula are subject to fierce policy debate, notably around the area of the extent of support to small, rural schools. The use of the formula allows a high degree of transparency on decisions about funding priorities.

Source: Shewbridge, C. et al. (2016), OECD Reviews of School Resources: Lithuania, OECD Publishing, Paris, <http://dx.doi.org/http://dx.doi.org/10.1787/9789264252547-en>.

Determining costs: the thorny issue of assessing and addressing "adequacy" of funding

232. [to be completed]

Data requirements and indicator choices: availability, integrity/manipulability and administrative costs***Choice of indicators used to distribute funding to schools***

233. A range of different indicators is used in different countries and different regions of countries to determine the proportion of students with identified needs for additional resources. While each indicator has advantages and drawbacks, no perfect indicator that takes into account all special needs students might have, ranging from disabilities to family problems exists. To construct such an indicator very detailed data on individual students would be required (West and Pennell, 2000).

234. Indicators vary in the share of the target population they actually reach. For all indicators, targeting areas, schools or students, there is a trade-off between the accuracy and the simplicity and transparency of the indicator (Levačić, 2006). Relatively simple indicators will always leave out some part of the target population. For more precise targeting to local contexts, more complicated indicators need to be established, although a higher degree of complexity makes these less transparent and understandable to a wider public (Fazekas, 2012). There are also examples where the use of simpler indicators did not make a large difference to schools' funding levels. For example, in Swidnik, in Poland, a funding formula that included a large number of indicators was introduced initially in 1994. In 1996, this funding formula was replaced by a formula relying on the number of students only. This change did not lead to any major differences in individual schools' levels of funding (Levačić and Downes, 2004).

Considerations about data and data collection

235. The availability and quality of data is a key concern when compiling indicators. There are different challenges presented for data collection. In general, area-based measures may rely on data that is less up-to-date and sample-based, thus limiting the accuracy for targeting smaller areas. In recent years, OECD countries have implemented regular compliancy reporting systems for schools and many of these are now electronic reporting systems (OECD, 2013). This offers a wealth of data for indicators and can allow a more accurate targeting of resources. However, there are some concerns raised about the reliability of school reports when there is incentive to inflate or deflate numbers in order to benefit from additional resources.

236. A major issue of many indicators used to allocate additional resources to areas and schools is the lack of up-to-date data. This primarily concerns indicators that try to measure different aspects of specific areas. In many cases, census data, which is collected only very infrequently, is used. Harwell and LeBeau (2010), for example, criticize the free school lunch indicator in the United States that is used to allocate additional resources to schools with a large number of disadvantaged students for relying on the national poverty guidelines which have not been updated for a long time. Area based indices used in Australia (SEIFA) are also criticized for being out-of-date (Santiago et al., OECD Review of Evaluation Australia). The Additional Educational Needs (AEN) Index, used in the United Kingdom, relies on census data which is only collected every 10 years and thus tends to be outdated (West, 2000).

237. A further problem is misclassification and missing data on part of schools, areas or students. For example, data on free school lunch status in the United States is missing for a significant number of students. Students without records or who do not complete the administrative procedure are often simply classified as not eligible for free school lunch (Harwell and LeBeau, 2010). In England, children are classified as eligible for free school meals in administrative data only if they are both eligible for and actually claiming free school meals (West and Pennell, 2000). Children eligible for free school meals but not claiming will not be captured. Further, misclassification may also occur since free school meal eligibility is based on and a better proxy for family income before the receipt of means-tested benefits and tax credits (Hobbs and Vignoles, 2007).

Box 4.7. Using indicators within funding formulas to address equity

Countries with well-established formulae include a range of indicators within the formula for allocating additional funds for students with various forms of disadvantage. Hill and Ross (1999) propose as the main dimensions for addressing vertical equity in a school funding formula:

- Socio-economic disadvantage;
- Non fluency in the language of instruction;
- Low educational attainment at a previous stage of education (which can be predicted from indicators of social disadvantage); and
- Disabilities, impairments and learning difficulties.

Since the mid-1990s New Zealand has operated a school funding formula which allocates funds from central government directly to schools. Its measurement of social disadvantage using census data from the areas in which students live gives the formula high integrity as schools cannot manipulate the indicator by identifying students as having learning difficulties in order to receive funding. Instead, the incidence of student need for additional support is predicted by the area social disadvantage indicator (Ross, 1983).

Box 4.7. Using indicators within funding formulas to address equity (cont.)

In New Zealand, there are two distinct allocations to address vertical equity:

- Special Education Grant (SEG): extra assistance to students with moderate learning needs.
- Targeted Funding for Educational Achievement (TFEA): to overcome the barriers to educational achievement associated with low socio-economic status.

Both are allocated according to the decile of social disadvantage to which the school's students belong. A school's social disadvantage score is derived from indicators measured in the household census for the enumeration areas in which the students live. The social disadvantage indicators are:

- Household income;
- Occupation of parents;
- Household crowding;
- Educational qualifications of parents; and
- Income support.

Using the formula to allocate funding intended to support students with special needs rather than providing resources in kind, such as teaching assistants, gives schools autonomy in deciding how best to spend the money on supporting students with special needs. Different students in different school contexts benefit from different ways of using the additional funding: teaching assistants are not always the best resource. Schools are also able to identify individual students or groups of students who would benefit from additional support so there is no need for a process of categorising individual students in order to secure funding for special needs, a good proportion of which can be allocated using social indicators. If schools have greater autonomy in spending funds intended to support students with special needs, they should be required to demonstrate how this funding has been used to additionally support the education of students with special needs (e.g. to be documented in school annual reports; to be audited as part of school inspection). Another approach to accountability would be to collect and analyse data on students' prior and later attainment in order to measure and compare the progress of special needs students in comparable schools, but this would require the establishment of objective comparative measures of student progress in learning.

Source: Santiago, P., G. Halász, R. Levačić and C. Shewbridge (2016b), *OECD Reviews of School Resources: Slovak Republic*, OECD Publishing, Paris.

Distribution of capital expenditure

238. [to be completed]

Policy options***Ensure a stable and publicly known system to allocate public funding to schools***

239. A general principle for more effective funding distribution is to ensure that funds are allocated in a transparent and predictable way. The most important benefit is the stability and predictability of financing, which allows all schools to plan their development in the coming years. This highlights the importance of ensuring stability in the principles and technical details of the funding distribution system. The OECD review has revealed examples of where funding formulas are used and where this helps build general acceptance by major stakeholders as a fair method for funding allocation (see below). In addition, the transparency of the formula has a beneficial impact on policy debates at the national level. Fazekas (2012) cites the presentation of clear criteria that can be scrutinised and debated as a clear advantage of a funding formula for the allocation of public funding. A funding formula provides a clear framework for debates on the sufficiency and proper allocation of funding. Different parameters within the formula may

be debated, which can help stakeholders to express their positions clearly and make agreements that are easy to monitor.

Follow guiding principles when designing funding formulas to distribute resources to individual schools

240. A well designed funding formula is, under certain conditions, the most efficient, equitable, stable and transparent method of distributing funding for current expenditures to schools. The distribution through a formula is more likely to lead to a more efficient and equitable allocation than other methods, including discretionary and incremental funding models. There is no single best practice funding formula. However, the OECD review has identified a set of guiding principles for designing funding formulas.

Align funding formulas with government policy and establish evaluation criteria accordingly

241. A number of criteria can be used to evaluate a funding formula, in particular efficiency, equity, integrity, administrative cost, accountability and transparency, and sensitivity to local conditions. The balance struck between the various criteria should reflect the government's policy preferences. With regard to meeting equity objectives, formula funding can be designed to combine both horizontal equity – schools of the same type (for example, primary schools) are funded at the same level – and vertical equity – schools of different types (for example, general programmes and technical-professional programmes) are financed according to their differing needs. However, inadequate formulas may exacerbate inequities and also inefficiencies.

Funding formulas should adequately reflect different per student costs of providing education

242. A major challenge in designing funding formulas is to adequately reflect that it does not cost the same to educate all students. There will be a need to fund schools differentially for legitimate differences in unit costs which are beyond the control of the school. This demands the introduction of different adjustment components in the formulas and could lead to a high degree of complexity. A balance needs to be struck between a simple formula, which might fail to capture school needs with full accuracy, and a sophisticated formula, which might be difficult to understand. As a guide for designing formulas to better meet differing needs, research has identified four main components:

- A basic allocation: This could be an allocation per student or per class and would be differentiated according to the school year (grade level) or stage of schooling (e.g. primary, lower secondary, etc.).
- An allocation for a specific educational provision: This component would adjust for a specific educational profile in a given school. For example, this could be the offer of a specialised curriculum such as a focus on the arts, sports or different vocational fields. It could also be the offer of an adjusted curriculum designed to meet specific educational needs of the school's student group.
- An allocation for students with supplementary needs: This would aim to adjust for different student characteristics which would require additional resources to ensure the same level of access to the required curriculum.
- An allocation for specific needs related to school site/location: This would aim to adjust for structural differences in school site operation costs, e.g. schools located in rural or remote areas with significantly lower class sizes, schools with higher maintenance costs (linked to local economic factors and/or specialised equipment needs).

Funding formulas should promote budgetary discipline

243. Funding formulas can be designed to set incentives for greater efficiency at the local and school levels. This entails not compensating overspending of schools unless justified by exceptional circumstances (i.e. emergency conditions, unexpected enrolment growth, small schools in remote locations). A per student funding allocation can impose greater fiscal discipline, which may be particularly necessary in a context of declining numbers in the student population that can lead to higher costs in terms of smaller school and class sizes. To acknowledge that not all costs are linear, a funding formula that essentially follows an allocation per student approach can incorporate compensation weights for smaller schools. The advantage of such an approach is that this can target more resources to particular schools (as set by a thorough analysis of national data), while keeping the incentive for the majority of schools in the system to reduce the number of classes by raising class size. This compensation allocation can be reviewed and adjusted to increase or alleviate financial pressure on local authorities with small schools and classes.

Ensure the periodical review of funding formulas to assess the need for adjustments

244. A periodical review of funding formulas is necessary to ensure they are fit for policy needs (which may change). There may be the need to improve the funding formulas as evaluated against the different criteria. This could include the need to increase or decrease the level of complexity in adjustments for student and school needs. The review of funding formulas should also take into account their position and weighting in the overall allocation of school education funding. For example, funding formulas could be better designed to adjust for differing student and school needs in favour or reducing the number of targeted funding programmes aimed at addressing differential funding needs.

Seek more efficient ways to address equity in funding mechanisms

245. Funding strategies play an important role in achieving equity objectives within school systems. A crucial aspect of policy is to decide on the best mechanisms to channel the extra resources to student groups with additional needs. This can typically be achieved through the regular allocation mechanism (e.g. a systematic weighted allocation to particular student groups within schools using a funding formula) or through funding directly targeted at specific students, schools or areas (e.g. extra funding to compensate for socio-economic disadvantage). The OECD review has highlighted the importance in striking a balance between targeted and regular funding to more efficiently support greater equity within a school system.

246. Targeted educational programmes may be used to allocate funding to priority areas. These can ensure responsiveness to emerging priorities and/or promote innovations within the school system. Funding will be earmarked for a specific purpose and can be used to promote specific educational policies. A range of examples are identified across countries, for example to help support mainstreaming of students with special educational needs or to support schools in rural locations. However, an excessive reliance on targeted programmes may generate overlap, difficulties in co-ordinating allocations, excessive bureaucracy, inefficiencies and lack of long term sustainability for schools. Targeted funding often comes along with greater transaction costs, including mechanisms to ensure it has been spent on the purposes it was intended for which may entail greater administrative and reporting burdens for schools. There are, therefore, arguments to reduce transaction costs by including adjustments for vertical equity within the major part of funding allocation via a formula. This can simplify the funding system overall.

Pay adequate attention to the accuracy and reliability of data used as a basis for funding allocation

247. The OECD review has revealed a wide range of different indicators are used across countries to distribute funding to schools. There is evidence of considerable refinement in indicators used over recent years and a policy consensus to use indices comprising multiple indicators in order to improve the

targeting of socio-economic disadvantage. It is apparent that all indicators have shortcomings and that there is always a trade-off between the accuracy and the simplicity and transparency of an indicator. However, an additional consideration when choosing indicators is that data that cannot be manipulated by schools gives greater integrity to the funding allocation. One example is the use of census-based data as a proxy for data reported by schools on individual student characteristics (see below). While this would be less accurate in targeting individual students, authoritative national research can be used to choose the best proxy indicator or combination of indicators. This also holds the advantage of reducing reporting burden on schools. The accuracy and efficiency of the allocation system will rely upon the level of sophistication of information systems.

Manage the risks of needs-based or input allocation mechanisms

248. Needs based or input allocation mechanisms are intuitive and can be perceived as fair, however, they may have some undesirable effects. For example, when funding is directly linked to the identification of individual students as having special educational needs, this may lead to excessive labelling of students which is stigmatising for individuals and can lead to considerable cost inflation. To avoid inflation of the numbers of students identified over time and inconsistent categorisations, the criteria used for assessing students as having physical or learning impairments should be transparent, unambiguous and applied impartially by educational psychologists. Several OECD countries use targeted funding for more severe special educational needs, complemented by a census-based funding approach for students with milder special educational needs or those linked to socio-economic disadvantage. Examples of such indicators are variables measuring social disadvantage (such as poverty, unemployment, poor housing, and low education level) in the immediate community of the school. Such indicators hold the advantage that schools cannot manipulate them.

249. Another way of reducing the incentive for schools to identify individuals as students with special educational needs in order to get more resources is to allocate some of the funding for students with special educational needs to all schools, as a fixed percentage of their formula budget. Some systems may not use any earmarked funding and this may risk the perception that funding is not allocated to support the learning of students with special educational needs. In such a context, stronger accountability at the school level with scrutiny by school boards on the educational provision in the school for students with special educational needs and the impact it is having on their learning will play a key role.

Share experience about funding formulas developed at sub-national level for system learning

250. In countries where local authorities have responsibility for funding allocation, there is a great opportunity for system learning. While central authorities cannot directly influence funding allocation, more attention can be devoted to improving efficiency in different approaches used within the country. There will be many different funding formulas developed at the regional or local levels to distribute funding to schools. Many of these will share the aim of providing a more equitable funding allocation. There is, therefore, much potential for local authorities to learn from each other regarding the effective design of funding formulas. Some larger authorities with greater capacity may have developed funding formula with external expertise. Sharing knowledge across authorities can help to avoid duplication of efforts. At the central level there is room to identify and promote best practices in funding allocation.

Evaluate the costs of provision and the adequacy of funding regularly to review allocation efficiency

251. Improving financial distribution requires regular and detailed analysis of the adequacy of funding and its effects on the quality of teaching, the efficiency of schools and the equity of education. This requires compelling evidence from regular audit work and academic research. Funding mechanisms may be designed to assign additional funding to ensure vertical equity (i.e. providing education of similar

quality to different students), but it is important to undertake regular evaluations of the actual costs. Reliable and detailed evidence should be gathered on the costs and adequacy of funding in general, and on specific elements that funding mechanisms aim to address, e.g. concerns for a more equitable distribution to support smaller schools in rural locations, the education of students with special educational needs and equity problems related to socio-economic disadvantages. This would entail an overview of the parameters used, for example, the assumptions for average class size and different school sizes for different educational levels. As funding mechanisms align to policy objectives, these are naturally framed by political preferences. However, comprehensive and compelling analysis and empirical evidence on the exact cost differences would strengthen the basis for policy decisions to review or adjust parameters included in funding mechanisms.

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ANNEX 4.A1 COUNTRY PROFILES OF CURRENT AND CAPITAL EXPENDITURE

Note: This represents a first attempt to compile data on current and capital expenditure from the questionnaires submitted by participating countries. In some cases, there will be a need for further clarification and these will be further developed accordingly.

Estonia

252. **Governance context:** Municipalities responsible for pre-primary, primary and secondary education

253. The distribution of funding for recurrent expenditure from the national government to municipal authorities is via a set of earmarked grants. There are no block grants.

254. The main earmarked grant for general education

255. National government provides an earmarked "Education grant for general education" for: Study materials (i.e. textbooks); School lunches; Professional development of teachers and school leaders; and Salaries for teachers and school leaders.

256. The ways to allocate funding for each of these components has evolved (and been contested) over the past 20 years. 1998 saw the introduction of a relatively simple per student formula, including initially six and then eight coefficients to adjust per student payments on the basis of differing demographic and socio-economic characteristics among municipalities. Due to dramatic demographic decline and with a new policy concern to protect rural schools, in 2008 the formula was revised to allocate funding on a per class basis to schools in rural areas. In 2012, the formula was revised again to allocate funding on a per student basis.

Current expenditure: mainly earmarked funding from the central to local level

Overview of earmarked grants for current expenditure from central to local level in Estonia

	Recipient	Area for which the grant is earmarked	Basis to determine the level of the grant
Grant for teaching Estonian to preschool children whose mother tongue is not Estonian (ISCED 0)	All municipalities	For teaching Estonian to preschool children whose study group's language is not Estonian	Number of study groups
Grant for preschool teachers' professional training (ISCED 0)	4 largest towns and municipality unions (who allocate the grant to local municipalities OR organise training directly)	For teachers' professional training	Funding formula - Number of students

	Recipient	Area for which the grant is earmarked	Basis to determine the level of the grant
Grant for state commissioned study places in VET schools (ISCED 2-3 vocational)	All municipalities (as appropriate)	Operating costs concerning activities related to teaching	Funding formula - Number of study places are "bought" - Student special educational needs - Different study fields - Extent of provision of vocational education in the school network - Labour market needs
Smaller targeted grants for general education (ISCED 1-3 general)	All municipalities (as appropriate)	Language Immersion Programme; Teaching Estonian for new immigrants and for students whose mother tongue is Russian; IB diploma programme; Hostel costs for children from least privileged families etc.	Funding formula <i>As appropriate:</i> - Mother tongue of student or family migrant background - Type of studies (IB) - Family socio-economic background (hostel)
Study allowances in VET schools (ISCED 2-3 vocational)	Three municipalities that own three VET schools	For compensating student accommodation and travel costs	Funding formula (no details provided)

Capital expenditure

	Recipient	Purpose of funds	Basis to determine the level of the grant
Ad-hoc decision based on assessment of needs from the local educational authority (ISCED 0-3)	Schools or Preschools owned by municipalities	Infrastructure construction, maintenance and renovation	Assessment of needs
Ad-hoc decision based on assessment of needs from a dedicated agency (State Real Estate Ltd) (ISCED 1-3)	Schools owned by the State	Infrastructure construction, maintenance and renovation	Assessment of needs
Infrastructure investment programme from central educational authority (ISCED 0-3)	Schools	Infrastructure construction, maintenance and renovation and instructional material	School and preschool administrators compete for funds
Infrastructure investment programme from dedicated agencies (EAS, Inoove) (ISCED 0)	Municipalities	Creating new preschool places	Municipalities that need more preschool places

Belgium (Flemish Community)***Current expenditure: block grants to school boards for operational costs and direct payment of staff costs***

257. There are no transfers from the Flemish Community to regional or local levels; rather funds are transferred directly to school boards. However, the Belgian government partially uses federal taxes for a lump sum transfer to the Flemish Community budget.

	Recipient	Purpose of grant	Basis to determine the level of the grant
Lump sum: transfer from central authority (including funds for ISCED 0-3)	Flemish Community	Can be used for all policy domains, including education	Funding formula - Size of total population under the age of 25 - Population at the age of compulsory education - Other non-education criteria

Transfers from the Flemish Community (Belgium) to school boards

	Recipient	Purpose of grant	Basis to determine the level of the grant
Block grant: transfer from State for operational budget (ISCED 0-3)	School Boards	Operational costs	Funding formula - Number of students - Student socio-economic characteristics - School size - School location - Level of education provided - Fields of study - General or vocational education - Grade levels offered - Student special educational needs - Number of apprentices with work-based placements
Restricted block grant for specific student groups (ISCED 0-3)	School Boards	Extra support for specific student groups: disadvantaged groups, newly arrived immigrants and refugees	Funding formula - Number of students - Student socio-economic characteristics - School location - Level of education provided - Fields of study - Grade levels offered - Student special educational needs
Dedicated grant: Direct payment of salaries for educational staff (ISCED 0-3)	Staff	Salaries for teachers, school management and administrative staff	Funding formula - Number of teachers - Teacher characteristics (career level, qualification, experience) - Number of students - Student socio-economic characteristics - School size - School location - Level of education provided - Fields of study - General or vocational education - Grade levels offered - Student special educational needs - Number of apprentices with work-based placements
Ad-hoc subsidies for school infrastructure (ISCED 0-3)		Construction, renovation, maintenance of school infrastructure	Administrative discretion - Based on application dossier - High population density can be a criterion

Capital expenditure

	Recipient	Purpose of grant	Basis to determine the level of the grant
Ad-hoc grant from the State education authority [Requires clarification] (ISCED 0-3)	Schools of the Flemish Community Education Network (Go!)	Infrastructure construction, renovation and maintenance	Administrative discretion: - Based on application dossier; - High population density can be a criterion
Ad-hoc grant from the Flemish Agency for Educational Infrastructure (ISCED 0-3)	Publicly funded private and provincial/municipality schools	Infrastructure construction and renovation	

Belgium (French Community)

258. As for the case of Flemish Community, the Belgian transfers a lump sum to the French Community budget, through revenues from federal taxes.

	Recipient	Purpose of grant	Basis to determine the level of the grant
Lump sum: transfer from central authority (including funds for ISCED 0-3)	French Community	Can be used for all policy domains, including education	Funding formula - Size of total population under the age of 25 - Population at the age of compulsory education - Other non-education criteria

Current expenditure: restricted block grants to school boards for operational costs and direct payment of staff costs

	Recipient	Purpose of grant	Basis to determine the level of the grant
Restricted block grant: transfer from State authority for operational budget (ISCED 0-3)	School Boards	Operational costs Salaries of technical maintenance staff Instructional materials School meals Work-based learning (as part of vocational programmes) Maintenance of infrastructure	Funding formula - Number of students - Student socio-economic characteristics - School size - School location - Level of education provided - Fields of study - General or vocational education - Grade levels offered - Student special educational needs - Number of apprentices with work-based placements
Restricted block grant for specific student groups: transfer from State authority (ISCED 0-3)	School Boards	Extra support for students with special education needs and specific student groups	Funding formula - Number of students - Student socio-economic characteristics - School location - Level of education provided - Fields of study - Grade levels offered - Student special educational needs
Dedicated grant for the direct payment of salaries for educational staff: transfer from the Ministry of French Community (ISCED 0-3)	Staff	Salaries for teachers, school management and administrative staff	Funding formula [Waiting for clarification] - Number of teachers - Teacher characteristics (career level, qualification, experience) - Number of students - Student socio-economic characteristics - School size - School location - Level of education provided - Fields of study - General or vocational education - Grade levels offered - Student special educational needs - Number of apprentices with work-based placements

Capital expenditure transfers from the French Community (Belgium) to school boards

	Recipient	Purpose of grant	Basis to determine the level of the grant
Ad-hoc subsidies for school infrastructure: transfer from State authority (ISCED 0-3)	School Boards	Construction, renovation and maintenance of school infrastructure	Based on application dossier Criteria that might be considered: - Socio-economic characteristics of students - School location (e.g., densely populated area)
Annual grant for capital expenditure: transfer from State authority (ISCED 0-3)	School Boards (with some restrictions for publicly subsidised private schools)	Construction, renovation and maintenance of school infrastructure Non-instructional material	

*Sweden****Current expenditure: lump sum to municipalities and various mechanisms (typically a block grant) for municipal transfers to schools***

259. The allocation of funding for current expenditures to schools is at the discretion of each municipality. Typically, this is a lump sum and may be used for any type of expenditure. The Education Act stipulates that the municipal funding mechanism should account for the number of students enrolled and also the "different precondition and needs of different students". However, the Swedish government believes that it is not possible to further specify a general model for funding allocation, including what proportion of municipal school funding should be reallocated to differentiate for the school's student composition (Swedish Ministry of Education and Research, 2016). The Swedish government underlines that the reallocation of funding for students' specific needs should not be limited to students with diagnosed special educational needs. The National Agency for Education conducted a study in 2012 and found that the proportion of funding allocated to compensate for socio-economic disadvantage varied between one and nine percent in the 50 municipalities studied (NAE 2013, in Swedish Ministry of Education and Research, 2016). Among the municipalities studied, the most common indicator to target such funding was the "parents' education level", followed by "foreign background" (idem).

	Recipient	Purpose of grant	Basis to determine the level of the grant
Earmarked grant: transfer from central authority (ISCED 0)	Municipalities	Compensation to cover maximum parental fees in early childhood education	At the discretion of the central authorities
Lump sum: transfer from central authority (includes funds for ISCED 1-3)	Municipalities	Any type of expenditure, including sectors other than education	Some equalisation used
Municipal transfer to schools – typically a block grant, but may take various forms; it may be distributed by districts within a municipality (ISCED 1-3)	Schools	Any type of expenditure; typically provides for salaries, buildings, material and equipment	At the discretion of the municipality or district The Education Act stipulates that the model for allocation should be transparent and account for: - Number of students enrolled - Students' different preconditions and needs (e.g. special educational needs). Research reveals common indicators to be "parents' education level" and "foreign background". Also, small schools with limited student population often receive more funding
Targeted funding for policy priorities		For example: Mathematics strategy	Municipal application (evidence that Stockholm and the other larger municipalities apply for and receive targeted funds more often and that a lack of administrative capacity may be a barrier for smaller municipalities)

Capital expenditure

	Recipient	Purpose of funds	Basis to determine the level of the grant
Infrastructure investment programme: transfer from the Local education authority (ISCED 0-3)	Schools	Infrastructure construction, renovation and maintenance	
Ad-hoc decisions based on assessment of needs: transfer from the Local educational authority (ISCED 0-3)	Schools	Infrastructure construction, renovation and maintenance	Assessment of needs

Denmark

Current expenditure: lump sum to municipalities and various mechanisms for municipal transfers to schools

260. It is challenging to identify how much of the variation in expenditures across municipalities can be attributed to differences in municipal income (despite some equalisation via the central allocation), differences in socio-economic contexts and differences in how much public education is prioritised. There are differences in expenditure level across municipalities that can be explained by differences in the decided level of service or by differences in productivity (Nusche et al., 2015). Research (Houlberg et al., 2016) indicates that municipalities with a relatively disadvantaged socio-economic population spend relatively more on education compared to other municipalities. Typically, municipalities use some sort of funding formula that is known to schools and include compensation for students from disadvantaged backgrounds (Nusche et al., 2015). However, funds to support the education of students with special educational needs within mainstream education are typically not earmarked, this leads to some concerns about a lack of transparency and uncertainty whether funds follow students when they move from special school to mainstream school and, it follows, whether students with special educational needs receive adequate learning support in mainstream schools (Nusche et al., 2015).

	Recipient	Purpose of grant	Basis to determine the level of the grant
Lump sum: transfer from central authority (includes funds for ISCED 1-3)	Municipalities (this central grant accounts for about 26% of municipal revenues)	Any type of expenditure, including sectors other than education	Accounts for certain municipal characteristics, including population size, age composition and an index of the socio-economic structure of the municipality. The weighting assigned to these factors is broadly 68% for age-related factors (including a high weighting for the age group 6-16 years) and 32% for socio-economic factors (the most important components being: over 5% of 20-59 year olds without employment, 25-49 year olds without vocational training and families in certain types of housing).
Municipal transfer to schools – may take various forms (ISCED 1-3)	Schools	Typically, school principals have a high degree of autonomy to use school funding, in consultation with the school board, within the central regulatory framework (class size, teaching hours for different subjects, students' rights to receive teaching adapted to their needs). Municipalities may set more specific regulations.	Municipal discretion. A variety of models and mechanisms are used. Some municipalities simply allocate a given amount per student, while most take account of the students' or area's socio-economic characteristics (although with different measures and weightings). School size is typically accounted for. Some municipalities use the number of students, others the required number of classes (national maximum class size of 28 students). Since 2007 local government reform, municipalities have in general adopted an approach to allocate special educational needs funding as part of the general allocation to schools, based on socio-economic characteristics.
Targeted funds for special needs education (ISCED 1-2)	Municipalities		Municipalities apply for additional funding

Iceland

261. **Governance context:** The 74 local communities are responsible for the establishment and operation of pre-primary and compulsory schools, including the provision of special education. Compulsory school education, including educational material and school transportation, is fully funded by the local communities. Textbooks are funded by the state. The operating costs of upper secondary education are funded by the state. Construction costs and initial capital investment for equipment are divided between the state and the relevant local communities, which pay 60% and 40% respectively.

Current expenditure: block grant to municipalities for compulsory education and various mechanisms for municipal transfers to schools; block grant from central authorities to schools providing upper secondary education

	Recipient	Purpose of grant	Basis to determine the level of the grant
Block grant: Central transfer for compulsory education provision (ISCED 1-2)	Municipalities	Any type of expenditure in compulsory education	Transfer from state annual income tax (2.07%)
Block grant/ earmarked funds: Central transfer under the Local Governments' Equalisations Fund (ISCED 1-2)	Municipalities	To even out the differences in expenditure and income of local governments with a specific or greater need	71% is for any type of expenditure; the rest is earmarked for support to disabled students with special needs, educational support to new arrivals in the country, the Icelandic Association of Local Authorities, experts and teaching consultants and various small projects. There is also a special allocation for student transportation costs. Allocation criteria were under review in 2015 with the intention to make them more general
Municipal transfer for current and capital expenditure – may take various forms (ISCED 0-2)	Schools	Salaries, operational costs, physical infrastructure; Extra support for specific student groups Some municipalities will allocate a block grant; others may earmark part of the funding for specific purposes	Either a specific funding model developed by the municipality or the municipality's general budget framework. Criteria primarily include: - Number of students - Legal requirements - Collective labour agreements - Number of generic class hours and the number of class hours required to support teaching students with special educational needs

	Recipient	Purpose of grant	Basis to determine the level of the grant
Block grant: Central transfer for current expenditure (and proportion of capital expenditure) (ISCED 3)	Schools	Block grant for salaries, operational costs, physical infrastructure	Funding formula, including general criteria and school specific criteria as detailed in contractual agreements between the State and each school (school curriculum and study programmes offered). <i>The general criteria are:</i> - number of teaching hours per student per week - average class and group sizes - average number of students per class or group - salary cost - proportion between teaching jobs to teaching cost - proportional division of teaching hours into daytime and overtime work <i>The specific criteria include:</i> - number of registered students of the past calendar year - the estimated number of students, average for two semesters of the coming financial year - the estimated number of students attending evening school, average for two semesters of the coming financial year - proportion of teaching hours for students attending preliminary and remedial education to total student teaching hours - square meters of housing split into usage for academic studies, management and administration, vocational studies, dormitories and cafeteria - rental cost of facilities used for teaching, the price for a cubic meter of hot water and kwh of electricity - distance from Reykjavik - average annual income of teachers - annual income and paid overtime of the head of the school

Capital expenditure

	Recipient	Purpose of funds	Basis to determine the level of the grant
Discretionary grant from the local educational authority (ISCED 0)	Preschools	Infrastructure construction, maintenance and renovation [Requires clarification]	Assessment of needs
Negotiation process with the local educational authority (ISCED 1-2)	Schools	Infrastructure construction, maintenance and renovation	Assessment of needs
Discretionary grant from the central educational authority (ISCED 3)	Schools	Infrastructure construction, maintenance and renovation	School and preschool administrators compete for funds

Slovak Republic

Current expenditure: block grant from central authorities to school owners for each school, but school owners have some discretion to reallocate a specified proportion

	Recipient	Purpose of grant	Basis to determine the level of the grant
School-specific grant: salaries (ISCED 1-3)	Regions (ISCED 3) Municipalities (ISCED 1-2) Private schools	One block grant for salaries and operational costs (see below). Regions/ municipalities have a degree of discretion and can reallocate a maximum of 10% of the received grant among schools.	Funding formula - Number of students - Level of education provided - General or vocational education - Teacher qualification level - Students with special educational needs integrated in mainstream education <u>For ISCED 1-2:</u> - If Grade 0 is offered - School size in a municipality with less than 250 school children with the same language of instruction <u>For ISCED 3:</u> - Bilingual programmes - Sports programmes - Priority VET programmes (with insufficient graduates compared to identified labour market needs)
School-specific grant: operational costs (ISCED 1-3)	Regions (ISCED 3) Municipalities (ISCED 1-2) Private schools	One block grant for salaries (see above) and operational costs. Regions/ municipalities have a degree of discretion and can reallocate a maximum of 20% of the received grant among schools.	Funding formula - Number of students - Level of education provided - General or vocational education - Students with special educational needs integrated in mainstream education - Heating intensity requirement (8 different temperature zones) - Operational intensity requirement other than heating (6 different categories) - Further education for teachers <u>For ISCED 1-2:</u> - School size in a municipality with less than 250 school children with the same language of instruction <u>For ISCED 3:</u> - Sports programmes - Priority VET programmes (with insufficient graduates compared to identified labour market needs)
School-specific grant: Support to students with special educational needs (ISCED 1-3)	Regions (ISCED 3) Municipalities (ISCED 1-2) Private schools	Earmarked funds for support to students with special educational needs (SEN) (Salaries for teaching assistants)	Other - Based on request by regional or municipal authority or private school, considering factors such as the number of children with SEN, the type of SEN, and historical trends
School-specific grant: Maintenance and infrastructure (ISCED 1-3)	Regions (ISCED 3) Municipalities (ISCED 1-2) Private schools	Earmarked funds for maintenance (repairs of damage on school property).	Other - Based on request by regional or municipal authority or private school. Decision criteria include: potential threat to lives and health, extent of damage, risk of future damages.

	Recipient	Purpose of grant	Basis to determine the level of the grant
School specific-grant: teacher salaries, instructional materials (ISCED 1-3)	Regions (ISCED 3) Municipalities (ISCED 1-2) Private schools	Earmarked funds to prepare for student competitions or participation in international projects (teacher salaries and instructional materials, student accommodation during competitions)	Funding formula <i>As appropriate:</i> - Number of students placed first, second or third in the competition - Number of international projects the school participates in
Earmarked grant (Top up funding for teacher salaries and operating costs) (ISCED 1-3)	Some regions, municipalities or private schools at discretion of central authorities		Discretion of the central authorities to allocate top up funding in cases where the school-specific grant does not cover staff and operational costs. The decisions are based on a request and justification by the region, municipality or private school.
School-specific grant: funding for disadvantaged student groups (ISCED 1-2)	Municipalities (ISCED 1-2) Does not include special schools.	Earmarked grant for disadvantaged student groups (Teacher assistant salaries, teacher salary bonuses, learning materials, field trips, language and sport courses etc.)	Funding formula - Number of disadvantaged students

Capital expenditure

	Recipient	Purpose of funds	Basis to determine the level of the grant
Ad-hoc decisions based on assessment of needs: transfer from the Central educational authority (ISCED 1-3)	School owners	Infrastructure renovation and maintenance in case of damages on premises threatening the provision of education	Assessment of needs: - Damages of premises (based on request of the school owner) Decision criteria: - Potential threat to lives and health - Extent of damage - Risk of future damages
Discretionary funding: transfer from the Regional educational authority (ISCED 1-3)	School owners	Infrastructure construction, maintenance and renovation	
Discretionary funding: transfer from the Local educational authority (ISCED 1-3)	School owners	Infrastructure construction, maintenance and renovation	

Czech Republic

Current expenditure: earmarked transfer to regional authorities for direct costs of education, regions distribute to individual schools

	Recipient	Purpose of grant	Basis to determine the level of the grant
Central earmarked grant for direct costs of education (ISCED 0-3)	Regions	Teacher salaries; Learning support staff; Staff not involved in instructional activities; Textbooks and teaching aids; Teacher further professional development; Students with special educational needs; Special needs schools; Early childhood education and/or pre-primary education	Negotiations between relevant authorities Funding formula - Number of students - Age of students (four age bands) - Regional Institutional Care Facilities
Regional allocation of central grant for direct costs of education (ISCED 0-3)	Schools	As above	Each of the fourteen regions develops a funding formula to allocate funding to regional and municipal schools. There may be negotiations between regional and municipal authorities regarding the allocation to municipal schools. Regional funding formulas vary, but typically include: - Number of students - School size - School location - Specific infrastructure - Level of education provided - Fields of education provided - General or vocational education - Grade level - Student special needs
Top up funding from municipalities for direct costs of education (ISCED 0-2)	Schools	As above	At the discretion of municipalities based on a needs assessment
Operational costs - covered by school founders (regions or municipalities)	Schools	Maintenance of schools; energy expenditures; communal services; small repairs	Discretion of school founders (regions or municipalities); may use funding formulas
Investment expenditures	Schools		Ad hoc; at the discretion of school founders (regions or municipalities)

Capital expenditure

	Recipient	Purpose of funds	Basis to determine the level of the grant
Ad-hoc grants based on assessment of needs, infrastructure investment programmes from the central and regional educational authorities (ISCED 1-3)	Schools	Infrastructure construction, renovation and maintenance; Instructional and non-instructional materials	At the discretion of the central and regional authorities

Slovenia*Current expenditure [to be compiled]**Capital expenditure*

	Recipient	Purpose of funds	Basis to determine the level of the grant
Discretionary funding: transfer from the Central education authority (ISCED 3)	Schools	Infrastructure construction, renovation and maintenance Non-instructional and instructional material	Schools compete for funds In urgent cases that need immediate investment Criteria examples: - Leaking roof - Leaking pipes, etc.
Discretionary funding: transfer from the Local educational authority authority (ISCED 0-2)	Schools	Infrastructure construction, renovation and maintenance Non-instructional and instructional material	

Chile

Current expenditure: a mix of block grant to school administrators, earmarked funding and school-specific grants

	Recipient	Purpose of grant	Basis to determine the level of the grant
Block grant for general school subsidy (ISCED 0-3)	School administrators (municipalities or private school owners)	<p>1. General school subsidy, based on average attendance of students, to be spent at discretion within regulated framework.</p> <p>2. Pro-retention Educational Subsidy paid to administrators that have achieved attendance of highly disadvantaged students in Grades 7-12</p> <p>3. Grant to public schools with delegated administration to non-profit corporations (less than 1% of schools)</p>	<p>Funding formula</p> <ul style="list-style-type: none"> - Average monthly attendance of children at school - School student profile (child, youth, adult) - educational level provided - vocational education - Special or adult education - Full day educational provision - Higher weighting for rural/highly isolated schools <p><i>For pro-retention Educational Subsidy:</i></p> <ul style="list-style-type: none"> - Student from highly disadvantaged socio-economic background <p><i>For schools with delegated administration:</i></p> <ul style="list-style-type: none"> - The main basis is student enrolment
Dedicated grant for school education	School administrators (88% of administrators of publicly funded private schools are in charge of one school)	<p>Educational purposes only, including:</p> <ul style="list-style-type: none"> - Salaries for management, teaching staff and teaching assistants - Management and operations costs for running the school - Services and materials for teaching and learning - Maintenance and repair of school property - Improvement of school's educational service 	Administrative discretion within regulated framework

	Recipient	Purpose of grant	Basis to determine the level of the grant
Block grant for strengthening public education (ISCED 0-3)	Municipalities	In the case of a surplus of resources, central authorities can redistribute funds to municipalities facing extraordinary difficulties which endanger the continuity of educational provision. Funding should support municipal educational services. Its regulation allows financing a variety of areas such as municipal management improvement, pedagogical resources and student support, infrastructure and equipment improvement, financial restructuring (debt reduction), educational community participation.	Transfer based on specific agreement with the municipality -Characteristics of the commune/municipality
Earmarked grant: complement for teacher salaries (ISCED 0-3)	School administrators	Teacher salaries	Funding formula - Education professionals in schools classified as difficult due to geographic location, marginalisation, extreme poverty or other comparable characteristics - Year of teaching service, teaching advance training, assessed teaching competence
Earmarked grant: students with special needs (ISCED 0-3)	School administrators	Improvement projects for schools with socially disadvantaged students (SEP); integration projects for students with special educational needs attending regular schools (PIE); boarding school; learning support; Maintenance of infrastructure	Funding formula - Average monthly attendance of students at school - Household socio-economic characteristics - Age /education level the student attends - Concentration of socially disadvantaged students in individual schools and historic school performance - Number of teachers - Labour market outcomes of graduates <i>For maintenance of infrastructure subsidy:</i> - Type of education programme provided - Region the school is located

	Recipient	Purpose of grant	Basis to determine the level of the grant
School-specific grant: salary incentive for staff in best performing schools (ISCED 0-3)	Schools	An incentive and recognition of education professionals (teachers and support staff) in schools with the best performance in a comparable group.	Funding formula - Monthly value per child and attendance - Based on the National Performance Evaluation System of Subsidised Schools (SNED), schools with the best performance within a comparable group in each region, which also concentrates up to 35% of the enrolment.
Block grant (ISCED 0)	Pre-school centers that operate based on funds transfers	?	Funding formula - Monthly value per child and attendance

Capital expenditure

	Recipient	Purpose of funds	Basis to determine the level of the grant
Infrastructure investment programme from the central education authority (School Infrastructure Department of the Ministry of Education and the National Fund for Regional Development) (ISCED 02-3)	Schools	Infrastructure construction, renovation and maintenance; Instructional and non-instructional materials	School administrators compete for funds
Annual grant from the central education authority (Ministry of Education) (ISCED 3, pre-vocational and vocational)	Delegated administration schools	Construction, renovation and maintenance of school infrastructure Non-instructional material	School administrators compete for funds
Discretionary funds from the central education authority (JUNJI Integra) (ISCED 01-0)	VTF preschool providers [requires clarification]	Preschool infrastructure repairs	Preschool administrators compete for funds

Uruguay

262. In Uruguay, there are no transfers between different levels of education authorities; the distribution of public resources is entirely at the central level. Four main central Education Councils are responsible for funding distribution to schools: Pre-primary and Primary Education Council; General Secondary Education Council; Professional and Vocational Secondary Education Council; Teacher Professional Development Council. The allocation to each Education Council is based on historical allocations and this makes it difficult to reprioritise allocations to certain sectors (Santiago et al., forthcoming). Each Education Council allocates funding to schools via a set of grant transfers at its discretion. However, there are numerous targeted funds administered directly by the central authorities (not via the Education Councils); in fact there are over 130 programmes for equity.

Current expenditure

	Recipient	Purpose of grant	Basis to determine the level of the grant
Central authorities allocation to different educational sectors	Four central Education Councils	Education	Historical basis - Ex-post transfers may happen: in the case that one sector has a surplus, this would be allocated to a sector with a deficit
Dedicated grant from the Education Councils (ISCED 0-3)	Schools	Teacher salaries; professional development of teachers	Administrative discretion, taking into account the type of school and the educational programmes provided. The number of teachers is determined also by the enrolment rate. Discretionary allocation for "eligibility for extra staff" based on assessment by Inspectors
Restricted block grant from the Education Councils (ISCED 0-3)	Schools	Operating costs; includes grants for school trips for ISCED 2-3 pre-vocational and vocational programmes	Administrative discretion, taking into account the type of school and the educational programmes provided.
Dedicated grant from the Education Councils (ISCED 0-3)	Schools	Instructional materials; telephone expenses	Administrative discretion, taking into account the type of school and the educational programmes provided. Based on historical parameters for the allocation of instructional materials. Education Councils directly pay the school utility bills.
Dedicated grant from the Education Councils for teacher training (ISCED 0-3)	Schools	Support for students with special educational needs	Administrative discretion, taking into account the type of school and the educational programmes provided. Allocation to special primary education accounts for the type of disability, which would dictate the type of human and material resources required.
Earmarked grant from the Education Councils (ISCED 2-3)	Schools	School meals – only for some specific programmes in general education and for some types of schools in pre-vocational and vocational education (agrarian schools)	Administrative discretion, taking into account the type of school and the educational programmes provided.

	Recipient	Purpose of grant	Basis to determine the level of the grant
Earmarked grant from the Inspection Department (ISCED 0-3)	Schools	Maintenance of infrastructure	Discretion of the Inspection Department. Based on a priority assessment throughout the year and depends on the assessed needs of the individual school.
Earmarked grant from the Regional Inspectorate (ISCED 2-3 pre-vocational and vocational programmes)	Schools	Maintenance of infrastructure	Discretion of the Regional Inspectorate. Based on a priority assessment throughout the year and depends on the assessed needs of the individual school.
Central funding for private providers (ISCED 0)	Private early childhood education providers	Non-teacher salaries	Expenses are fixed in a general agreement rule

Capital expenditure

	Recipient	Purpose of funds	Basis to determine the level of the grant
Infrastructure investment programme: transfer from Central educational authority at the responsibility of CODICEN (Department of Infrastructure) (ISCED 0-3)	Schools	Infrastructure construction, maintenance and major infrastructure works	
Ad-hoc decisions based on assessment of needs: transfer from the Central educational authority (ISCED 2-3)	Education councils	Infrastructure construction, renovation and minor infrastructure works	Assessment of needs
Residual capital funds from regular funding for current expenditure: transfer from the Central educational authority (ISCED 0-3; pre-vocational and vocational)	Education councils	Instructional and non-instructional material	
Infrastructure investment programme: transfer from the Central educational authority at the responsibility of PAEPU (Support Program for Public Primary Education) (ISCED 1)	Full-time primary schools	Extra support for infrastructure construction, renovation and maintenance and instructional and non-instructional material	

	Recipient	Purpose of funds	Basis to determine the level of the grant
Infrastructure investment programme: transfer from the Central educational authority at the responsibility of PAEMFE (Support Program for Secondary and Training in Education) (ISCED 2-3)	Secondary schools	Extra support for infrastructure construction, renovation and maintenance and instructional and non-instructional material	
Universal funding: transfer from a Dedicated agency (Ceibal Centre) (ISCED 1-3)	Schools	Instructional material	Universal funding
Negotiated process: Regional inspection and architects teams of Education Councils and CODICEN (ISCED 0-1)	Education Councils	Infrastructure construction, renovation and maintenance and minor infrastructure works	Negotiation process
General bid: transfer from Central education authority(ISCED 2-3)	Education Councils	Instructional and non-instructional material	Bid [Requires clarification]

Kazakhstan

263. **Governance context:** Highly centralised. Administratively, Kazakhstan is divided into 14 regions and two cities of special status (Astana and Almaty) and 175 municipalities. Regional governors are appointed by the President. Regions and districts cannot contradict central government policies. Regions and municipalities are responsible for the delivery of education services in the majority of schools, but must adhere to detailed national norms and central planning. The central authorities run some schools. There is no restriction as to which type of schools is run by different level authorities.

264. The distribution of school funding is decided on a discretionary basis by regions in consideration of national norms and, in practice, is greatly associated to historical expenditures adjusted for inflation (Pons et al., 2015). School principals are responsible for preparing the annual school budget, but these tend to be adjusted downwards with schools having little bargaining power and needing to negotiate individually for any increases to cover unexpected expenses (idem). Each region checks the staffing in the proposed school budget against national norms and reviews the overall financial implications. Once the regional budget is established, local authorities have some discretion to distribute the remaining budget.

265. A proposed reform to school funding, specifically the introduction of a per student funding formula, has been postponed and will be partially introduced (in school grades 10 and 11 only) in 2018 (Pons et al., 2015). The proposed reform would include a school-specific transfer for current expenditures from the central administrative level to each school via the respective regional and local authority.

Current expenditure: some equalisation among different administrative levels, each administrative level transfers funds with discretion to its schools

	Recipient	Purpose of grant	Basis to determine the level of the grant
Equalisation transfers from higher to lower administrative levels (subventions) or vice versa (extractions).	Central, regional or local administration	General funding transfer to equalise differences in local revenues and ensure that each administrative level has enough resources to implement its functions.	Subventions or extractions are established in absolute terms for a period of three years.
Target transfers for current expenditures from central and/or regional level (mainly from the central level) (ISCED 0-3)	Regional or local administrations	Earmarked grants usually targeted at funding specific budgetary programmes (government initiatives, specific reforms, etc), e.g. 2014-2020 earmarked funding for full coverage of pre-school	The order of consideration and selection of earmarked transfers is defined by the central authority for budget planning in accordance with the central authority for governmental planning. Transfers are made during the validity period of three year general transfers. The amount transferred strictly adheres to the region's annual financial plan, which includes a budgetary application with detailed information on funding needs. The regions must also allocate funding to local levels as specified in the region's annual financial plan. If funding is not fully absorbed, it must be returned to the regional – and in turn the central – level.
Main transfer for current expenditures, from either the central, regional or local administrative level. (ISCED 0-3)	Schools (schools receive funding from the administrative level directly responsible for their operation)	Funding for any type of current expenditure.	Administrative discretion. In accordance with the region's annual financial plans and based on historical expenditures.

Capital expenditure

	Recipient	Purpose of funds	Basis to determine the level of the grant
Ad-hoc decisions based on assessment of needs: transfer from the National Fund and republican budget (ISCED 0-3)	Preschools	Infrastructure construction, maintenance and renovation Instructional material	Assessment of needs
Ad-hoc decisions based on assessment of needs: transfer from the Regional educational authority (ISCED 0-3)	Schools	Infrastructure construction, maintenance and renovation	Assessment of needs

Lithuania

Current expenditure: central grant for teaching costs to municipalities, which can reallocate a limited proportion of the grant among schools; maintenance costs paid directly by municipalities

	Recipient	Purpose of grant	Basis to determine the level of the grant
Student basket scheme: transfer from Central authority (ISCED 0-3)	Municipalities	Teacher salaries Other teaching costs	Municipalities have a restricted degree of discretion to reallocate a proportion of the grant Funding formula - Number of students - Student socio-economic characteristics (distinctive minority, SEN status, migrant status) - School size - School location - Level of education provided - Fields of study - General or vocational education - Student special educational needs
Grant for maintenance costs	Schools	Maintenance costs, including salaries	Municipal discretion
Discretionary funds: transfer from Local authority (ISCED 0)	Preschools	Teachers' salaries (Maintenance of infrastructure)	At the discretion of Local authority

Capital expenditure transfers to schools

	Recipient	Purpose of grant	Basis to determine the level of the grant
4-years grant: transfer from Central authority (ISCED 0-3)	Local education authority	Infrastructure construction	Infrastructure investment programme criteria
Discretionary funds: transfer from Local authority (ISCED 0-3)	Schools	Infrastructure maintenance and renovation	Ad-hoc decisions based on assessment of needs
Discretionary funds: transfer from National Agency for Pre-school Infrastructure Construction (ISCED 0)	Preschools	Infrastructure construction	

266.

CHAPTER 5. MONITORING, EVALUATING AND REPORTING THE USE OF FINANCIAL RESOURCES IN EDUCATION

267. This chapter is concerned with how the use of financial resources can be effectively monitored, evaluated and reported. It looks at responsibilities and processes in place across countries to ensure the transparency of funding information and the availability of data for improving resource use.

268. Monitoring, evaluating and reporting the use of financial resources once they have been allocated and distributed is a key element of school funding. Providing adequate levels of financial resources is an essential condition for high quality teaching and learning, but the monitoring, evaluation and reporting processes that are in place are equally important. Monitoring, evaluation and reporting processes determine the level of knowledge available for different authorities and stakeholders about the use of financial resources across a system. And they provide information about what a planned budget actually delivers beyond the intentions for the use of resources as expressed in the budget allocation. Monitoring, evaluation and reporting thus give a fuller picture of the educational experience that is actually provided to students.

269. Monitoring and evaluation are essential for ensuring that resources are actually used for what they were originally intended as planned in the budget. It ensures that financial resources are used in line with the requirements and regulations attached to funding and that the available funds are managed effectively. In practice, budgets are rarely implemented exactly as approved. This can be for legitimate reasons, such as adjustments in policies in response to emerging challenges. But the effective implementation and execution of a budget may also be hindered by a lack of capacity (e.g. to budget adequately for expenses or to comply with the planned budget), mismanagement, unauthorised expenditures, inefficiencies, and corruption and fraud (Vegas and Coffin, 2013; Ramkumar, 2008). Also, the flow of financial resources from one level of government to the next, and ultimately to schools and students, entails a risk for leakages, inefficiencies and mismanagement. Monitoring and evaluation serve as fiscal control mechanisms that help to reveal mismanagement and inefficiencies and that facilitate accountability of authorities and decision-makers for the implementation and execution of a budget. As Fiszbein et al. (2011) pointed out, tracking inputs, processes and outcomes is important for ensuring good conditions for teaching and learning, but it is important that the resulting information translates into accountability for the effective and efficient use of financial resources.

270. Monitoring and evaluation are also crucial for determining the efficiency and effectiveness with which financial resources are used (for conceptual definitions of efficiency and effectiveness, see Chapter 1). Monitoring and evaluation facilitates learning about the ways in which financial resources are used at different levels of the system, about the ways in which the use of financial resources translates into outcomes for different groups of students, and how resources could be used more efficiently and effectively to achieve the goals of a system. It thus also provides information if financial resources have been allocated productively. Such information can then inform ongoing and future budget debates and processes for planning a future budget with robust evidence as analysed in Chapter 3.

271. Transparency in school funding depends on a number of elements within the overall approach to school funding, such as transparency at the stage of planning and formulating the budget (Chapter 3) and the transparency with which financial resources are distributed across different levels of administration and to individual schools (e.g. through a clear and transparent funding formula) (Chapter 4). Reporting on the actual use of financial resources is a further element for creating transparency in school funding. It can

provide information to different stakeholders about resource flows, resource use decisions and the effectiveness and efficiency with which the available financial resources are used and managed. While no direct link between reporting and education outcomes has been established (Vegas and Coffin, 2013), transparency of the use of financial resources is important in terms of effectiveness and efficiency (e.g. reporting of expenditure at different levels of government can facilitate the efficient allocation of funds). Transparency is important in terms of public accountability for the use of public resources that are derived from citizen's expenditures and earnings. Making information on financial resource flows and use available also reduced the risks for corruption and misuse of resources if it enables public stakeholders to hold authorities and schools accountable for the use of their resources (Wodon, 2016).

272. Monitoring and evaluation arrangements and reporting requirements have to be seen in the context of the overall approach to school funding. Monitoring, evaluation and reporting depends on the distribution of responsibilities for different domains of school funding, that is who is responsible for making certain decisions about the allocation and distribution of certain types of financial resources and for the management of these financial resources once they have been allocated (see Chapter 2). Responsibilities for decision-making and financial management determine the need for accountability and transparency at different levels of governance and for the respective authorities. The level of decentralisation and autonomy of sub-national and intermediate authorities and schools in a system, in particular, determine the level of necessary accountability and transparency of resource use by sub-national and intermediate authorities and schools. While it is important to recognise that the involvement of multiple actors and levels of governance as well as funding and service delivery at a decentralised unit, the school, can complicate clear lines of accountability, institutional arrangements and fiscal control mechanisms may help clearly communicate and enforce responsibilities from the central administration to the school level (Vegas and Coffin, 2013).

273. Monitoring, evaluation and reporting are, furthermore, influenced by the approach chosen for distributing funding to different levels of governance and to schools (see Chapter 4). Distributing funding through a lump sum, an earmarked grant or a targeted programme, for example, will have different implications for monitoring, evaluating and reporting on the use of the financial resources. Distributing financial resources to schools based on certain criteria, such as the number of students in a school, may also influence monitoring, evaluation and reporting in terms of the type of information that needs to be monitored, evaluated and reported and the administrative efforts this involves to ensure sound allocations of funds to authorities and schools.

274. This chapter analyses the responsibilities for monitoring and evaluating the use of financial resources and the processes in place for monitoring and evaluating the use of financial resources at different levels of the system. It covers reporting requirements and processes and the availability of information about the use of financial resources at different levels of the system. The chapter, furthermore, highlights the role of data and information management systems for monitoring, evaluation and reporting. While the chapter analyses monitoring, evaluation and reporting processes at different levels of the system, it is important to also consider the overall balance of these processes in ensuring accountability overall. Strong horizontal accountability, for example, can compensate for a lack of capacity and resources for vertical accountability through formal financial audits.

Responsibilities and processes for monitoring and evaluation and reporting requirements at the central level

Monitoring, evaluation and reporting as part of the budget cycle

275. Monitoring, evaluation and reporting constitute integral parts of the central budget cycle. The budget cycle consists of four stages: the budget preparation and formulation, the budget approval and enactment, the budget execution, and the budget evaluation.

276. The different stages of budgeting may involve different monitoring, evaluation and reporting processes. Already the stage of budget preparation may involve evaluation processes that create knowledge about the efficiency and effectiveness of different policies and programmes and inform the budget allocation process, e.g. in the form of cost-benefit analyses and spending reviews. Spending reviews are most often carried out by the ministry of finance, possibly together with the spending ministry, and serve to develop and adopt savings measures based on the systematic scrutiny of baseline expenditure. They may analyse different funding scenarios and their expected outputs and outcomes to decide on and reprioritise budget allocations (Fakharzadeh, 2016; OECD, 2013a; Marcel, 2012). Spending reviews are analysed in greater detail in Chapter 3 on the planning of the use of financial resources. Monitoring, evaluation and reporting processes that form part of the budget execution and evaluation stage are analysed in this chapter. Adopting a particular approach to budgeting, such as performance-based or outcome-oriented budgeting will influence the monitoring, evaluation and reporting activities that are linked to the budgeting process as it determines the information that is required as input into the budget preparation, for example.

Responsibilities for monitoring, evaluation and reporting of the central budget

277. The ministry of finance is typically entrusted with the task of monitoring performance of line ministries and may be responsible for conducting performance evaluations. Evaluation can also be undertaken by line ministries, and in many countries, the ministry of finance, spending ministries, their agencies and the parliament may work together. Typically, spending agencies also have their own programmes and project planning and controlling tools to allocate costs among programmes and keep track of assets and inventories and maintenance works (Fakharzadeh, 2016; OECD, 2014; Curristine, 2005). Through the adoption of performance-based budgeting and management frameworks in a growing number of countries, spending ministries have taken on greater autonomy in the budget process in these countries, particularly for monitoring and evaluation. Spending ministries define their goals through a set of outcomes and related indicators, monitor the achievement of the goals and targets, and report on the efficiency and effectiveness of their work against the set indicators (Kristensen et al., 2002) (for a number of country practices, see Box 5.2).

Budget execution stage

278. As part of the budget execution stage, funds are released to various line ministries, departments and agencies as per the approved budget. The respective line ministries, departments and agencies then initiate expenditures directly (e.g. through payrolls) or by procuring goods and services and payments are made for these expenditures. During the budget execution stage, expenditure transactions are recorded in accounting books and accounting and budgeting reports are produced. The budget execution stage, then, entails the monitoring and reporting of expenditures, revenues and debt levels. It involves a continuous analysis and assessment of how funds are actually spent to implement the policies, programmes and projects outlined in the budget.

279. During the course of the financial year, accounting officers or their delegated staff members record all of the outstanding revenue and expenditure transactions. Accounting follows certain accounting

standards which are set by the ministry of finance or an independent professional advisory body and may be described in public budgeting documents. Accounting standards can help achieve integrity, control and accountability objectives and influence the quality of financial data and information. Accounting standards, therefore, also influence the quality of reporting of financial data (e.g. in terms of comparability) and the quality of decision-making to plan the use of financial resources (Fakharzadeh, 2016; Blöndal, 2003).

Box 5.1. Country practices for monitoring and evaluating the central budget

In **Denmark**, each policy sector has its own approach to evaluation, and each ministry and agency can decide on an evaluation model. In addition, spending agencies have to control spending and follow-up on the allocated appropriations. If this follow-up shows that the given appropriations are about to be exceeded, the agency must either take action to reduce spending or apply for an increased appropriation. This application must go through the relevant minister and approved by the Ministry of Finance. In May and September each year, all ministries have to report a balance sheet and expected economic development to the Ministry of Finance. Afterwards, the Ministry of Finance presents the information from the ministries to parliament in the publication of a Budget Outlook.

In **Iceland**, the Ministry of Finance monitors the financial performance of spending ministries in comparison with the budget. In case of significant variation, the Ministry of Finance calls for explanations and encourages the spending ministries to take action, for example to change the programme structure, processes or management. Most evaluation is done on an ad hoc basis. Ministries have flexibility and freedom in their performance evaluation system, and the ministries monitor their progress against targets and goals.

In **New Zealand**, forecasting performance is regularly monitored by the Treasury, and may also be reviewed by an external body commissioned by the Treasury. Every year the Minister of Education must prepare and present to the House of Representatives a report on the performance of the school sector, which includes information on the supply of outputs, management performance, and educational attainments.

Source: Fakharzadeh, T., 2016

280. Principles referred to as the accounting basis determine when transactions or events should be recognised for financial reporting purposes (Allen and Tommasi, 2001). Cash and accrual accounting constitute the two main bases of accounting in the public sector. Under the cash basis, a transaction is recognised once the cash is received or the cash is paid out, while under the accrual basis, a transaction is recognised when the activity generating revenue or consuming resources takes place, even though the cash might not have been received or paid yet (Fakharzadeh, 2016; Allen and Tommasi, 2001). While the public sector traditionally relied on cash accounting, accrual accounting systems have become the norm in many OECD countries (Fakharzadeh, 2016; OECD, 2014). The recording of financial transactions, furthermore, entails a chart of accounts (the classification of transactions and events, such as payments, revenues, depreciation, and losses, according to their economic, legal, or accounting nature which also serves as the basis for preparing financial statements), a budget classification (the coding schemes that are used to define both revenue and expenditure transactions), and a book of accounts (a set of books or a database where all transactions are recorded according to the specification of the chart of accounts and the budget classification system, also called the General Ledger) (Fakharzadeh, 2016; Allen and Tommasi, 2001).

281. Charts of accounts and budget classifications may be specific to the education sector. In Australia, for example, the Standard Chart of Accounts (SCOA) includes guidelines specific to the education sector, such as the need to include libraries and educational resources under the account named “Plant and Equipment” within the Assets. It also states that the account “Client Support Services” should include costs associated with the provision of education and support, tutoring and pre-school support, education fees and child care support (Council of Australian Governments, 2010).

282. The recorded transactions form the basis for accounting and budgeting reports that are typically prepared by the ministry of finance. Throughout the financial year, in-year and mid-year reports are produced. These reports compare the actual budget results with the approved budget to show whether the budget provisions are being adhered to during the execution phase. In-year reports generally do not monitor service delivery and performance. The financial year culminates in the closure of the accounting books and the production of year-end reports. Financial reports and statements provide information to the executive, the legislative and the public (Fakharzadeh, 2016; Deng and Peng, 2011).

Box 5.2. Features of an accounting system

An accounting system should have the following features:

- Effective procedures for bookkeeping, systematic recording of transactions, adequate security, and systematic comparison with banking statements. Computerising the accounts may help to improve accounting procedures, but the related security issues should be reviewed. Some countries have implemented or are implementing “light” computerised systems in order to facilitate the production of timely monitoring reports. Such systems can improve information dissemination, but often, data are not properly secured (backup procedures, control of access, etc.). In such situations, manual systems should not be abandoned completely.
- All expenditure and revenue transactions should be recorded in the accounts, according to the same methodology. This information should cover funds with earmarked revenues and foreign and domestic loans.
- A common set of expenditure classifications according to functional and economic categories.
- Clear and well-documented accounting procedures and clearly defined concepts (the notion of commitment, for example, can be interpreted in different ways).
- Financial reports and statements that are produced regularly.
- An adequate system for tracking the use of appropriations (“budgetary accounting”), at each stage of the expenditure cycle (commitment, verification, and payment).
- Transparent reporting of transactions made through “below-the-line”, suspense or liability accounts.
- Whatever the basis of accounting, notes to the financial statements should indicate the main accounting policies and provide sufficient detail to permit correct interpretation of the information, and a statement of accounting policies.

Source: Allen, R. and D. Tommasi (eds.) (2001), *Managing Public Expenditure: A Reference Book for Transition Countries*, <http://dx.doi.org/10.1787/9789264192607-en>.

Budget evaluation stage

283. Budget evaluation is the last stage of the budget cycle that assesses whether financial resources have been used appropriately and effectively. This can be an annual end-of-year activity or part of an ongoing process throughout the budget year. At the end of the fiscal year, the executive reports on its fiscal activities to the legislature and the public. A year-end report consolidates information on the actual expenditures of administrative units, revenue collections, and debt. Audit bodies, such as the supreme audit institution, the national audit office or the auditor general, are in charge of overseeing public expenditures

and verifying expenditures in the year-end report for accuracy (Fakharzadeh, 2016; Ramkumar, 2008). Public sector audits generally take one of the following three forms:

- **Financial audits:** Financial audits are also referred to as attestation audits because the auditor attests to, or verifies, the accuracy and fairness of the presentation of financial statements. In the course of a financial audit, an auditor scrutinises a sample of vouchers to establish the authenticity of the transactions in the books of accounts and consolidated financial statements and to determine whether the accounts fairly present the entity's financial affairs. The auditor's observations are recorded in an audit report, which may list all errors and irregularities that were uncovered. In many countries, the audit report also contains a formal opinion by the auditor on whether the financial statements present a true and fair picture of the government's financial position and whether the receipts and payments have been applied as per the budget law.
- **Compliance audits:** When conducting a compliance audit, the auditor determines whether the following conditions have been satisfied: 1. Has the expenditure been authorised by a competent authority? 2. Has the expenditure been authorised by the budget appropriation law and made in accordance with the terms of the law? 3. Does the expenditure conform to the procedures (relevant rules, regulations, and orders) promulgated under the country's various public finance and other laws? (Ramkumar, 2008).
- **Performance audits:** More recently, countries' supreme audit institutions have begun measuring budget impact through value-for-money audits (Fakharzadeh, 2016; OECD, 2015b; Ramkumar, 2008). Since the auditor seeks to report on a particular program's management and technical operations, the performance audit team must be familiar with the program's technical and managerial aspects. Therefore, performance audits are often resource intensive and require large expenditures. In undertaking a performance audit, an auditor typically reports on the following three factors: economy, i.e. can the program be run at less expense?; efficiency, i.e. can the relationship between inputs (both human and material) and outputs (goods or services) be improved?, and effectiveness, i.e. is the programme delivering its intended results, as assessed by measuring program performance indicators against actual results? (Ramkumar, 2008).

284. The audit body usually submits its audit reports to the legislature, typically to a committee mandated to review audit findings. The committee reviews the information and it may hold public hearings during which executive agency officials must testify regarding any significant audit findings. The committee then prepares a report laying out specific recommendations regarding the corrective action the agencies should. In most countries, the legislature depends on the national audit institution for reports on the government's financial performance and adherence to the budget law (Hawkesworth and Klepsvik, 2013; Deng and Peng, 2011; Robinson, 2011; Ramkumar, 2008).

285. An overview of auditing practices in countries participating in the review on school resources can be found in Box 5.3.

Box 5.3. Internal and external auditing practices at the central level

In Austria, the Federal Court of Audit can carry out audits on all aspects and levels of the school administration, including the federal and provincial sub-systems and authorities, and typically publishes a number of reports on audits in the area of school administration every year. At the highest political level, the federal minister is subject to parliamentary questions and has to provide detailed answers on all matters of public administration, school system management and resource use under his or her responsibility (Bruneforth et al., 2016).

Box 5.3. Internal and external auditing practices at the central level (cont.)

In Belgium, the Court of Audit provides budgetary advice and exercises financial control, which includes a control of the legality, compliance and good use of public funds. Its competencies extend to the communities. The Court of Audit can perform audits on the public funding mechanisms applied by public authorities, including for education. In the area of education in the Flemish Community, the Court of Audit examined a number of issues over the last decade. This includes Operational budgets in elementary education (2006), Financing and subsidies to pupil guidance centres (2006), Putting at disposal of staff due to personal reasons prior to their retirement in education (2007), Equal opportunities in regular elementary and secondary education (2008), Staffing in regular full-time secondary education (2010), Pedagogical and administrative support to elementary and secondary schools (2010), Cost-free education and cost-control in elementary education (2011), and Supervision of quality of education by the Inspectorate (2011) (Ministère de la Fédération Wallonie-Bruxelles, 2016 ; Flemish Ministry of Education and Training, 2015).

In the Czech Republic, the education budget is evaluated together with the overall budget at the end of the fiscal year. Both the Supreme Audit Office and the Czech School Inspectorate can evaluate the effective use of public funds. The Supreme Audit Office oversees compliance, but can also evaluate if an institution works effectively (MŠMT, 2016).

In Estonia, the National Audit Office plays a substantial role in controlling the finances of state agencies, including those in the education sector, and for conducting risk-based assessments of the public sector. The office has a small team of three auditors dedicated to auditing the education sector. Between 2010 and 2015, this team conducted audits of tertiary education, vocational schools and special needs school and activities by the central government to promote research and development (Santiago et al., 2016a).

In Iceland, the National Audit Office is responsible for monitoring and promoting improvements in the financial management of the state and in the use of public funds. The office furthermore audits individual institutions to ensure compliance with the Budget Act and is responsible for all annual accounting audits. The Office has the authority to audit where and what it wishes but a parliamentary committee can also request an audit at its own initiative or the request of parliamentarians, as long as the subject is within the legal framework of the Office. As such the Office has done an audit on the financial situation of the upper secondary schools and the model used to calculate their funding, the use of specific funds, the approach of the Ministry of Education, Science and Culture towards projects and contracted operations of third party institutions such as on continued education (Iceland Ministry of Education, Science and Culture, 2014).

In Kazakhstan, strategic and operative plans set short-, mid- and long-term directions and goals, and a system of norms indicates how these should be achieved. Multiple mechanisms are in place at all levels to monitor progress towards the national objectives and ensure compliance with the system of norms. Within the Ministry of Education and Science, the Department of Strategic Planning and Information Technologies is responsible for monitoring educational policies and for preparing monitoring reports for the SPED 2011-2020, the Action Plan for 2011-2015 as well as the annual operational plan. Monitoring reports integrate input from the oblasts, which include consolidated reports from rayons and schools, and must contain an analysis of spending, an analysis of the overall effectiveness of implementation and its influence on the social and economic situation, and the results of audit activities performed by other government agencies, including financial audits. The Ministry of Education and Science reports to the Executive Office of the President and is monitored by the Ministry of the National Economy on its performance, and the Ministry of Finance on the execution of the budget. The Accounts Committee is the supreme audit institution, which is the body with the highest authority in the control of the execution of the national budget. The Accounts Committee is directly subordinated and accountable to the President. The Agency for Civil Service Affairs and Fight against Corruption, is responsible for investigating and tackling corruption. The Ministry of Finance is also responsible for the investigation of economic and financial offenses (OECD and The World Bank, 2015).

In Lithuania, the National Audit Office is responsible for supervising the legitimate management and use of state property and the execution of the state budget. It examines and evaluates the legitimacy of the use of funds allocated to education. The National Audit Office also provides occasional independent scrutiny of the activities of the Ministry of Education through its performance audits. The office, for example, audited non-formal education during the period 2011-13. The resulting report drew attention to wide-spread inadequacies in material resources and the education environment in non-formal education. It found that provision varied enormously throughout Lithuania with limited access to activities for children and youth in rural areas and that parts of the funds allocated for non-formal education had been used for other activities. After a reform of the education finance system in Lithuania, the audit office also prepared several reports evaluating the reform. These reports played an important role in initiating and supporting structural adjustments to the new education funding mechanism (Shewbridge et al., 2016b; NASE, 2015).

Box 5.3. Internal and external auditing practices at the central level (cont.)

In the Slovak Republic, the Ministry of Education carries out financial audits and controls the use of the state budget and of funds from the European Union through its Department of Control. The ministry coordinates its audits with the Ministry of Finance and the Supreme Audit Office. The department presents the annual plan of its activities to the minister of education, and the Summary Financial Management Report and individual auditing reports to the Ministry of Finance. There are also governmental audits which assess the setup and efficiency of management and control systems, the fulfilment of the requirements for receiving government funds and the control of other aspects of correct, effective and appropriate use of public funds. The main purpose and goals of governmental audits are defined in the yearly plan of governmental audits. Governmental audits can be performed by the Ministry of Finance, the Ministry of Education or the Financial Control Office with the permission of the Ministry of Finance. The Supreme Audit Office acts as an independent state control body. The office controls the efficient use of funds and of state and regions' assets and funds from the European Union. The Office is responsible for the control of the Slovak Government, ministries and other legal units established by municipalities, regions etc. The Supreme Audit Office performs its controls based on the yearly plan of controls, which is based on the strategic goals defined for a three-year period (Education Policy Institute, 2015).

In Uruguay, mechanisms to monitor the use of public resources in education concentrate on the execution of the central budget by CODICEN and the education councils. Both ANEP's internal audit and the external control by the Court of Auditors have standardised procedures to periodically assess ANEP's compliance with existing laws and regulations (Santiago et al., 2016c; INEEd, 2015).

Capacity of and resources for audit and monitoring bodies

286. [to be completed]

Programme evaluation

287. Programme evaluations assess the activities undertaken by ministries and agencies against a set of objectives or criteria. Programme evaluation may be carried out “ex-ante”, i.e. before implementation, during implementation, or “ex-post”, i.e. after implementation. Ex-ante evaluation examines alternative policies and programmes or the theory of change and the programme design to meet desired objectives (Owen, 2001; Wolpin, 2007; Sims et al., 2002). Ex-ante evaluations can be required by funding bodies as a condition of the grant making process. In that case, ex-ante evaluations are designed to provide evidence on impact and effectiveness to inform the funding decision (European Commission 2014; UNESCO 2007). Evaluation during implementation generally monitors the implementation process. It assesses the initial signs of impact and the experiences of stakeholders affected by the intervention to facilitate possible changes to the programme. Ex-post evaluation examines the outcomes and impact of a programme with a backward view (Fakharzadeh, 2016).

288. Programme evaluations can be implemented internally or by a third party, such as the ministry of finance, the supreme audit institution, or external consultants and use a variety of quantitative and qualitative methodologies, including experimental and simulation approaches, such as game theory, behavioural insights, surveys, and mixed models. Programme evaluation can also use cost-benefit analysis to assess the returns of a programme and evaluate whether a programme should be continued or not (Fakharzadeh, 2016). Cost-benefit analysis is, however, less frequently used in education than in areas such as health and employment, and is less common in Europe than in the United States. In the cost-benefit analysis of an educational programme, the different costs that must be taken into account include public expenditure on teacher and other staff salaries, school buildings, teaching equipment, tuition fees charged to parents, and other schooling expenses by parents, for instance books and pens. The benefits of the educational programme are then calculated in monetary terms. This may, nevertheless, be a complicated task (Münich and Psacharopoulos, 2014). As technological and analytical capacity to process and summarise large amounts of data and information have expanded, there has been rapid development in

more advanced policy evaluation models (European Commission, 2010, Vegas and Coffin 2011), including methodologies for causal evaluation (Schlotter et al., 2010).

289. The OECD's Education Policy Outlook reviewed programme evaluation practices in education in OECD countries. The following themes emerged:

- There is a variety of different types of evaluators, including specialist education evaluation agencies, university based researchers, private institutes and international organisations.
- Evaluation metrics vary and can take the form of quantitative evaluation (e.g. data and indicators), qualitative evaluation (e.g. surveys and interviews), or a combination of both.
- Evaluation is resource intensive in terms of investment and often requires specialised tools and skills sets, or the involvement of a third party evaluation institution. Many of the evaluations analysed involved large scale surveys and data cleaning as part of the process.
- The timing of the evaluations varies greatly as does the period of time between implementation and evaluation. Much of the formal evaluation of specific programmes is backward looking and takes place a significant time after implementation, in some cases as the evaluation process was awaiting data on outcomes from the target of the policy implementation.
- Many evaluations focused on implementation perspectives and progress in implementation rather than measuring direct impact against objectives, while others consisted of measuring progress towards numerical objectives only.
- While many evaluations are comprehensive in terms of methodology employed, the vast majority of evaluations do not attempt to demonstrate causal impacts. A common approach taken by evaluators was outlining changes to key indicators over the course of implementation and theorising that the changes are due to the programme (OECD, 2015a).

An overview of programme evaluation practices in countries participating in the review on school resources is presented in Box 5.4.

Lack of systematic and robust programme evaluations and/or limited use of evaluation results

290. Various countries have introduced education programmes for different purposes over time, including targeted programmes for equity, but the impact of education programmes is not always systematically and rigorously evaluated, thus resulting in possible inefficiencies. As the OECD Review of Evaluation and Assessment Frameworks concluded, “there is only an emerging culture of systematically evaluating the impact and outcomes of different educational interventions” (OECD, 2013). A lack of rigorous programme evaluations often means that decisions about programmes and initiatives are taken with minimal attention to the efficiency or effectiveness of their likely education outcomes. It makes it difficult to phase out existing programmes that are not effective and to introduce new ones instead.

Box 5.4. Programme evaluation practices

In the Flemish Community of Belgium, the Department of Education and Training within the Ministry of Education and Training is responsible for policy preparation, evaluation, co-ordination and communication. The ministry has commissioned evaluation reports on certain aspects of the legislation on school education. Recent examples include evaluations on topics with particular relevance to resources use such as the use of staff resources, policies on support for educational needs in regular elementary and secondary education, benefits and costs of education, and inclusive education (Nusche et al., 2015; Flemish Ministry of Education and Training, 2015).

In Chile, the Ministry of Finance and its budget department (Dirección de Presupuestos, DIPRES), through its Programme for the Evaluation of Programmes and Institutions, evaluates the design, management and results of public programmes. Evaluations by DIPRES fall under four categories: Evaluations of Government Programmes, Evaluations of Programme Impact, New Programme Evaluations and Comprehensive Evaluations of Expenditures. Evaluation provide information that supports programme management and the resource allocation process. They include recommendations which generate management commitments to improve programme performance. The implementation of these commitments is monitored systematically through two annual reports. In 2013 (the latest year for which information is available) the only evaluation published within the education area was for the Intercultural and Bilingual Education Programme. The previous year, three evaluations were published (two for higher education and one for initial education). The Ministry of Education also conducts evaluations of educational programmes through its research and analysis unit (Centro de Estudios). Between 2000 and 2013 a total of 112 evaluations were conducted, 41 of which corresponded to those initiated by DIPRES and the rest to the Ministry. These evaluations covered 110 programmes. Half of them evaluated programme implementation and process, 32% programme design and 18% programme impact. The results of the educational programme evaluations by the ministry are delivered to the respective unit authorities that use the information as they see fit. Moreover, government programmes are subject to an ex ante evaluation to ensure social returns of the investments under the National Investment System (SNI) within the Ministry of Social Development (Santiago et al., forthcoming; MINEDUC, AQE and ES, 2016).

Denmark makes use of special thematic evaluations or studies to generate information at the system level. The Danish Evaluation Institute (EVA) was established in 1999 to help bring about a shift from a focus on inputs to outputs. EVA conducts evaluations in all levels of education in Denmark. Since 2006, its evaluations in the Folkeskole are commissioned by the School Council (Skolerådet). In addition, EVA conducts independent evaluations. These monitoring mechanisms were built into the reform from the outset to allow further analyses and adequate responses in case the set targets are not met. The Danish Institute for Local and Regional Government Research (KORA), an independent institute under the Ministry for Social Affairs and the Interior, conducts analysis and research on and for municipalities and regions. KORA's aim is to contribute knowledge that can promote quality improvement, better use of resources and better management in the public sector. A reform of the Folkeskole was introduced in 2014 together with a research and evaluation programme to provide a basis for actors at all levels of the management chain to learn from experiences and results (how the reform is implemented and what works best); document the implementation and effect of the reform overall and of its most important initiatives; and strengthen the empirical research on school leadership, teaching and learning (Nusche et al., 2016b; Shewbridge et al., 2011).

In Iceland, the department of assessment and analysis within the Ministry of Education, Science and Culture performs occasional programme and policy evaluations. Some of the latest evaluations include an evaluation of the arrangement and execution of the school support services of the local communities, the reasons for drop-out from the upper secondary schools and the implementation of regulation no. 140/2011 on the roles and responsibilities of stakeholders in the compulsory schools. At the time of drafting the country background report, a working group composed of members of the Ministry of Education, Science and Culture, the Ministry of Welfare, the Association of Teachers in Primary and Lower Secondary Schools and the Association of Headteachers was evaluating the implementation of inclusive schools (Iceland Ministry of Education, Science and Culture, 2014).

In Lithuania, education programmes are regularly evaluated according to the formulation of the expected outcomes of the programme and the degree of achievement of the expected outcomes. The Ministry of Education and Science commissions research and produces its own reviews and analysis. Every year a few reviews are published in the series Education problem analysis which offers insights and conclusions about the implementation of education policies and programmes (NASE, 2015).

291. The implementation of a systematic and robust approach to evaluating education programme can be hampered by a lack of financial resources or priority of resource allocation being given to implementation rather than evaluation (Guskey, 2000). A lack of political will can be a further obstacle to introducing evaluation systematically. The results of a programme evaluation might become available during a time considered as inconvenient in the political cycle and carry political risks, e.g. if it is closely tied to the programme of a political party (Rutter, 2012). And as for monitoring and evaluation in general, a lack of analytical capacity or sufficient information on student learning outcomes can be a further obstacle to the implementation of robust programme evaluations (OECD, 2013b). In the Czech Republic, for example, one of the main challenges for the implementation of EU funding for 2007-2013 included a lack of evaluation capacity which resulted in poorly defined objectives and the inefficient monitoring of individual projects (Shewbridge et al., 2016a).

292. In some countries, it may be a case of strengthening the general culture of evaluating education programmes. In Austria, for example, there is a widespread use of school pilots. According to research from the Court of Audit, 50% of Austrian schools have introduced or participated in a school pilot either by introducing new pedagogical concepts and teaching subjects or by trying out organisational innovations. However, even though there has been a shift towards greater outcome orientation and programmes and policies are increasingly accompanied by scientific evaluations (the New Secondary School reform, for example, was introduced with a legal requirement for evaluation), there is very little systematic evaluation of the success of the different pilot projects. In fact, the formal legal requirement to evaluate school pilot projects and to report to parliament was removed from the respective legislation without replacement in 2012. This indicates a slowdown in the momentum of formally established programme and policy evaluation (Bruneforth et al., 2016; Nusche et al., 2016a). In Iceland, assessing the effectiveness of different policies and targeted programmes is not carried out systematically as part of a predesigned process (Iceland Ministry of Education, Science and Culture, 2014). In Kazakhstan, there is a general lack of high quality cost-benefit analyses of different educational policies and programmes which also stems from the lack of an independent and external evaluation agency (OECD and The World Bank, 2015). Uruguay is another case in point. Some programme evaluations are carried out by the CODICEN's Division for Research, Evaluation and Statistics, and one programme for the introduction of technology in schools and classrooms (Plan CEIBAL), in particular, benefits from rigorous evaluation through the department dedicated to this programme. But there is no broader tradition of programme and policy evaluation and this despite the implementation of a number of targeted interventions that are designed to tackle the country's challenges of high year repetition and dropout rates and student truancy and absenteeism. While there has been some monitoring or reporting on the implementation or impact of some of the programmes, their evaluation has generally been limited. Programme evaluation has not been systematic, part of the programme design, and paid no attention to costs and benefits (Santiago et al., 2016c).

293. In other countries that have more systematic processes for programme evaluation in place, it may be a case of improving existing processes and of strengthening the focus on evaluating the impact of programmes and initiatives. In Chile, for example, even though there are many studies (particularly those commissioned by DIPRES) that evaluate education programmes, few of them focus on measuring impacts. Even those that attempt to do so are retrospective studies following quasi-experimental methodologies with serious data limitations. Overall, this limits the ability of the ministry to use rigorous evidence to prioritise among programmes and influence their design and operation (Santiago et al., forthcoming).

294. There is also a need to monitor the existence and effectiveness of multiple programmes over time to avoid duplications and inefficiencies. This includes the existence of different programmes that may be implemented by different ministries and/or authorities, such as a ministry of social affairs, particularly with regards to programmes that seek to address social disadvantage. In Chile, there is a strong sense among budget officials both in the ministry and in DIPRES that there exist instances of multiple programmes

serving similar goals and that efficiencies could be gained by either consolidating them or through better coordination. There is, for instance, more than one programme focused on student retention, one of which has been introduced by the National Board of School Assistance and Scholarships (JUNAEB) and one of which has been implemented by the education ministry (Santiago et al., forthcoming). Also in Austria, many pilot projects have become institutionalised for a longer time period and the Court of Audit found that the education ministry does not have a complete oversight over all pilot projects. As a result, the ministry also does not have a comprehensive knowledge of the resources that are spent on these pilot projects (Nusche et al., 2016a).

295. There may, furthermore, be concerns about the effective use of evaluation results. The findings of evaluations can be used for several purposes in the budget cycle and at the budget preparation stage. They can inform the different actors that are involved in the budgeting process and help define the budget for the following year. In practice, however, recommendations may not always be followed up or be taken into account in the budget formulation process (Fakharzadeh, 2016).

The role of research and civil society

296. In addition to programme evaluations carried out by public institutions and authorities, research organisations and civil society organisations can play an important role for producing evidence about the impact of policies and programmes. Research can help anticipate and respond to future needs and offer the best advice available from scientific knowledge and scholarly work on the efficient and effective use of resources. Public authorities can play a key role in facilitating this kind of research, be it through funding or the management and dissemination of the data required to undertake such analyses. In Chile, for example, the Fund for Research and Development in Education (*Fondo de Investigación y Desarrollo en Educación*, FONIDE) established by the Ministry of Education in 2006 offers competitive grants to universities and research centres to carry out research in the field of education. Research centres at both the Catholic University and the University of Chile (*Centro de Estudios de Políticas y Prácticas en Educación* and *Centro de Estudios Avanzados en Educación*) lead networks of researchers in the field of education with financial support from the National Commission for Scientific and Technological Research (*Comisión Nacional de Investigación Científica y Tecnológica*, Conicyt). Non-governmental organisations such as *Educación 2020*, *Elige Educar*, *Enseña Chile*, *El Plan Maestro* are also very active in forming positions on the basis of analytical studies they conduct (Santiago et al., forthcoming).

297. In other countries, however, the capacity of the education research community may pose challenges for analysing the effectiveness and efficiency of resource use and research structures and funding may be limited to facilitate such research. In Denmark, for example, researchers interviewed for the OECD review reported that relatively little research evidence was available regarding the relationship between inputs and outputs, and the causal links between interventions and outcomes in the school system (Nusche et al., 2016b).

Focussing monitoring and evaluation of financial resource use on outcomes and performance and using resulting evidence for planning purposes

298. A performance-oriented approach to monitoring and evaluation has the potential to improve decision-making and is critical to making the use of the available financial resources more effective. It can help communicate a focus on efficiency and effectiveness across a system and provide incentives for the efficient and effective use of resources. A number of countries have been introducing performance management, often as part of wider public sector reforms and the introduction of performance-based approaches to budgeting, for example. Among countries participating in the review, Austria introduced performance-based budgeting to increase transparency of budgets and to establish links between resource inputs and outcomes (Bruneforth et al., 2016; Nusche et al., 2016a). And the Slovak Republic initiated a

reform for a more efficient, reliable and open public administration in 2012 with the objective of making public administration simple, accessible, sustainable, transparent and cost-effective. The reform also seeks to establish a new quality management system to monitor and assess performance efficiency and the quality of state administration (Santiago et al., 2016b).

299. Nevertheless, the analysis of the impact of financial resources on education achievement or objectives is still not very common. Monitoring and auditing processes mostly concentrate on compliance with regulations and pay limited attention to linking inputs with outcomes. For instance, the country review of Lithuania identified a focus on the amount of available resources and a limited focus on the effectiveness of resource use and the extent to which resources deliver the best possible outcomes for all students among the government and education stakeholders as a key challenge (Shewbridge et al., 2016b). In Kazakhstan, the existence of detailed norms provides clear expectations for what should be achieved and how resources should be managed, and thus facilitates their monitoring, but this approach also results in a compliance-driven process that does not entail the analysis of educational performance. The focus on budget guidelines and compliance rules, furthermore, leads to a lack of monitoring of activities that are not regulated by norms (OECD and The World Bank, 2015). The country review of Uruguay similarly criticised the failure to evaluate the execution of public spending in education against educational results which leads to little accountability at the system level (Santiago et al., 2016c). Also in the Flemish Community of Belgium, audit reports for the Ministry of Finance emphasise compliance rather than educational use and value (Nusche et al., 2015).

300. Defining performance and evaluating the impact or outcomes of expenditure can be challenging itself. It requires the setting of goals and objectives, the identification of appropriate indicators, the collection of relevant data for these indicators, and sufficient analytical capacity to interpret the data and analyse efficiency and effectiveness (e.g. by identifying the value added of a particular education policy or programme). To put inputs in relation to outcomes requires sufficient knowledge of the performance of a system. In some contexts, however, the extent of system-level monitoring and the level analytical capacity are limited and comparable measures of student outcomes are not available or only available for particular stages of education and/or in discrete skills. Systems may overly depend on the results of international measures of education system outcomes in the absence of national measures (OECD, 2013b). In the Czech Republic, the OECD review noted important information gaps that would support the monitoring of resource use. There is limited information on educational outcomes, including important gaps in information on equity, such as comparative information across regions and basic indicators of socio-economic factors (Shewbridge et al., 2016a). The effective monitoring and evaluation of resource use in relation to performance is, furthermore, often complicated by challenges for managing different knowledge and data (more on this below).

301. Evidence and information that results from monitoring and evaluation then need to be used effectively for planning budgets and for decisions on how to best allocate financial resources, e.g. through an overall approach to budgeting based on performance and outcomes. However, it can be difficult to integrate performance information in the budget process framework (e.g. to change the budget classification to adapt it to outcome and output measures) (Fakharzadeh, 2016). And it can be difficult to make best use of the data that are available. Data need to be available in adequate quantity and properly interpreted. At the same time, it is important for all actors of the system to be aware that the availability of large amounts of data must not be confounded with having a full understanding of any given situation. (Blanchenay and Burns, 2016; Burns and Cerna, 2016).

Monitoring and evaluating how the use of financial resources translates into outcomes for different student groups

302. While countries typically invest considerable resources in efforts to improve the learning outcomes of disadvantaged students, this commitment is not always matched with the same level of attention to monitoring and evaluating the impact of these investments on the learning outcomes of these students. Information on the learning needs of disadvantaged children and the pedagogical needs and challenges of schools attending these children can be very useful for the design of interventions to address those needs. In various countries participating in the school resources review, however, the monitoring and evaluation of equity for different students groups could be strengthened. For instance, there may be no national assessments that provide regular information about the learning opportunities and outcomes of all students or results from national assessments may not be sufficiently disaggregated to facilitate the monitoring of equity.

303. In the Flemish Community of Belgium, it is thanks to international assessments and to academic studies that researchers have been able to test the equity credentials of schooling in the absence of national standardised tests or examinations that measure the learning outcomes of all Flemish students at key stages of schooling. There is no strategy yet for assessing the progress of different groups of students over the course of their schooling and into the workforce, technical training or tertiary education (Nusche et al., 2015). In Chile, there is no system in place for monitoring the learning outcomes and achievements of socio-economically disadvantaged students. As a result, there is no clear diagnosis or knowledge of the most pressing needs of schools that serve students from vulnerable communities at the different levels of the system (Santiago et al., forthcoming). Also in Denmark there is limited attention to monitoring outcomes for different student groups. Student assessment results are not systematically disaggregated for student groups from different backgrounds and there appears to be little differential analysis on how the 2014 Folkeskole reform impacts on different student groups (Nusche et al., 2016b). In Lithuania, there is a commitment to providing additional support to students growing up in families at risk of poverty. The focus, however, is on providing inputs rather than on monitoring the outcomes of disadvantaged groups of students to determine the extent to which the education system serves their needs (Shewbridge et al., 2016b). Uruguay is another country participating in the review in which there is limited knowledge about educational disadvantage and little differential analysis of student performance across groups of students (Santiago et al., 2016c).

304. In some countries there is, furthermore, limited attention to equity in learning outcomes for specific groups of students. In Chile, for example, the monitoring system pays limited attention to the learning outcomes of students from indigenous communities (Santiago et al., forthcoming). In Lithuania, there did not seem to be a sufficiently strong focus at system level on ensuring equity in terms of gender even though evidence from international student assessments shows a clear performance disadvantage for Lithuanian boys in core skills (Shewbridge et al., 2016b).

Availability of information and reporting at a central level

305. [to be completed]

Responsibilities and processes for monitoring and evaluation and reporting requirements for intermediate authorities

306. Depending on the governance of the education system and the level of decentralisation, different intermediate levels of governance may be responsible for different aspects of school funding (see Chapter 2). This includes regional, provincial and local education authorities as well as other school organising bodies, such as private entities, foundations, and religious bodies. Depending on the national context and

aspects such as sources of funding, funding mechanism, and decision-making power for the use of resources, different evaluation, monitoring and reporting processes may be in place for these intermediate authorities. For example, in Denmark, the use of financial resources at a local level is generally not monitored or evaluated by central authorities, but there has been a deliberate emphasis on monitoring the use of specific grants provided to the municipalities. For example, the utilisation of earmarked funding for teacher competency development is managed at the municipal level, but municipalities are required to report in an accounting system their levels of spending on formal teacher education. In 2020, the Ministry for Children, Education and Gender Equality plans to evaluate how municipalities have spent the funding destined for teacher competency development and to reclaim any parts of the funding that were not used for this purpose (Nusche et al., 2016b). Considering arguments for local autonomy for managing some resources to ensure resource use decisions meet local needs as analysed in Chapter 2, there is also a need to build up strong monitoring and evaluation processes at an intermediate level to facilitate accountability for resource use.

307. Monitoring, evaluation and reporting requirements may differ between public and private intermediate authorities and intermediate authorities that are organised in different ways. In the Flemish Community of Belgium, for example, financial management and oversight of school boards differs depending on the educational network a school board belongs to (Flemish Ministry of Education and Training, 2015). Similarly, in the French Community of Belgium, the accounts of school providers are controlled depending on the educational network a school provider belongs to (Ministère de la Fédération Wallonie-Bruxelles, 2016). And in Austria, monitoring, evaluation and reporting differ for the federal and provincial sub-systems (Bruneforth et al., 2016; Nusche et al., 2016a).

308. At lower levels of a system, the public may demand greater accountability and transparency in terms of budgeting and accounting due to the greater proximity of the authority to citizens (Fakharzadeh, 2016). In countries with a large degree of decentralisation, local political and democratic processes often play a strong role for accountability and oversight of the use of financial resources at a local level. The local use of resources provides a clear link between decision-makers and users of services. However, local oversight requires strong capacity to use available performance information and evaluate the use of financial resources and entails a risk of political capture by strong interest groups (Elacqua et al., 2008, also see Chapter 2).

Requirements and guidelines for accounting and financial reporting

309. Countries may have certain requirements for accounting and financial reporting for intermediate authorities in place. They may also provide intermediate authorities with guidelines and manuals to support them in their accounting and reporting.

310. In Chile, all school providers must provide annual statements about the use of their financial resources. These statements are audited by the Education Superintendence as analysed below. Not providing the required information is considered a serious violation leading to a hefty fine of at least CLP 21 million (Santiago et al., forthcoming).

311. In Iceland, municipalities are required by law (no. 138/2011) to produce annual financial plans and reports for municipal services and institutions. It is up to municipalities to work within this legal requirement (Iceland Ministry of Education, Science and Culture, 2014).

312. In Kazakhstan, monitoring and internal reporting on resource use takes place at multiple levels of the governance structure of the education system. It is operated in a bottom-up cascade in which every unit and level regularly reports to the hierarchically upper level about itself and the levels below. Annual school reports are sent from the school to the *rayon* education department, then to the *oblast* education department

for consolidation, and finally to the Ministry of Education and Science. The Ministry of the National Economy establishes reporting requirements on operations of regional and local authorities (OECD and The World Bank, 2015).

313. In the United States, state-level education authorities often provide budgeting and accounting guidance to their school districts. The states' Departments of Education usually publish a manual for school districts in the state with guidance on budgeting and accounting. The latter must be consistent with the GASB and other standards set at the national level.

314. Similarly, in Canada, provinces have their own education acts with specific regulations for the budgeting and accounting of the education sector and typically guide intermediate authorities on their financial management and accounting and reporting.

315. In New Zealand, the Education Act 1989 sets the requirements for school boards in relation to annual reports. Accordingly, annual reports should include annual financial statements and performance information that provides an analysis of any variance between the school's performance and the relevant aims, objectives, directions, priorities, or targets set out in the school charter. The Education Act provides general guidelines and standards applicable to the annual financial statements. It specifies that financial statements should be consistent with the generally accepted accounting practice, include a statement of contingent liabilities and entail a statement of accounting policies. In addition, the ministry of education publishes forms, guidelines, policies and circulars that cover topics of grants, finance, investment and resourcing, among others (Fakharzadeh, 2016).

Internal audits and evaluations

316. Intermediate authorities may monitor and evaluate the use of their financial resources in education internally. As Fakharzadeh (2016) points out, monitoring and evaluation at lower levels of a system is often more operational in nature than at higher levels. The OECD School Resources review provides information about some of the requirements that are in place for intermediate authorities to implement internal auditing and evaluation processes. In Estonia, like all government agencies, municipal governments are legally required to have internal audit commissions in place. These commissions are required to make judgments if an institution has complied with the law and if it is spending financial resources efficiently and effectively (Santiago et al., 2016a). In Lithuania, municipal control and audit services supervise the use and management of municipal assets and government property and conduct external financial and performance audits in municipal administrative entities. Municipalities may also set up education councils to promote participation in the development and oversight of local education policies (Shewbridge et al., 2016b; NASE, 2015).

External audits and evaluations

317. Various countries participating in the OECD School Resources review have external audits and evaluations of intermediate authorities in place. These external audits and evaluations may build on internal financial management processes and assess and validate financial statements and reports produced by intermediate authorities.

318. Considering that intermediate authorities and schools may both fulfil certain tasks for the management of financial resources, the agencies responsible for monitoring and evaluating financial resource use may be responsible for monitoring and evaluating both intermediate authorities and schools. Depending on how responsibilities are distributed in practice between intermediate authorities and schools, the focus of monitoring, evaluation and reporting activities may differ for both levels. In Chile, for example, school providers receive public funding and account for the use of these resources. They are thus

typically more involved in the financial management of schools and the control of these resources than schools themselves. This overall distribution of tasks and responsibilities, then, explains the focus of different evaluation and monitoring processes in Chile (Santiago et al., forthcoming; MINEDUC, AQE and ES, 2016).

319. Central authorities, such as the ministry of finance or national audit bodies which are responsible for auditing and evaluating public intermediate authorities in general may also be responsible for auditing education provision at this level. In Chile, for example, there are a number of institutions that monitor and evaluate the use of public financial resources more broadly, but also by school providers. The General Comptroller of the Republic which controls municipalities also oversees municipalities in their function as school providers. The Internal Revenue Service monitors the tax management of school providers. And the State Defense Council is in charge of judicial processes in case a school providers present faults in the use of its public resources (MINEDUC, AQE and ES, 2016). In Estonia, the national audit office plays a substantial role in controlling public finance and may also audit expenditures and financial management of local authorities. The ministry of finance has the right to audit the accounts of local governments. One of the most recent audits of the national audit office concerned the use of the education grant by local governments and schools and an audit of local governments planned at the time of drafting the country review report for Estonia also focussed on school finance (Santiago et al., 2016a). In Kazakhstan, the use of funding by regional (*oblasts*) and local authorities (*rayons*) is also monitored by the Ministry of Finance. The Treasury Committee of the Ministry of Finance monitors the execution of the public budget also at the regional and local levels and the financial control inspectorates of the Financial Control Committee audits the education departments of oblasts and rayons (OECD and The World Bank, 2015). In Lithuania, the national audit office which is responsible for supervising the legitimate management and use of public property and the execution of the public budget conducts financial audits of municipalities (and schools) (Shewbridge et al., 2016b; NAES, 2015). In the Slovak Republic, the Ministry of the Interior is responsible for oversight over the education departments of regional state authorities (Santiago et al., 2016b).

320. In other countries, the ministry of education may also be responsible for supervising the use of financial resources at lower levels or a specialised institution may have been set up to carry out external audits and evaluations of intermediate authorities and school providers. In Chile, for example, the Ministry of Education has supervisory structures for public schools run by municipalities in the form of regional education secretariats (SEREMIs) and provincial education departments (DEPROVs). DEPROVs are mainly responsible for the technical and pedagogical support of schools, but also inspect the administrative and financial situation of schools under their responsibility, and supervise the education activities of their municipalities. This includes the validation of municipal development plans (PADEMs). In addition, the Education Superintendence (*Superintendencia de Educación*) is responsible for evaluating the use of public financial resources by all school providers (and individual schools) that receive public funds and for communicating the results of its audits to the educational community. It audits the annual financial statements of school providers for consistency with administrative data. The Education Superintendence also evaluates the compliance of school providers (and individual schools) with legislation, standards and regulations, investigates any claims or complaints against school providers (and schools) and applies any pertinent penalties. It was established in 2012 as part of the national System for Quality Assurance which was created through the enactment of the General Education Law (*Ley General de Educación*, LGE, 2009) and is represented at a central as well as a regional level. The audit programme is based on school samples and uses a risk management model that considers both the probability of transgressions and their potential negative effects on the quality of education. In 2015, the Superintendence undertook about 20 000 audit visits to over 9 000 schools (Santiago et al., forthcoming; MINEDUC, AQE and ES, 2016).

321. Some countries have introduced requirements for intermediate authorities to commission external audits, but may then leave it up to intermediate authorities to work within this arrangement. This is, for example, the case in Estonia. Here, local governments are required to periodically commission external

audits of their managerial and financial systems (Santiago et al., 2016a). Similarly, in Iceland, municipalities are required to commission an external audit by an independent accounting professional as specified in the legislation for local governments (no. 138/2011). It is up to municipalities to work within this legal requirement (Iceland Ministry of Education, Science and Culture, 2014).

322. Other countries do not get much involved in monitoring and evaluating the use of financial resources by intermediate authorities. The evaluation of the performance of intermediate authorities in the area of education may, however, still form part of broader evaluations of performance in the provision of local services. In Denmark, for example, annual negotiations between the central government (the Ministry of Finance and the Ministry for Children, Education and Gender Equality) and Local Government Denmark (KL, LGDK), the association and interest group of Danish municipalities, entail the setting of goals in terms of municipal performance and development of municipal services for the coming fiscal year. Annual negotiations also provide space for discussing and evaluating progress towards these goals across the system. The Ministry for Children, Education and Gender Equality does not get involved in monitoring individual municipality budgets as long as national framework laws are respected. Individual municipalities are autonomous in their spending decisions and the central level will only follow up if there is evidence that laws are not respected. The ministry may, however, monitor and supervise municipal quality reports and follow up in case of any concerns. In this case, the ministry may recommend municipalities to work with a corps of central learning consultants (Nusche et al., 2016b).

Focussing on outcomes and performance rather than budgetary and regulatory compliance

323. Like monitoring and evaluation at a system level, monitoring and evaluation at intermediate levels may not always take into account how the use of financial resources translates into outcomes and performance. Legislation and regulations may, in fact, prevent higher level authorities from evaluating efficiency and effectiveness at intermediate levels of the system. Instead, monitoring and evaluation of intermediate authorities may rather focus on budgetary and regulatory compliance. In Estonia, for example, audits of local government expenditures funded by their general budgets carried out by the ministry of finance and the national audit office can only assess legal compliance. Broader questions of efficiency and effectiveness can only be assessed when audits concern expenditures from earmarked grants (Santiago et al., 2016a). In Chile, similarly, evaluations through the Education Superintendence assess the legality of expenses declared by school providers as part of their reporting. Legislation specifies that the Superintendence should not analyse or evaluate the effectiveness with which resources are used. However, the Education Superintendence is in the process of focussing its audits and evaluations towards a model that seeks to not only determine the use of financial resources in line with legal requirements, but to contribute to educational quality and to improve school resources management (MINEDUC, AQE and ES, 2016). Provincial and regional authorities also seem to be more focussed on ensuring compliance with central priorities and instructions rather than in supporting school providers in the management of their schools (Santiago et al., forthcoming).

Benchmarking and monitoring

324. Countries can also have regular monitoring and benchmarking processes for intermediate authorities, and local governments, in particular, in place. Benchmarking is the process of comparing performance against that of others in an effort to identify areas of improvement. In this sense, it is an efficiency tool used to improve value for money offered by public services, such as education (Fakharzadeh, 2016; Cowper and Samuels, 1997). Benchmarking and monitoring processes typically cover all services for which intermediate authorities are responsible and may include education as one aspect.

325. In Denmark, the Ministry of Social Affairs and the Interior is responsible for monitoring the overall performance of the municipalities. It manages *Nøgletal* (Key figures), a system that makes

available data on the social conditions, economic background, local finances, and outputs for municipalities and regions. Information in this system is kept at a relatively general level to avoid excessive bureaucratisation. It includes information on per student expenditure, the number of primary and lower secondary schools, the number of regular classes, average school and class size, expenditure on private schools and continuation schools (*Efterskole*), and the proportion of students in private schools relative to the number of students in the *Folkeskole*. The Ministry of Finance may also prepare ad hoc analyses to benchmark municipalities on certain areas of spending. In addition, the municipalities have been developing a common business management system for all Danish municipalities (*Fælleskommunal ledelsesinformationssystem*, FLIS [Joint Municipal Information System]). The development of this system was intended to enhance the transparency and accountability of municipal decision-making in the new governance context following the 2007 structural reform. The system has been operational since 2013 and collects both financial and administrative information from individual municipalities, thus providing the possibility to compare indicators across municipalities. For the *Folkeskole*, the system includes information on aspects such as: spending per student, school size, class size, teachers' age, teachers' salaries, inclusion, and student characteristics (such as age, gender and ethnic background). The data can be viewed for individual municipalities (Nusche et al., 2016b).

326. In Iceland, a monitoring board under the Ministry of the Interior monitors that municipalities manage their finances according to legislation and regulations. The Association of Local Authorities gathers data and statistics on pre-primary and compulsory schools, their operation and basic resource use on an annual basis. Municipalities and individual schools are encouraged to use that information to compare their status to that of others with the aim of improving both operations and efficiency (Iceland Ministry of Education, Science and Culture, 2014).

327. In England and Wales in the United Kingdom, the Audit Commission, a non-departmental public body tasked with auditing local authority expenditure, has been monitoring local performance according to a set of key performance indicators since implementation of the Local Government Act 1992. The Audit Commission produces annual comparative indicators of local authority performance which include, for instance, the percentage of three- and four-year-olds with a school place within the local authority, expenditure per primary school pupil, expenditure per secondary school pupil, and the percentage of draft special educational needs statements prepared within six month periods (Fakharzadeh, 2016).

Need for greater transparency of resource use at intermediate levels of the system

328. [to be completed]

Lack of monitoring and evaluation of infrastructure and maintenance investments at a local level

329. [to be completed]

Responsibilities and processes for monitoring and evaluation and reporting requirements at the school level

330. The use of financial resources may also be monitored and evaluated at the school level, both internally as part of schools' financial management processes, possibly linked to general reporting requirements or reporting requirements tied to certain funding mechanisms (e.g. targeted grants), and externally through specific monitoring and evaluation processes. The scope of monitoring, evaluation and reporting will depend on the level of school autonomy for managing financial resources in a country. External processes can include audits of individual schools conducted by national or local audit bodies, the evaluation of financial aspects as part of school evaluations carried out by education inspection services, and the collection of reports from public schools on their closing budget. Evaluations of the use of

financial resources may, furthermore, focus on the evaluation of individual school leaders as part of personnel management and appraisal systems. As for intermediate authorities, the focus and extent of monitoring, evaluation and reporting may depend on the distribution of tasks and responsibilities between schools and their intermediate authorities. Monitoring and evaluation processes and reporting requirements and the quality of control and oversight may differ between public and private schools.

Financial accounting and reporting in schools

331. School accounting systems are used to describe the nature, sources, and amounts of a school's revenues, the allocation of revenues within the school institution to various domains (or funds and accounts), and the actual expenditures in these domains. Accounting systems are also utilised by public schools to protect public funds from the possibility of loss due to carelessness, expenditure for the wrong purpose, theft or embezzlement, to provide the possibility to relate expenditures to the attainment of educational objectives, to provide the possibility to appraise the performance of a school in obtaining its objectives, to meet reporting requirements by authorities, and to inform the school community about the fiscal and educational activities of the school.

Guidelines and requirements for financial accounting and reporting

332. The OECD School Resources review provides information about some of the internal monitoring and evaluation processes and reporting requirements in place for schools.

333. In the Czech Republic, private schools must fulfil a number of requirements to receive public operating grants. They are required to provide information about the settlement of the grant provided by a set deadline, provide analysis of the way the grant provided was used, and provide an annual report on the operation of the school. If the school has a school council in place, it must provide information about the discussions of at the meeting of the school council (MSMT, 2016).

334. In the Flemish Community of Belgium, schools are required to follow the general regulation on the sound application of accountancy rules in relation to the legal structure of the school education provider (pertaining to public law, such as a municipality, or to private law, such as a foundation). There are also transparency and reporting requirements for the use of public funding. In particular, schools have to give proof that funding has been used according to the objective of the allocation and that there is no diversion of resources (Flemish Ministry of Education and Training, 2015).

335. In Chile, all schools receiving public financing from the Ministry of Education must present an Annual Accounts Report to justify the use of all the resources received. This includes both public and private resources. The Annual Account is regulated by Supreme Decree No. 469 which establishes the common mechanisms for accountability by the schools receiving public funding and defines the modalities, characteristics, conditions and terms. It must be presented to the Education Superintendence (MINEDUC, AQE and ES, 2016).

Support for financial management, accounting and reporting in schools

336. Schools can be supported in their budgeting and accounting through the availability of data through central information systems. In Iceland, all schools have access to IT systems for budgeting and accounting practices provided by the central government and the respective municipalities (Iceland Ministry of Education, Science and Culture, 2014). In Estonia, larger municipalities have developed remote electronic accounting systems for their schools. These systems relieve schools of the costs of keeping their own accounts while also giving them the ability to monitor their budgets on a day-to-day basis. They thus permit the responsible decentralisation of managerial powers to schools (Santiago et al., 2016). In Lithuania, schools are supported in their budgeting and accounting through the ministry's

education management information system. This information system informs on indicators such as the average school area per single pupil, or heating costs (Fakharzadeh, 2016). In Spain, all schools have ICT systems in place for their financial management. The Ministry of Education, Culture and Sport created an ICT programme for financial management in 2000 (Economic Management of Schools, GECE 2000) which has been the basis of the subsequent computerized financial management programmes of the regional education authorities that are currently in force. The programme has many features and utilities to support computerized financial management and allows the development of official budget models necessary for the accountability required for the academic year and the calendar year (Spanish Ministry of Education, Culture and Sport and Spanish National Institute of Educational Evaluation, 2016).

337. Schools in various countries taking part in the OECD review on school resources in which schools hold considerable responsibilities for the management of financial resources also often have specialised administrative staff, such as school accountants and budget officers. This is, for example, the case in the Czech Republic, Estonia and the Slovak Republic (Santiago et al., 2016a; Santiago et al., 2016b; Shewbridge et al., 2016a).

Monitoring of resource use through school boards

338. School boards can play a key role in monitoring the use of resources at the school level and for horizontal accountability of school-based resource management. The impact that schools boards can have for the oversight of the use of financial resources, however, depends on the definition of their roles and responsibilities and their capacity. Local accountability, furthermore requires access to sufficient and relevant information, e.g. on the financial resources that are available and how they are allocated and used for teaching and learning (Vegas and Coffin, 2013).

339. In Denmark, school boards play a role in evaluating school quality. It is part of the school boards' role to set principles and long-term goals for the school and to follow up on school budgets, policies and results. In most schools, the school leader prepares the school budget with input from the teaching staff and presents it to the school board and by law, it is the role of the school board to hold the school leader accountable and make the final decision on the school budget (Nusche et al., 2016b). In Estonia, boards of trustees also play a strong role for horizontal accountability and for ensuring that decision makers use funds in compliance with the law. Budgets, revenues, and expenditures are fairly continuously being reviewed by different stakeholders, including at the school level through boards of trustees (Santiago et al., 2016a).

340. In Iceland, school boards have a crucial statutory responsibility regarding the operation of pre-primary and compulsory schools in each municipality. The boards' role includes both the professional and the operational aspects of schooling. School boards are also responsible for ensuring that laws and regulations are complied with and for making recommendations for improvements to the municipality. In addition, each compulsory school is required to establish a school council which should participate in the development of the school's strategy and discuss the school curriculum, annual operational plan and other school related plans. Compulsory schools in small municipalities can, however, apply for exceptions to this requirement. Pre-primary schools need to establish a parents council which should comment on and monitor the implementation of the school's curriculum and other plans. At the upper secondary level, the minister of education, science and culture appoints a school board for each school that includes representative of the ministry as well as the municipality. School boards should determine the focus of school activities and be, among other things, responsible for the annual operating and financial plan of the school (Iceland Ministry of Education, Science and Culture, 2014).

341. In Lithuania, legislation promotes very clearly the importance of self-governance at the school level and the particular role of the school council as the highest self-governance body at school level. The

country review of Lithuania suggests a strong role of school councils for decisions about and oversight of the use of resources. The school council representatives that the OECD review team met talked passionately and knowledgeably about their role and responsibilities, highlighting the importance of ensuring connections between the school and the community it served and the value there was in ensuring that different perspectives were articulated before final decisions were made on how best to deploy available resources (Shewbridge et al., 2016a).

Support for and capacity of school boards

342. School boards may also receive guidance and support to fulfil their role. In England in the United Kingdom, the *Governors' Handbook* gives guidance to governors in maintained schools (schools maintained by local authorities), academies and free schools on financial requirements and the accountability of the bodies on financial matters (Fakharzadeh, 2016). Parent associations can also play an important role to provide training and guidance to school boards. In Denmark, as part of the 2014 *Folkeskole* reform, the national parents' association received DKK 12 million to raise the competencies and professionalism of the school boards to strengthen democratic involvement of stakeholders and horizontal accountability at the school level (Nusche et al., 2016b).

343. But in various countries there are also concerns about the capacity of school boards to get involved in the monitoring of the use of financial resources [to be expanded].

Monitoring, evaluation and reporting of the use of targeted funds at the school level

344. The availability of targeted funds may be linked to specific monitoring, evaluation and reporting requirements that schools need to comply with to benefit from these funds.

345. In the Flemish Community of Belgium, the provision of extra staff resources for secondary schools implementing additional educational support for disadvantaged students through the 2002 Decree on Equal Educational Opportunities (*Gelijke Onderwijskansen*, GOK) is linked with evaluation and monitoring requirements. Secondary schools have considerable flexibility as to how to use GOK hours, but must follow a three year cycle of policy and planning in year 1, evaluation in year 2, and inspection in year 3 (Nusche et al., 2015). More generally, school evaluations carried out by the inspectorate evaluate the use of earmarked funding for specific purposes (Flemish Ministry of Education and Training, 2015).

346. In Chile, schools that receive funding through the preferential school subsidy (SEP) are required to develop a school improvement plan. As part of the SEP subsidy, school providers must sign an agreement of equal opportunities and excellence in education (*Convenio de Igualdad de Oportunidades y Excelencia Educativa*) in which they commit to use the additional resources provided through the SEP to put the school improvement plan into practice while respecting certain regulations for how the funds can be used. The school improvement plan itself should describe support initiatives that target priority students and technical-pedagogical actions to improve the achievement of low-performing students. It should aim to improve school processes as a whole and set annual objectives, indicators, measurements for evaluation and monitoring, timelines, and sources of funding. School improvement planning typically involves a school self-evaluation to analyse the school's management and operation and to identify strengths and weaknesses. At present, there are more than 8 000 schools that have committed themselves to engage in school improvement planning in return for SEP subsidies (Santiago et al., forthcoming).

347. In England in the United Kingdom, Department for Education introduced the Pupil Premium, an additional funding scheme provided to schools attending disadvantaged students. Pupil Premium funds are provided on a per-student basis and schools have autonomy on how these resources are spent. Schools are expected to spend these resources on strategies that better support learning for disadvantaged students and

close the achievement gap between disadvantaged and advantaged students. Since 2012 schools are required to publish online information about how the Pupil Premium is used and the interventions they are implementing to address the needs of disadvantaged students as well as the impact they are having. Schools receiving the Pupil Premium are required to monitor and report achievement of all students and to report achievement specifically of disadvantaged students. Ofsted, the English inspection agency, monitors closely the attainment and progress of disadvantaged students and how schools are addressing the needs of disadvantaged students. For example, inspectors evaluate whether or not school leaders have a special focus on improving learning of disadvantaged students, if the schools review disadvantaged students' progress on a regular bases and how they develop strategies with this information, and if teachers understand how best to meet the needs of disadvantaged students. If the inspection identifies issues regarding the provision for disadvantaged students, then a more thorough review (the pupil premium review) is conducted. The purpose of this review is to help schools to improve their pupil premium strategy so that they "spend funding on approaches shown to be effective in improving the achievement of disadvantaged pupils". The Department for Education uses information reported by schools to highlight and reward those schools reaching good results for disadvantaged students. Schools demonstrating good progress in reading, writing and math for disadvantaged students and consistently high or improving attainment for other students, receive an award (Pupil Premium Award). This serves as repository of good practices for other schools aiming at improving attainment of disadvantaged students (Santiago et al., forthcoming).

A lack of transparency of the use of financial resources at the school level

348. [to be completed]

Administrative costs of monitoring, evaluation and reporting

349. [to be completed]

External evaluations of the management and use of financial resources in schools

School evaluations and financial audits

350. Depending on the level of school autonomy for the management of financial resources, the use of financial resources by schools may be evaluated or audited. While the room for the misuse of funds at the school level is often limited, also considering the limited degree of financial autonomy for schools in many countries and the large share of funding going to teacher salaries, and depends on the funding mechanism (e.g. funding based on student numbers or on number of classes, approach to funding additional costs for educating children with special needs), there are a number of areas that may need to be monitored for compliance. This includes the possibility to inflate data that form the basis for funding allocations, possible incentives for schools to categorise a greater number of students as "disadvantaged" or "with special educational needs" to receive additional funding, and the misuse of earmarked funding. This was also evident in some countries participating in the school resources review. In Chile, for example, schools have limited possibilities for the misuse of funds as school budgets are almost entirely managed by school providers, but there are significant doubts about the quality of the attendance data reported to the ministry with some non-official reports suggesting widespread fraud (Santiago et al., forthcoming). In Lithuania, the national audit office claims that there is still scope to increase the reliability of the data provided by schools. Although considerable progress has been achieved in this respect since the introduction of the education finance reform, the data on enrolment and student characteristics used for calculating the funding are still not sufficiently reliable (Shewbridge et al., 2016b).

351. Financial risk and sustainability, possibly linked with the development of student enrolments, may be another area that may need to be monitored to ensure stable teaching and learning environments for students. Northern Ireland in the United Kingdom, for example, implemented a viability audit in 2011 to ensure the viability and long-term sustainability of schools. The Department of Education commissioned all Education and Library Boards to identify those schools which were evidencing stress in relation to sustainable enrolment levels, delivery of quality education and financial viability. Financial sustainability has also been a concern to the school inspectorate in the Netherlands. Although the financial situation has improved, it is considered as unstable in primary and secondary education. Employee numbers are falling and schools do not have much financial leeway which makes it difficult to provide good-quality education. The inspectorate sees risks in the financial sphere as an indication of quality problems and has the possibility to place school boards under special financial supervision.

352. Depending on the overall governance arrangements, different authorities may take responsibility for monitoring and evaluating the use of financial resources in schools. In some countries, central education authorities, such as the ministry of education, the school inspectorate or an evaluation agency, may take the responsibility for reviewing financial statements, verifying data that determine funding allocations or carrying out financial audits. In the Flemish Community of Belgium, schools have to report about the use of public funding and give proof that funding has been used in line with the objective of the allocation. While there are no financial audits of schools, the Ministry of Education and Training supervises the use of operational funds and the Agency for Educational Services verifies data to justify the allocation of financial resources to schools (for example student numbers per year and study programme and students' socio-economic background) (Flemish Ministry of Education and Training, 2015). In Chile, while the Education Superintendence focuses on the evaluation of school providers, it also audits the use of public resources by schools and verifies the data provided by schools (Santiago et al., forthcoming). In Iceland, upper secondary schools are responsible for their finances to the Ministry of Education, Science and Culture. Both the ministry and individual school sign a contract stating how the school will fulfil its legal obligations which are then monitored and evaluated by the ministry (Iceland Ministry of Education, Science and Culture, 2014). In New Zealand, the Ministry of Education monitors and advises schools on financial matters. It reviews audited financial statements and may ask for explanations in the event of liquidity issues, if performance is poor or if there is a reduction in net assets (Fakharzadeh, 2016).

353. The evaluation of the use of financial resources may also be part of broader school evaluation processes. In the Czech Republic, the school inspectorate is responsible for evaluating the operation of all schools and school facilities that are in the school registry irrespective of school founder. The inspectorate controls compliance with legal regulations related to the provision of education and school services and checks and audits state budget funding (Shewbridge et al., 2016a). In Chile, evaluations by the Agency for Quality Education focus on the evaluation of educational quality and processes, but also evaluate the financial management of schools. The Indicative Performance Standards for Schools and School Providers entail a "Resource management" domain and six standards related to the management of financial resources (Santiago et al., forthcoming). And in Lithuania, the National Agency for School Evaluation evaluates all schools on a 7-year cycle against a standard framework. As part of the five focus areas of this framework, evaluations consider a school's strategic management which includes a school's strategy (including implementation and impact of the school's strategic plan) and asset management (including fund management, asset management and space management) as two key themes of performance (Shewbridge et al., 2016b).

354. In other countries, central financial and auditing authorities may be responsible for evaluating and auditing the use of financial resources in schools. In Estonia, the ministry of finance has the right to audit the accounts of schools (Santiago et al., 2016a). In Iceland, the national audit office carries out audits of the financial statements of individual upper secondary schools (Iceland Ministry of Education, Science and Culture, 2014). Also in Lithuania, the national audit office conducts financial legitimacy audits of

schools as part of its responsibility for supervising the use of public property and the execution of the public budget (NASE, 2015).

355. In countries with a large degree of decentralisation to intermediate levels of governance, such as local or regional authorities, authorities at these levels may bear the overall responsibility for monitoring and evaluating the use of financial resources by their schools. This is, for example, the case in Denmark where municipalities are responsible for ensuring and controlling the quality of their schools. Typically, municipalities monitor closely that schools operate within their allocated budget and follow up with school leaders in case of financial problems. In one of the municipalities visited as part of the country review undertaken by the OECD, all school leaders jointly followed the budgets for all schools in the municipality. Municipal staff and school leaders communicated regularly about their spending, which makes it easier for the municipality to shift resources between schools when necessary (Nusche et al., 2016b).

Benchmarking of schools

356. Countries may also have systems in place to benchmark schools on their use of financial resources. In England in the United Kingdom, for example, the Department for Education has developed a framework for better value for money in the education sector that emphasises the use of benchmarking. It publishes performance tables annually that include information on schools' spending, classified by income and expenditure type. With this publicly available data, various interested parties can track schools' spending and the outcomes achieved. There is also a website for schools' financial benchmarking to allow schools to benchmark spending and performance. Measures of attainment are also displayed as part of this framework, with data available on: progress measures (in reading, writing, maths, etc.), absence levels, and finance (income per pupil from grant funding and self-generated income, expenditure per pupil for teaching staff, supply teachers, education support staff, learning resource, ICT learning resources, catering, premises, energy, etc.) (Fakharzadeh, 2016)

Personnel evaluation and performance management

357. In some countries the evaluation of school leaders considers their responsibilities for the management of financial resources. In the Czech Republic, for example, regions and municipalities place a strong focus on budgetary compliance in their evaluation of individual school leaders (Shewbridge et al., 2016). In other countries, personnel evaluations do not include financial management aspects. In Iceland, for example, financial resource management is not part of individual performance evaluations (Iceland Ministry of Education, Science and Culture, 2014). Financial management aspects and the use of financial resources may rather be assessed for the school as a whole in these cases.

Combining the evaluation of pedagogical and financial and budgetary aspects of school operation

358. The evaluation of financial and budgetary aspects carries the risk of creating a tension with the evaluation of pedagogical aspects and processes to improve teaching and learning. Consideration of financial and budgetary aspects may focus on compliance with rules and regulations rather than the links between the use of financial resources to promote school improvement and development and the ways in which the use of financial resources is related to the quality of education. Evaluations may, furthermore, focus on accountability only and fail to provide meaningful feedback on how to use the available financial resources more effectively. As a recent OECD study on evaluation and assessment highlighted, school evaluations must go beyond compliance with regulations and focus directly on the quality of teaching and learning to contribute towards school improvement (OECD, 2013b).

359. This may concern evaluation processes at different levels of a system. In the Czech Republic, for example, evaluations by the school inspectorate have traditionally focussed on legal and budgetary compliance and only recently started to shift towards the evaluation of the quality of teaching and learning (Shewbridge et al., 2016a). In Denmark, municipalities typically focus on the quality of education in their quality assurance and also monitor if schools keep within their budget. But, in line with the Danish focus on school autonomy they do often take only little interest in monitoring and evaluating the spending choices of their schools (Nusche et al., 2016b).

360. The evaluation of financial aspects in relation to educational processes may be complicated by various factors. It may stem from an overall lack of shared focus on efficiency and effectiveness at all levels of a system, particularly at the level of intermediate authorities and schools. Governance arrangements and the distribution of responsibilities between different authorities can also be a factor. In the Czech Republic, for example, school organising bodies typically fail to take educational aspects into account in the financial oversight over their schools and in the evaluation of individual school leaders and to focus on budgetary and regulatory compliance only as they rely on the school inspectorate to evaluate pedagogical processes (Shewbridge et al., 2016a).

361. There also seem to be trade-offs between the integration of financial and pedagogical considerations in one evaluation process and the introduction of different evaluation processes. Some countries have integrated the external evaluation of financial and budgetary aspects of schools' operation and pedagogical aspects. In the Netherlands, for example, until recently, financial and pedagogical-didactical inspections were conducted separately by two different units of the inspectorate, but a number of cases of financial and organisational mismanagement of schools led to calls for stronger supervision of educational governance. As a result, the inspectorate now integrates the two lines of inspection, also in recognition of substantial linkages between the quality of financial and human resource management at the level of schools and school boards and the quality of education (Nusche et al., 2014). In other countries, different institutions or actors take responsibility for evaluating both issues separately. In Chile, for example, the distribution of responsibilities between the Agency for Quality Education (which evaluates pedagogical processes and the quality of education in schools) and the Education Superintendence (which evaluates the compliance with legal requirements of schools and school providers) provides favourable conditions for the implementation of school evaluations that contribute to school improvement. But it also entails the risk of overloading schools with further external processes, pressures and expectations in an already complex environment of multiple accountabilities. It may also make it difficult to connect resource use decisions with pedagogical considerations (Santiago et al., forthcoming).

Monitoring and evaluating the use of financial resources to promote equity in learning opportunities and outcomes at a school level

362. Monitoring and evaluation of the use of financial resource at the school level may not pay sufficient attention to the ways in which resource use decisions in schools promote equal learning opportunities and outcomes for all students, including those from disadvantaged backgrounds. Differentiated analysis is necessary to understand whether certain interventions may have differential effects on students from different groups and to design adequate strategies to meet specific learning needs (OECD, 2013b).

363. In Denmark, for example, municipalities recognise the additional needs of schools with a disadvantaged student intake, and invest heavily in schools enrolling students from such backgrounds, but there is generally little evaluation of how this additional funding is used and in how far it contributes to improving learning opportunities for these students. While there is increasing focus on analysing student assessment results to formulate improvement strategies, it does not seem to be common practice to analyse results separately for different groups at risk of underperformance (Nusche et al., 2016b). Similarly, in the

Flemish Community of Belgium, the impact and effectiveness of additional resources for equal opportunities is not sufficiently monitored. Elementary schools receive higher allocations of teaching hours based on their socio-economic profile, and secondary schools receive additional GOK hours (Nusche et al., 2015).

Data and information management

364. [to be completed]

Lack of integration of data and information management systems

365. [to be completed]

Policy options

Monitor the effectiveness of the use of financial resources

366. Countries should consider monitoring the use of public financial resources in school education in relation to their impact on outcomes from schooling and to move the focus of financial monitoring systems from compliance to the analysis of the performance of the school system. A performance-oriented approach which involves the robust analysis of detailed financial and educational data and the identification of effective policies and programmes has the potential to improve decision-making and to make the use of the available financial resources more effective.

367. Monitoring the effectiveness with which financial resources are used requires comprehensive information about resource inputs, educational processes and outcomes. Performance-oriented monitoring, therefore, requires an ongoing and regular assessment of the state of education and the flow of resources. As a result of governance arrangements and split responsibilities, existing data on different aspects of a school system are often split across levels of governance and different institutions. This can obfuscate resource flows and prevent a full picture of the available data on inputs, processes and outcomes. To facilitate the monitoring of the effectiveness of resource use, countries should make efforts to integrate the different existing databases. This would help to link resource use decisions with results, facilitate better decision-making, and create transparency of resource use. In decentralised school systems, integrated data systems should make available disaggregated data to meet the information needs of sub-national levels of governance. Common reporting standards for budgeting and accounting should be developed, even though one needs to take into account the costs this implies. Establishing a focus on effectiveness would, furthermore, benefit from the development of strong analytical capacity, systematic and robust processes of policy and programme evaluation, a culture of using evidence as well as the implementation of a more strategic budget planning process.

Monitor how financial resources for specific student groups translate into outcomes for these students

368. Many countries show a considerable commitment to providing additional support for students at risk of underperformance. This focus on additional inputs needs to be matched with sufficient attention to monitoring the outcomes of different student groups such as socio-economically disadvantaged students, students with a migrant background, indigenous students, and students with special educational needs, to determine the extent to which the school system meets their needs. Monitoring equity issues at a system level can inform resource use decisions to address inequities, help to target financial support more effectively, and increase the overall focus on equity in resource use decisions among different stakeholders across the system. Analysing the relationship between investments in certain groups of students (e.g. through targeted programmes), on the one hand, and student outcomes, on the other hand, can be a key step to understanding what works to improve equity in schooling.

369. Countries should set clear equity goals for the system, such as minimum standards of achievement of the most vulnerable students, and develop related indicators to monitor the achievement of these equity goals. Learning outcomes should be analysed for specific groups of students and key performance data should be sufficiently broken down for different student groups to facilitate the analysis of the challenges particular groups of students face. Data that are sufficiently disaggregated can also help to facilitate peer-learning among schools with a similar student intake and similar challenges. Commissioning thematic studies on the use of resources for equity is another option for monitoring the equity of the school system.

370. It is also important to monitor how schools use their funding to provide high quality teaching and learning for all of their students. This is particularly relevant in the case of targeted programmes for disadvantaged schools, even though one needs to also consider the potential disincentives such monitoring requirements can entail. School boards can play an important role in discussing the use of financial resources for different student groups with the school leadership.

Include the effectiveness of the use of financial resources as one element of evaluation and assessment procedures in schools

371. In countries that have extended a great degree of autonomy for the management of financial resources to schools, other elements of a country's evaluation and assessment framework, such as external school evaluations, school self-evaluations and school leader evaluations, should also include an evaluation of the effective use of financial resources. This could promote a more effective use of resources and hold schools accountable for their use of public financial resources. Evaluating the effectiveness of the way in which financial resources are used at the school level should go beyond budgetary and financial compliance and financial stability to also assess how schools use their financial resources to promote the general goals of a school system, to implement their school development plan and to ultimately improve teaching and learning for all students based on a common vision of a good school. The information from external and internal evaluations should result in helpful feedback to schools to inform their decision-making on how to make better use of their resources and promote school development.

Strengthen the local capacity for monitoring the use of financial resources in relation to education quality

372. Oversight about the use of financial resources at the local level can help ensure that decisions about the use of financial resources meets local needs and provide conditions for strong local accountability. However, regional and/or local authorities may have little capacity for monitoring and evaluating the use of financial resources, in particular how the use of resources relates to teaching and learning. Local agents may focus on budgetary and legal compliance only and rely on other actors of the system, such as the school inspectorate, to evaluate the pedagogical aspects of school organisation.

373. Broader strategies to build local capacity analysed in above should also pay attention to the competencies of education administrators for implementing monitoring and evaluation processes that link inputs with performance and for using the resulting data for improvement. To build local capacity for evaluating and monitoring the use of financial resources, a review of existing approaches by different local authorities can serve to identify and share examples of good practices. In decentralised systems with incipient monitoring and evaluation practices at a local level, establishing reporting requirements may provide an effective stimulus to develop evaluation practices. Formulating competency profiles for local officials can also be one way to clarify expectations.

374. It is also important to build the evaluation and monitoring capacity of school leaders and school boards. School leaders need to be able to collect and report data on school budgets and student outcomes to

their responsible authorities as well as the school community in effective ways. Central authorities could provide exemplars of good practice in data analysis, reporting and communication to make sure some minimum requirements are met. The school community should have a prominent role in monitoring the use of financial resources at a local level as part of their overall role for school development and receive training in this area. For example, it could be a requirement for schools to seek the school community's formal approval for the school's annual budget plan and it could be mandatory for school leaders to present quarterly finance reports for discussion by their community.

Promote budgetary transparency, ideally in relation to the performance of the school system

375. Countries should promote the transparency of the education budget and the way in which financial resources are used, ideally in relation to the performance of the school system. Detailed budgetary reporting can provide decision makers with clear information about resource use on which to base their decisions and facilitate the robust analysis of detailed financial and non-financial data and thus enhance the quality of policy decisions. It can also strengthen public participation and oversight and build trust. In decentralised systems, in particular, reporting on the use of central resources at lower levels of the system, also in relation to expected performance, can increase transparency about the flow of resources and thus strengthen trust and accountability.

376. Reports about the education budget should make available information about expenditure by levels of education and different sub-sectors, different expenditure categories, localities and possibly even individual schools, as well as information about the sources of funds for investment in the school system. Budgetary reporting should be linked to evidence about the performance of the school system in relation to established policy objectives and targets. This could help to communicate the goals of the investments in the school system and build social consensus about fiscal efforts for schooling. To this end, countries could develop a national reporting framework that brings together financial indicators and performance indicators, including information on the learning outcomes for students at risk of low performance.

Make information about the use of financial resources in schools publicly available

377. Countries with a large degree of school autonomy for the use and management of financial resources should encourage the dissemination of information about school budgets together with information about the school development plan and other activities at the school. Countries could consider introducing a school-level reporting framework that is developed together with schools which enables schools to examine the impact and improve their decisions. School-level reporting can also ensure that the school community knows how schools operate and how financial resources are used. In particular, it would be important to publicly disclose the public resources each school receives alongside the use of those resources and, possibly, the educational outcomes at the school.

378. Of course, school level information about school performance needs to be put into broader national contexts and policies, e.g. on school choice, and the particular context of a school, such as students' socio-economic background. Reporting of school-level information, furthermore, needs to be weighed against the administrative burden involved. To cope with the administrative burden, schools should have sufficient administrative support, through staffing and their school organising body, to comply with reporting requirements. The administrative burden could also be reduced by providing schools with easy access to national data sufficiently disaggregated for the use at the school level. Depending on the nature of the school-level report, reports could also be prepared directly by higher-level authorities, to not impose any additional paperwork on schools.

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