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Governing and distributing school funding: Effectively connecting resources and learning

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This background note on governing and distributing school funding to effectively connect resources and learning is intended to inform Session 2.A of the High-Level Seminar on Value for Money in Post-Covid Education.

A challenge for school systems is to ensure that school education is resourced effectively and equitably so that all students can benefit from high quality education. Beyond sufficient levels of funding, this requires adequate funding governance arrangements and well-designed funding allocation mechanisms. This note examines the role of whole-system approaches to tackle complexity challenges in school funding governance related to fiscal decentralisation and growing school autonomy for resource use; a series of fundamental questions that need to be addressed when designing school funding allocation mechanisms, highlighting the potential of formula-based funding to match funding levels with needs; and the necessity for adequate regulatory frameworks for the public funding of private providers to mitigate potential harmful effects of such policies.

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Introduction

1. About two-thirds of OECD governments raised their budget for education in response to the COVID-19 pandemic, with the remainder maintaining a constant budget (OECD, 2021[1]). The economic recovery is, however, uneven and considerable uncertainty remains. As governments across the OECD face different policy challenges in terms of employment and output (OECD, 2021[2]), they will need to make difficult budgetary choices to support the recovery, and balance short- and long-term economic and social goals in allocating public resources between and within different sectors, such as education, health care and social welfare. While investment in education is a crucial element in the economic and social recovery from the COVID-19 crisis, ensuring an efficient and equitable use of education resources becomes a clear policy priority.

2. For school education, on average, the overall level of funding matters to provide quality teaching and learning for all students as a summary of the recent quasi-experimental literature associating school spending and student outcomes in the United States suggests (Jackson, 2018[3]). Overall levels of spending arguably also matter to respond to new priorities as countries and economies respond to the COVID-19 pandemic. A school system that lacks quality teachers, school leaders, and support staff as well as adequate educational facilities and materials will have more difficulties to promote quality education (OECD, 2017[4]). Insufficient investments in staff may make a career in schools less attractive and motivating, thus crowding out the most qualified professionals. Resource constraints, such as a lack of quality staff, may also hinder schools' capacity for pedagogical innovation (OECD, 2019[5]). Similarly, while investments in physical resources are rarely the most effective way to improve students' learning, inadequate facilities that do not support students' learning, health and comfort and teachers' working conditions can thwart a school system's pursuit of excellence (OECD, 2018[6]; Gunter and Shao, 2016[7]).

3. Beyond an adequate level of investment, however, the governance and distribution of school funding is at least as important to effectively connect resources and learning. Governance questions are concerned with the different authorities involved in raising, managing and allocating school funds and the relationship between these authorities. In many countries, the governance of school funding is characterised by increasing financial decentralisation, enhanced school autonomy and growing public funding of private school providers. While these developments generate new challenges, if accompanied by adequate institutional arrangements, they also provide opportunities for funds to be used more effectively and equitably across school systems. The design of effective mechanisms to allocate and distribute funding, whether this is between different levels of the administration or to individual schools, is also essential if school funding policies are to efficiently support student learning, equity and related policy objectives (OECD, 2017[4]).

4. This background note describes practices and procedures involved in effectively governing and distributing school funding and analyses the challenges involved. The note is organised around five selected key themes:

i. First, the note reviews the distribution of responsibilities for raising and spending funding for school education. This includes the role and design of fiscal transfers to equalise spending capacity across jurisdictions and of monitoring and evaluation to ensure transparency in the flow of resources.

ii. Second, the note explores the importance of whole-system approaches to address complexity challenges in school funding governance, which can create inefficiencies and a lack of transparency. Effective school funding governance requires a clear delineation of responsibilities for school funding, adequate co-ordination mechanisms, and systematic capacity building.

iii. Third, the note analyses the trend to give schools greater autonomy for managing their own funds, and the conditions that need to be in place for schools to use this autonomy in a constructive way. This includes the role of educational leadership, technical support and accountability, as well as adequate institutional frameworks to mitigate potential inequities across schools.

iv. Fourth, the note discusses a series of fundamental questions that need to be addressed when designing an effective funding allocation model that ensures that resources are distributed in a transparent and predictable way. This includes the balance between regular and targeted funding, the methods used to determine the amount of funding allocations and related information needs, and the implementation of new funding allocation mechanisms. This theme covers country approaches for distributing funding for current and capital expenditures.[1] For current expenditures, the analysis also focuses on the design of funding formulas that can be adjusted to support policy objectives aiming for greater efficiency, equity and quality.

v. Fifth, the note reviews the public funding of private providers as part of broader policies to promote parental choice and education quality, and the design of adequate regulatory frameworks to counteract potential adverse effects of such policies on equity.

Distributing responsibilities for revenue raising and spending in school education

The majority of initial funding for school education originates at the central level, but in many countries sub-central authorities are important actors in school funding

5. The majority of initial funding for school education originates at the level of central governments, raised mainly through tax revenues, while sub-central authorities typically complement central funding from their own revenues, be it through local taxes or user fees (OECD, 2017[4]).[2] In 2018, on average

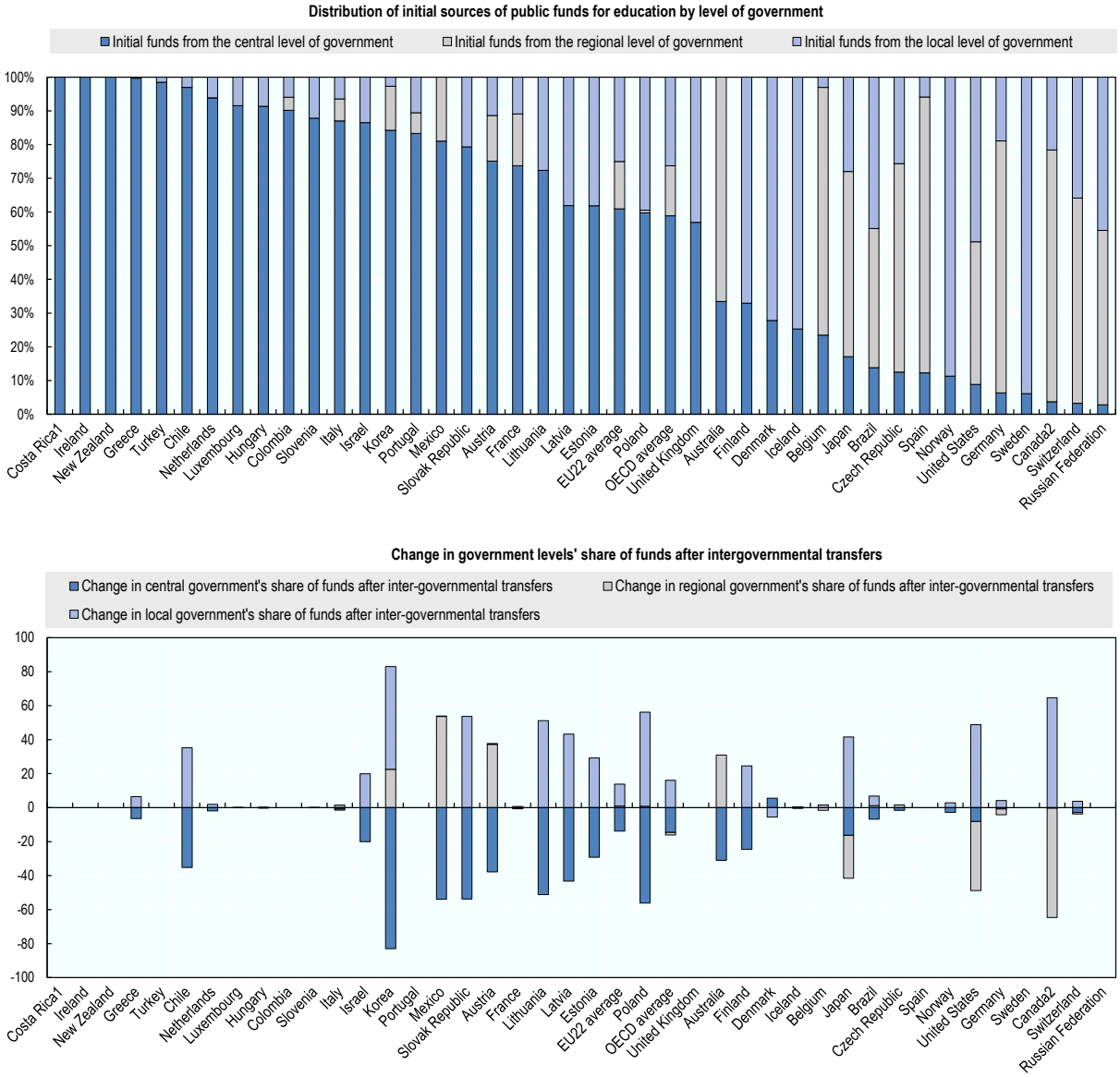
[1] Current expenditure describes incurred costs with teaching and learning activities, teachers' and other educational staff's salaries, other operating costs and costs with assets that have a duration of less than one year. Operating costs refer to expenses associated with the maintenance and administration of a school on a day-to-day basis (e.g. heating, electricity, small repairs, perishable instructional materials, etc.). Capital expenditure refers to spending on assets that last longer than one year. This includes, for instance, the construction, renovation and major repair of school buildings.

[2] The central level specifies authorities that make decisions or participate in different aspects of decision making on a national scale. This includes, among others, the central government, central education, financial and legislative

across OECD countries, 59% of the public funds for non-tertiary education came from the central government before transfers to the various levels of government (Figure 1) (OECD, 2021[8]). Local authorities contributed another 26% of initial funding, and regional governments 15% (OECD, 2021[8]).

Figure 1. Distribution of initial sources of public funds for education and change in government levels' share of funds after intergovernmental transfers (2018)

Primary, secondary and post-secondary non-tertiary education, in percentage



Note: 1. Year of reference 2019. 2. Primary, secondary and post-secondary non-tertiary education includes pre-primary programmes. Countries are ranked in descending order of the share of initial sources of funds from the central level of government.

authorities and central auditing services. All authorities below the central level in administrative terms are referred to as sub-central level, which includes regional and local authorities, for example.

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 (2021[8]), *Education at a Glance 2021: OECD Indicators*, https://doi.org/10.1787/b35a14e5-en, Table C4.2.

Decentralised school funding arrangements require an alignment of revenue raising and spending powers and a careful balancing of accountability and trust between actors

6. In many countries, sub-central authorities have emerged as important actors in the allocation and management of school funding (OECD, 2017[4]). Fiscal decentralisation offers the potential for sub-central governments to best adapt school funding decisions to local needs. However, decentralised approaches to school funding need to be designed in ways that ensure sub-central authorities have both adequate resources to meet the needs of their students and relevant capacity to fulfil their funding responsibilities. This requires efforts to arrive at an objective and shared assessment of the necessary amounts of funding, as disagreements in this respect may lead to tensions between levels of government (OECD, 2017[4]). It also requires a careful balancing of accountability and trust between levels of governance. Even if funding responsibilities are decentralised, the central government often remains responsible for ensuring high quality, efficient and equitable education nationally, and may therefore have an interest in controlling sub-central spending and performance. Sub-central authorities, on the other hand, may perceive such central monitoring as interference in their areas of responsibility (Schaeffer and Yilmaz, 2008[9]).

7. Responsibilities for raising and spending school funding need to be well aligned to encourage an efficient use of fiscal resources (OECD, 2017[4]). Where one actor, such as the central government, is responsible for most of the financing, whereas other actors, such as sub-central governments, are in charge of expenditure, the former may have concerns about the misuse of resources, while the latter may have worries about the fairness of the funding system (OECD, 2017[4]). For instance, where responsibilities for raising funds to cover the teacher payroll and for deciding on teacher employment are misaligned, incentives to ensure efficient staffing levels in line with changing enrolment are reduced (OECD, 2019[5]).

8. One way to address this dilemma can be, for school systems that give sub-central authorities large spending powers, to increase, at the margin, sub-central revenue raising powers and fiscal autonomy. For example, the Nordic countries typically give local governments substantial control over personal income tax rates, while some Central and Eastern European countries have also started to do this. Reliance on own tax revenues may support sub-central authorities in determining public service levels in line with local preferences, help mobilise additional resources for school education, and discourage overspending by creating a hard budget constraint (OECD, 2017[4]).

Fiscal decentralisation entails risks of creating inequalities in available resources across localities, which requires adequate fiscal equalisation mechanisms

9. At the same time, raising the proportion of own revenue in sub-central education budgets also entails risks of creating 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 provide adequate funding per student. In the United States, for example, prior to the 1970s the vast majority of resources spent on compulsory schooling was raised at the local level, primarily through local property taxes. Since the local property tax base is generally higher in areas with higher home values, the heavy reliance on local financing contributed to the ability of wealthier jurisdictions to spend more per student (Jackson, Johnson and Persico, 2015[10]).

10. Schemes that transfer fiscal resources from the central government to sub-central authorities (vertical transfers) or between sub-central governments (horizontal transfers) can help ensure that all

jurisdictions have the necessary resources to provide similar services at similar tax levels, and to provide equal opportunities for their students. Fiscal transfers can also help address gaps in sub-central revenues and expenditures. Indeed, sub-central spending responsibilities have grown much faster than their tax collection responsibilities, creating fiscal imbalances (OECD, 2017[4]). Once transfers to sub-central levels of government are accounted for, the share of central funding for non-tertiary education falls from 59% to 44%, while the share of local funds rises as a result, from 26% to 42% (Figure 1 above). In Korea, Lithuania, Mexico, Poland and the Slovak Republic, the difference of funding power before and after transfers represents more than 50 percentage points (OECD, 2021[8]).

11. The OECD School Resources Review provides examples from different countries that have introduced fiscal transfer and equalisation mechanisms alongside reforms devolving funding responsibilities to sub-central governments (Box 1).

Box 1. Fiscal transfer and equalisation mechanisms as part of education finance decentralisation reforms in select countries

- When **Brazil** devolved authority from a highly centralised system to states and municipalities in the mid-1990s, it created a Fund for the Maintenance and Development of Basic Schools and the Valorisation of the Teaching Profession (*Fundo para Manutenção e Desenvolvimento do Ensino Fundamental e Valorização do Magistério*, FUNDEF) 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 (which was subsequently revised in 2007 in the form of the Maintenance and Development Fund for Basic Education- *Fundo de Manutenção e Desenvolvimento da Educação Básica*, FUNDEB) did not prevent wealthier regions from increasing their overall spending more rapidly than poorer regions, but played a highly redistributive role and increased both the absolute level of spending and the predictability of transfers. In 2021, FUNDEB was relaunched with a new mandate and as a permanent feature of the school funding system.
- In **Colombia**'s relatively decentralised school system, financing for the regional and local authorities that have been certified to provide education comes mainly from the national budget, although sub-central entities can contribute their own resources. The main financing mechanism is the General System of Transfers (*Sistema General de Participaciones*, SGP) which shares revenues for different public services between the central and sub-central governments. The distribution of SGP resources is specific to each sector. The system's most important component for education financing allocates a specific share per student annually to the sub-central governments, based on conditions of equity and efficiency, differentiating geographic zone (urban-rural) and taking into account the number of students enrolled the previous year. Additional funding is provided for specific student characteristics (e.g. special needs students). Additional components distribute resources for quality improvement, including to schools. Further elements of the SGP contribute to the financing of pensions and healthcare in education.
- In **Denmark**, municipalities are the main providers of public services, including primary and lower secondary education. Municipal spending is primarily financed through central government grants and local taxes. The total volume of the grants is decided through annual negotiations between the central and local governments. The grant level for a given municipality is based on its population size. In addition, there is a fiscal equalisation scheme, which on one hand takes into account tax revenue and, on the other hand, expenditure needs depending on age composition and socio-economic structure in the municipalities. The fiscal equalisation

scheme seeks to give municipalities a similar financial basis depending on their population, so that all municipalities are able to provide a similar service level.

- 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. The education component is calculated based on student numbers (with numerous coefficients reflecting cost differences for educating different groups of students), and thus reflects different costs of provision. The equalisation component is based on a formula and equalises poorer jurisdictions up to 90% of average per capita revenues of local governments with similar student populations.

Source: OECD (2017[4]), *The Funding of School Education: Connecting Resources and Learning*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264276147-en; Radinger et al. (2018[11]), *OECD Reviews of School Resources: Colombia 2018*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264303751-en.

The nature of fiscal transfers influences sub-central autonomy for and central steering of spending in school education

12. Different conditions can be set when funding is transferred from the central to sub-central authorities, and these can have considerable influence on how the money is spent. Grants may be tied to a particular purpose (i.e. earmarked), be allocated to a certain type of expenditure (i.e. a block grant), or be transferred for general use for the public sector (i.e. lump sum). The type of conditions attached to a grant will influence the actual balance of responsibilities between levels of governance and determine the scope of decision-making for sub-central authorities as well as the degree of steering for the central level.

13. The greatest degree of administrative freedom is granted to sub-central authorities when funding is transferred as a lump sum, which leaves discretion over the proportion of funding allocated to school education. Lump sum funding may nevertheless make it more difficult to shield local education budgets from budget pressures for other public services. Block grants, that is funding allocated on the condition that it is spent on a certain type of expenditure (e.g. current spending in pre-school and primary education), still leave a high degree of discretion to sub-central authorities (e.g. whether to spend on salaries or operational costs). Earmarked grants impose greater restrictions by specifying use for a specific item of expenditure, thereby allowing the central level to have greater control over sub-central spending and policy (OECD, 2017[4]). Funding can, for example, be earmarked to ensure a minimum level of expenditure on particular staff types, educational materials, or a specific student group (OECD, 2018[6]; OECD, 2019[5])

14. Some countries, like **Denmark** and **Sweden** have been using specially allocated subsidies increasingly as a means to steer municipalities in the use of funding at a local level (OECD, 2017[4]). Overall, though, across the public sector, a slight trend from earmarked grants to non-earmarked grants could be observed, combined with steering through regulations and a focus on outcomes and performance (Blöchliger and Kim, 2016[12]; OECD, 2021[13]).

The design of fiscal transfer mechanisms needs to address a range of challenges

15. While fiscal transfers play an important role in providing sub-central revenue for service provision and equalising sub-central revenue levels, they bring their own potential challenges. First, fiscal transfers from central governments may exacerbate fluctuations in sub-central revenues and complicate medium-term planning as they are often pro-cyclical (i.e. likely to increase in times of strong growth and decrease in times of crisis). Second, if grants are adjusted on the basis of local revenues, sub-central authorities might be discouraged from raising their own resources, reducing total mobilisation of

resources for education. Third, a high reliance on central grants may encourage overspending in the hope that this overspending will then be compensated via additional grants, and thereby increase deficits and debt. Finally, the determination of grant levels and calculation methods themselves may also be problematic (Blöchliger and Kim, 2016[12]; Busemeyer, 2008[14]). In the design of fiscal transfer mechanisms, it is therefore important to strike a balance between ensuring stakeholder involvement and limiting the risk of rent-seeking and political distortions (e.g. through independent agencies or two-stage budget procedures).

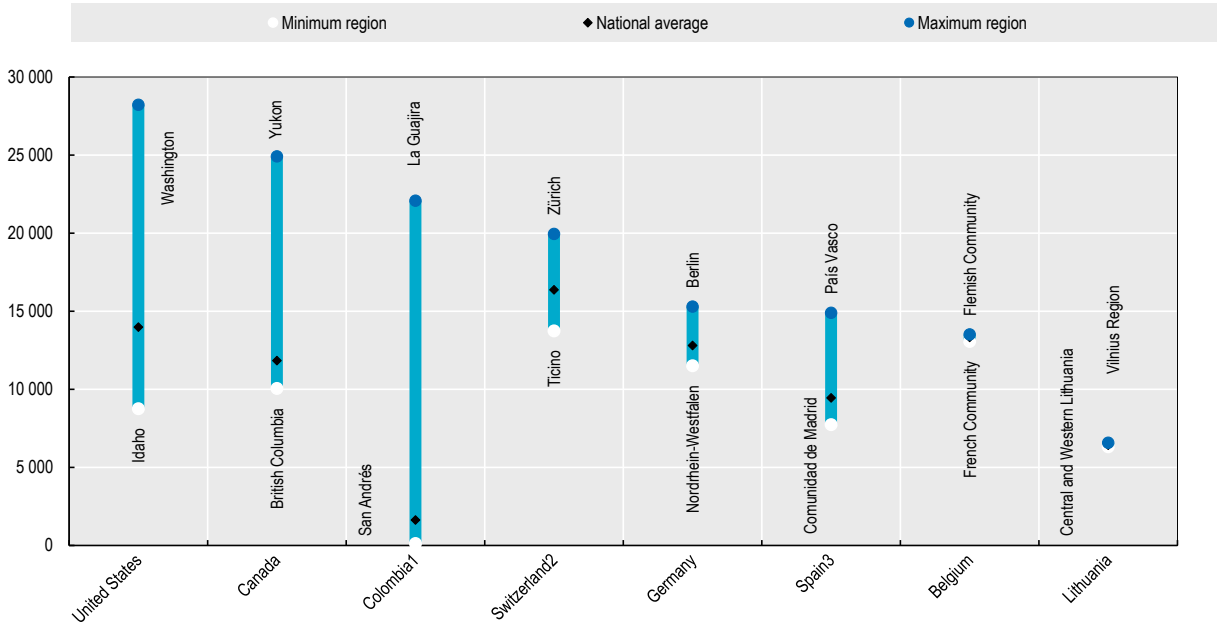
16. Even if well-designed fiscal equalisation mechanisms are in place, educational spending might still differ considerably across jurisdictions in decentralised systems. According to data from Education at a Glance 2021, for example, the region with the highest level of per-student expenditure in the United States spends almost three times as much as the region with the lowest level of spending. Smaller regional differences are found in Germany, Spain and Switzerland (Figure 2) (OECD, 2021[8]). Such spending differences might indicate different priorities for public education, a potential for efficiency savings in some jurisdictions and/or potential inequities in the educational services provided to students. To ensure a basic level of funding for all schools, one option is to earmark some central funding for schools based on assessed needs while another part can be used at the discretion of sub-central authorities. Sharing experiences in approaches to school funding between sub-central jurisdictions should also be encouraged and facilitated (OECD, 2017[4]).

Fiscal decentralisation should be accompanied by adequate monitoring, evaluation and reporting to ensure transparency in the flow of resources

17. Finally, the expansion of sub-central spending, revenue collection and borrowing powers creates challenges for fiscal control and financial reporting (Schaeffer and Yilmaz, 2008[9]). Adequate monitoring, evaluation and reporting processes need to be in place to ensure that funds transferred from the central to sub-central governments are used efficiently and in line with laws and regulations. Sub-central authorities should provide adequate information about their education budgets to increase transparency about the flow of resources (OECD, 2017[4]).

Figure 2. Subnational expenditure on educational institutions per full-time equivalent student (2018)

Primary and secondary education, in equivalent USD converted using PPPs



Note: To ensure comparability across countries, expenditure figures were converted into common currency (USD) using national purchasing power parities (PPPs). However, differences in the cost of living within countries were not taken into account.
1. Government expenditure data transferred to subnational entities.
2. Only expenditure for teaching and non-teaching staff.
3. Public expenditure on education in public institutions.
Countries are ranked in descending order of maximum subnational expenditure on educational institutions per full-time equivalent student.
Source: OECD (2021[8]), *Education at a Glance 2021: OECD Indicators,* https://doi.org/10.1787/b35a14e5-en, Figure C1.2.

Addressing the complexities of decentralised school funding systems through whole-system approaches

The distribution of responsibilities for school funding is complex in many countries

18. In many school systems there is a complex distribution of responsibilities for funding school education, which may differ by resource category (e.g. current vs capital spending) and level and type of school education (e.g. primary vs. secondary and general vs vocational education).

19. For instance, in most countries the local government levels have retained responsibility 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, education lies more often at regional or central levels (OECD, 2017[4]). To give another example, compared to current expenditure, the responsibility for managing capital investments tends to be less decentralised, but in all but one countries participating in the OECD School Resources Review, responsibilities were shared between at least two and often three actors, most commonly involving both central and local authorities (OECD, 2018[6]). Finally, also the staffing of schools and the management of the related budgets typically involves multiple actors. For example, schools may be responsible for employing their teachers for which they receive central funding, while local authorities cover the payroll of administrative staff (OECD, 2019[5]).

Successful decentralisation requires clearly delineating responsibilities, establishing well-functioning co-ordination mechanisms and adequate data management

20. In order to ensure the effectiveness and transparency of school funding, a clear distribution of responsibilities as well as mechanisms for co-ordination between different actors are required. It needs to be clear which authority is responsible for funding particular levels and types of education as well as categories of resources, such as the employment of teachers, school leaders and other staff; infrastructure investment and maintenance; and ancillary services, including school meals and transportation. In decentralised contexts, it is important that each level of government is accountable for its specific spending decisions. Effective accountability of sub-central authorities likewise requires reliable and co-operative control structures across levels of government (OECD, 2017[4]).

21. Co-ordination is also crucial for managing trade-offs and balancing short and long-term considerations in the use of school resources in multi-level systems. For instance, the distribution of responsibilities for the use of funding for school staffing will influence the scope for actors to determine the mix of staff in terms of numbers and profiles that best meets students' and schools' needs (OECD, 2019[5]). Similarly, the division of responsibilities for capital investments and current maintenance funding will influence the scope for assessing the interactions between both types of spending and for determining the most efficient resource allocations. Capital investments can have a significant long-term impact on maintenance costs, just as putting off repairs can result in the need for major overhauls (OECD, 2018[6]).

22. As the experience of the OECD School Resources Review participants also shows, complex governance arrangements for school funding entail a risk for inefficiencies where responsibilities overlap, and can lead to a lack of transparency, accountability and trust in the use and flow of financial resources. Efficiency challenges may emerge where parts of a school system are managed by different levels of administration in relative isolation. This may also create difficulties to manage information on the use of funding and how it promotes equity and quality in student learning, well-being and development (OECD, 2017[4]).

23. Solving such complexity challenges in school funding governance requires a whole-system approach that involves a reflection about both structures (e.g. the most efficient number of governance levels involved in school funding) and processes (e.g. stakeholder involvement, open dialogue and use of evidence and research). Thinking of structures in isolation without connecting them to supporting processes will not provide systemic and sustainable solutions. Where funding is channelled through several intermediary tiers of government before reaching schools, one might consider reducing the number of levels involved to decrease bureaucracy and increase possibilities for central steering. Improving the availability of data on different aspects of school funding, which are often split across levels of governance and different institutions, can help monitor the effectiveness of school funding and create transparency in resource use at different levels of a school system (OECD, 2017[4]).

In decentralised systems, building capacity at the local level for managing school funding is also essential

24. In countries where sub-central authorities play a key role for managing school funding, building the technical skills and administrative capacity at a local level needs to be an important priority. Decentralised school funding arrangements place significant demands on local authorities for budget planning and financial management. Smaller authorities may have less experience and staff creating local capacity constraints, which can result in inequities between localities (Dafflon, 2006[15]). Professional training and support are important aspects to consider in improving capacity at the local level. Competency frameworks for local leaders and administrators that reflect the skills necessary for financial management can be used to guide training and professional development as well as recruitment processes (OECD, 2017[4]).

25. The professionalisation of local management depends however not only on the capacity of local actors themselves, but also on the institutional settings in which they operate. This includes their access to key information, as well as mechanisms to monitor and provide feedback on the work of municipalities and their services. A further way for building the capacity of local authorities lies in the creation of networks and collaborative practices (e.g. jointly employing specialised staff for budgeting, financial control and the use of performance data), but these are still underdeveloped in many contexts (OECD, 2017[4]). Since capacity building is a complex enterprise and takes time, it is ideally thought out from the beginning and planned strategically (Burns, Köster and Fuster, 2016[16]).

26. **Norway** provides an example for systematic investment in building capacity at all levels of the system, based on local analysis and decision making in networks of municipalities. To establish a more sustainable approach for educational improvement and address capacity differences across local authorities, a new collective competence development model for schools has been introduced. This model relies on three complementary pillars: 1) a decentralised scheme that aims to ensure that all municipalities implement competence-raising measures, by channelling state funds to the municipalities; 2) a follow-up scheme in which municipalities and county authorities that report weak results in key education and training areas over time are offered state support and guidance; and 3) an innovation scheme that is intended to result in more research-based knowledge about the school system (OECD, 2019[17]).

27. Networks of advisors can also support the education work of local authorities and complement other capacity building strategies. In **Denmark**, for instance, the education ministry has created a national body of learning consultants who work with municipalities (and schools) in their improvement efforts. The work of the consultants is overseen by the ministry's Resource Centre for the Folkeskole (*Ressourcecenter for folkeskolen*), which brings together both evidence from research and practical knowledge from the field. This initiative thus creates a circle of learning and evidence that brings central knowledge to the local level, but also from the local to the central level (OECD, 2019[5]).

28. Some countries with a large number of small providers have responded to capacity challenges by merging providers and thereby consolidating capacity for effective resource management. Others are considering to move responsibilities to higher levels of the administration or to create new bodies to administer resources for a larger number of schools. **Chile**, for example, has been undergoing a process of recentralisation of its public school system since 2015, with a number of Local Education Services and a national Directorate for Public Education gradually taking over responsibilities from municipalities. This process is expected to be completed by 2025. In a similar move, the central government in **Hungary** took over the maintenance of schools from local governments in 2011 to respond to challenges identified with decentralisation (OECD, 2019[18]). Where responsibilities are re-centralised, it is important that funding decisions involve consultation with local stakeholders and remain responsive to local needs (OECD, 2017[4]).

Giving schools autonomy for managing and allocating funding

Schools have different degrees of resource autonomy across countries

29. Since the early 1980s, many OECD and other countries, such as Canada, Finland, Hong Kong (China), Singapore, Spain and Sweden have granted their schools greater autonomy in both curricular and resource allocation decisions, albeit from different starting points (Eurydice, 2007[19]; Wang, 2013[20]). While the motivations for these reforms have varied across countries, they were typically expected to increase schools' responsiveness to the demands of local communities, reduce bureaucracy, and raise the potential for innovation (Burns and Köster, 2016[21]; Bullock and Thomas, 1997[22]).

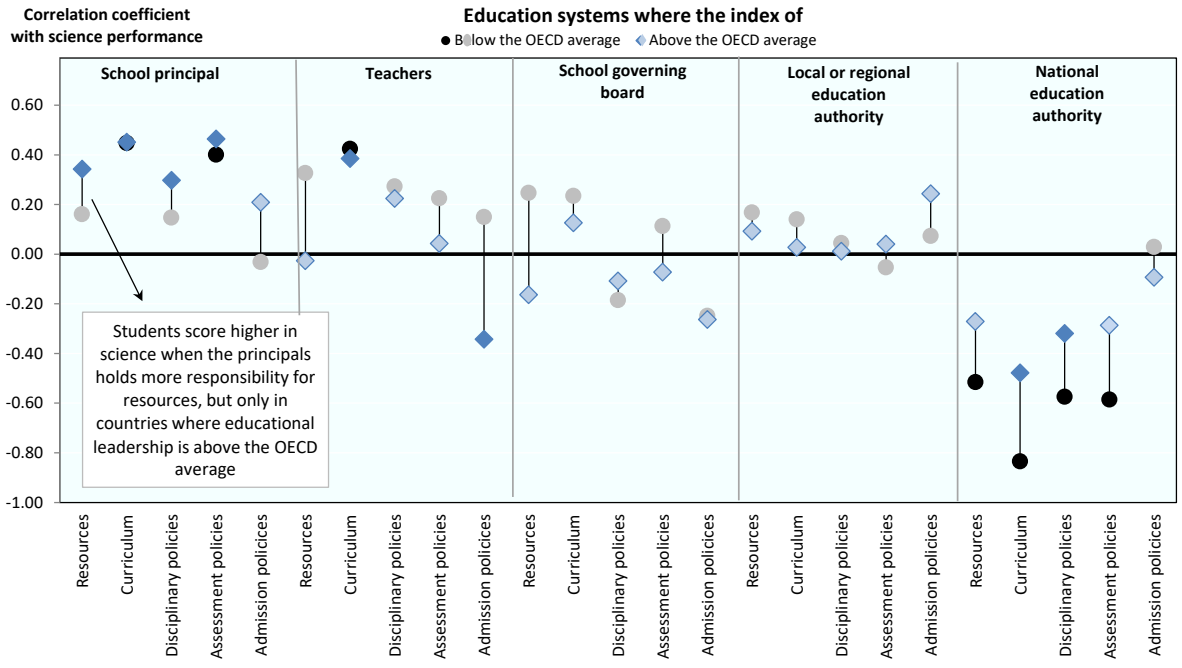
30. Schools enjoy most freedom over the use of their resources when central or sub-central authorities allocate a large proportion of their funding in the form of unrestricted block grants, which gives schools the discretion to allocate resources freely across all areas of spending. In other school systems, schools have intermediate levels of autonomy as they receive some financial resources, possibly linked to certain conditions for spending. Grants may for instance be restricted for a particular area (e.g. operating spending) or be earmarked for a specific item (e.g. professional development). By contrast, schools have little resource autonomy where they do not receive funding directly, but where resources are allocated "in kind" and/or costs are directly paid for by the responsible authority (OECD, 2017[4]).

Reaping the benefits of resource autonomy requires strong educational school leadership and technical support

31. While budgetary autonomy for schools may yield a range of benefits, research and experience suggest that the relationship between budgetary autonomy and school performance is not clear cut and that greater financial responsibility does not work in all contexts or for all schools. Overall, students' science performance in PISA 2015 was higher where school leaders held more responsibility for managing resources (e.g. formulating the budget, hiring and firing staff), but only when comparing countries where principals' reported stronger educational leadership than the OECD average (Figure 3).

Figure 3. Correlations between the responsibilities for school governance and science performance, by index of educational leadership (2015)

Results based on system-level analyses



Note: The responsibilities for school governance are measured by the share distribution of responsibilities for school governance in PISA 2015 Table II.4.2; Results based on 26 education systems where the index of educational leadership is below the OECD average, and 44 education systems where it is above the OECD average; Statistically significant correlation coefficients are shown in a darker tone.
Source: OECD (2016[23]), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, http://dx.doi.org/10.1787/9789264267510-en, Figure II.4.10.

32. The benefits of budgetary devolution therefore likely depend on schools' ability to use their autonomy in a constructive way and to deal with the related challenges. This requires investment in school leadership, as well as adequate administrative and technical support. Training on time-management skills, which are comparatively easy to impart, could help leaders resolve tensions between pedagogical and administrative leadership responsibilities, increase their time spent on tasks deemed to be of high priority and reduce stress (OECD, 2019[5]). As schools administer their own funds, they need to set up budgeting and accounting systems, manage contracts and vendors, and discuss resource matters with the school community. Some systems, such as **England (United Kingdom)** provide practical support to schools to fulfil such responsibilities and improve efficiency in spending (e.g. on non-staff goods and services) (Box 2).

Extending the budgetary responsibilities of schools requires strategies to mitigate potential inequalities and to hold schools accountable over resource use

33. Furthermore, if school autonomy is not to exacerbate inequities across schools, a comprehensive regulatory and institutional framework needs to be in place (Bullock and Thomas, 1997[22]). Building capacity for resource management tasks is particularly challenging for small schools and those in disadvantaged circumstances. One way to reduce potential inequities is to extend budgetary autonomy selectively to schools with sufficient capacity or to pool administrative resources across multiple schools (e.g. sharing human resources, facilities and back-end infrastructure). The school associations established in the **Flemish Community of Belgium** provide a good example of collaborative platforms that promote cost savings across schools by allowing them to share resources. While the formation of and participation in school communities is voluntary, the government provides incentives in the form of additional staff resources that can be shared between the schools of an association (OECD, 2017[4]).

34. Finally, extending schools' budgetary autonomy needs to be accompanied by effective monitoring and evaluation processes to ensure that funds are used in line with overall objectives and that all students receive a high-quality education. School boards can play a key role in local monitoring and in providing horizontal accountability, and should be supported through guidance, resources and information. Approaches to school evaluation should consider how schools use their funds to promote the general goals of the school system and student learning and development. Countries with a large degree of school autonomy should also encourage the dissemination of information about school budgets together with information about school development plans and other activities at the school (OECD, 2017[4]).

Box 2. Initiatives to support schools in their resource management responsibilities and increase the efficiency of non-staff spending in England (United Kingdom)

England (United Kingdom) has launched multiple initiatives to support schools in their resource management and increase the efficiency of school's non-staff spending in a period when many of them are facing budgetary pressures.

The **Schools' Buying Strategy**, launched by the Department for Education in 2017, has sought to support schools in saving on their non-staff-expenditure and to point them to various tools and advice for school leaders and financial administrators (typically "School Business Managers"). As part of a wider effort to advance the professionalisation of schools' financial staff, the ministry brought together best-practice guidance and practical support such as templates for each step of an effective procurement procedure. The tools provided by the ministry also include an online benchmarking system

that allows schools to compare their overall spending patterns and specific expenditure lines with those of similar schools to identify inefficiencies and cost-saving potentials.

Since many schools have difficulties procuring a wide range of goods and services in a complex market environment, the ministry has offered them the opportunity to take advantage of nationally agreed rates and benefit from economies of scale through so-called "**National Deals**" – framework agreements. These national deals give schools an opportunity to save on their existing contracts for, among others, water and electricity; software licenses; and Information and Communication Technologies (ICT) supplies. The National Deals programme also offers interest-free loans to fund energy-saving improvements and the popular Risk Protection Arrangement, which provides schools with a cheaper alternative to commercial insurance providers.

By April 2020, the Schools' Buying Strategy had secured savings of GBP 425 million, and was being evaluated and revised based on lessons learned during implementation.

Source: Adapted from OECD (2018[6]), *Responsive School Systems: Connecting Facilities, Sectors and Programmes for Student Success*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264306707-en; Department for Education (2021[24]), *Schools' Buying Strategy*, London, https://www.gov.uk/government/publications/schools-buying-strategy (accessed on 10 January 2022).

Establishing the overall approach to school funding

35. Different mechanisms can be used to allocate funding in school education, whether this is between different levels of the education administration or to individual schools.

36. As a basic principle, a funding model needs to ensure that resources are allocated in a transparent and predictable way. A stable and publicly known system to allocate public funding allows schools and authorities to plan their development in the coming years. At the same time, a degree of flexibility in funding is also necessary to respond to unforeseen needs, such as changes in student enrolment (e.g. through negotiations in the application of funding rules or an adjustable component) (OECD, 2017[4]). Even a small decrease in student numbers can result in a decrease of funding for staff salaries, which remain fixed. Flexibility is also provided through human resource management tools, such as working time (e.g. full-time and part-time work) and contract conditions (e.g. permanent and temporary employment) (OECD, 2019[5]).

37. In designing a funding allocation model that best fits the school system's governance structures, school systems need to consider a series of questions that are discussed in the following.

The overall approach to school funding needs to balance regular funding to schools and targeted funding to support given objectives

Targeted funding has the potential to support specific policy objectives…

38. Besides the distribution of responsibilities for school funding and the conditions that are attached to different funding allocations, an important consideration is to determine how much of the public funding for schooling will be distributed via the main allocation mechanism and how much via other mechanisms, such as targeted funding offered via special programmes. The main allocation mechanism refers to the regular funding to cover the payroll of staff as well as other determined expenditures, typically based on student enrolment, but also other factors depending on policy goals (OECD, 2017[4]).

39. While the funding of special programmes has its drawbacks, funding mechanisms external to the main allocation offer a certain degree of flexibility to the overall funding model and can support specific

policy objectives and pilots of innovative practice. Targeted programmes can also help to compensate for inequities, especially if combined with a stable funding allocation that promotes equity. Other arguments for retaining a proportion of funding at a more central level for targeted programmes include: the need to respond to short term or emergency expenditures occurring unevenly across schools (e.g. structural repairs); to support emerging needs (e.g. digital learning, tutoring interventions); and to ensure the adequate provision of services (e.g. in-service training for staff, availability of support staff) (OECD, 2017[4]).

40. A number of countries have employed targeted programmes for different purposes (e.g. to support mainstreaming of students with special educational needs or to support rural schools) (Box 3). During the COVID-19 pandemic, a range of targeted programmes have been used to bridge equity gaps. Across OECD countries, subsidies for devices (personal computers, laptops) were the most common measure to target populations at risk of exclusion from distance education platforms. Some countries also provided financial incentives and support to vulnerable students, such as for food or transport (OECD, 2021[25]). Programmes to minimise declines in achievement due to remote learning have also been instituted (Box 3).

…but should be used in adequate balance vis-à-vis regular funding

41. At the same time, there is an argument that efficiency is improved, the greater the proportion of funding that is provided through the main allocation mechanism for different areas of spending. In **England (United Kingdom)**, for example, the central funding mechanism was found to be more efficient as a greater proportion of overall funding was delegated to schools, excluding only major capital expenditures and a few local services from the main funding allocation. This was coupled by a requirement that the major proportion of local funding formula be driven by student numbers and characteristics (OECD, 2017[4]).

42. An excessive reliance on targeted funding can result in overlaps and create a lack of predictability about future resource allocations. While targeted programmes allow for better steering and monitoring of resource use, this comes along with greater transaction costs and an administrative burden. The accumulation of numerous targeted funds can moreover lead to a piece-meal re-centralisation of funding, increase complexity and reduce transparency in school funding. Indeed, the use of targeted funding – external to the main allocation – seems to be linked to governance challenges, and appears to increase with a perceived lack of clarity on how funding is used at sub-central or school levels (OECD, 2017[4]).

43. The OECD School Resources Review thus highlighted the importance of striking a balance between regular and targeted funding to achieve the goals of the funding system more efficiently and simplify the funding system overall. This includes decisions about the best mechanism to support equity and channel extra resources to student groups with additional needs. There are arguments to reduce transaction costs by including adjustments for particular student groups within the major part of the funding allocation to promote equity rather than relying on targeted funding (OECD, 2017[4]).

Box 3. Examples for targeted funding for specific programmes in select countries

Programmes to promote policy objectives and priorities

- In **Colombia,** the education ministry is the main institution that plans, manages and supervises the financing of public education. The ministry can also support initiatives in the school system, according to government priorities and financed by the ministry's investment budget. In the past, financing has promoted teacher development as well as initiatives related to rural education.

- In the **Czech Republic**, a number of specific education grants are used to fund specific experimental or piloting programmes and new educational initiatives, often developed or proposed at a local level. If these programmes show positive outcomes, they may eventually be integrated into the mainstream financing scheme.
- In **England (United Kingdom)**, schools serving disadvantaged students receive resources through a targeted programme (Pupil Premium), in addition to their regular funding allocation. They are free to spend these according to their needs but are also held accountable for their decisions.
- In **New Zealand**, the education ministry funds schools (which are administered by boards of trustees) directly, but may also provide targeted services and programmes. For instance, the ministry funds a dedicated learning and behaviour service (Resource Teachers: Learning and Behaviour, RTLB) which is more efficient to provide across a number of schools, and covers educational support, release time for classroom teachers, and professional development in behaviour management or curriculum development.

Programmes to minimise declines in achievement due to remote learning during the COVID-19 pandemic

- In **France** the programme "Learning Holidays" was implemented in 2020 and 2021 to support students that may have been particularly affected by school closures. This initiative builds on co-operation with local authorities and associations, and has two main objectives: 1) educational (addressing learning gaps and reducing the risk of dropout); and 2) social (ensuring children's access to enriching experiences during summer vacations).
- In **Portugal**, all public schools have been able to apply for additional resources under the umbrella of the "*Plano 21|23 - Escola+",* a programme with more than 40 measures for educational recovery.

Sources: OECD (2021[25]), *The State of School Education: One Year into the COVID Pandemic*, OECD Publishing, Paris, https://doi.org/10.1787/201dde84-en; OECD (2017[4]), *The Funding of School Education: Connecting Resources and Learning*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264276147-en, OECD (2019[5]), *Working and Learning Together: Rethinking Human Resource Policies for Schools*, OECD Publishing, Paris, https://dx.doi.org/10.1787/b7aaf050-en.

It is important to choose the right method to determine the amount of regular funding for schools…

44. Regular funding can be allocated to schools using broadly one of four main approaches, the use of which also differs depending on whether funding is allocated for current or capital spending:

- **Administrative discretion**, which is based on an individual assessment of the resources that each school needs. While it might involve the use of indicators, the final allocation might not necessarily correspond to the calculations and these would not be universally applied to all schools.
- **Incremental costs**, which consider 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). This approach is often combined with the use of administrative discretion, and both approaches are usually used in centralised systems.
- **Bidding and bargaining**, which involves schools responding to open competitions for additional funding offered via a particular programme or making a case for additional resources.
- **Formula funding**, which involves the use of objective criteria with a universally applied rule to establish the amount of resources each school is entitled to. 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 (OECD, 2017[4]).

45. Allocating funding based on the needs of a given school (i.e. administrative discretion and bidding and bargaining) is more direct than when based on a set of indicators of needs. However, when allocating resources to a large number of schools it is difficult to be aware of specific needs, and the distribution of funding on a discretionary or incremental basis is rarely efficient or equitable. When funding is allocated on a historical basis, this funds existing staff year after year and gives no incentives for schools to reduce their expenditures, increase their efficiency, or improve quality of provision. Historical funding provides stability and predictability, but it may also inhibit the expansion of schools with increasing demand, while supporting those whose development is lagging behind (European Commission/Eurydice, 2000[26]).

46. While administrative discretion plays an important role in the allocation of school funding in many countries, the use of formula funding is well suited to the distribution of current expenditure and many countries have introduced this. The use of formula funding provides a high degree of transparency to the allocation system and when linked to the number of students provides good forecasting of public expenditure (European Commission/Eurydice, 2000[26]). The transparency that a funding formula provides can have a beneficial impact on policy debates and help build general acceptance of a funding model as funding criteria and allocations can be scrutinised and debated. 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 (OECD, 2017[4]).

… and to regularly review funding mechanisms and establish implementation strategies when introducing new funding mechanisms

47. Managing the effective implementation of new funding mechanisms is also key. When a decision is made to introduce a new funding allocation mechanism, an excellent design of the mechanism is not enough. There will always be winners and losers when changing an existing funding model unless additional resources are made available (OECD, 2017[4]).

48. In **Austria**, for example, the introduction of socio-economic criteria into the existing formula to distribute resources was a topic of much debate. While social partners supported the introduction of an index-based resource distribution, some provinces with a large share of rural schools were opposed to this change since it would likely have resulted in the redistribution of funding from rural to urban schools. As part of a major school reform in 2017, the education ministry was given the possibility to set socio-economic index into the resource allocation, but this required the introduction of regulations. In **England (United Kingdom)** and **New Zealand**, funding model changes have been controversial as well (OECD, 2017[4]).

49. Experiences in many countries thus highlight the importance of effectively managing the political economy of reform and of having a realistic estimate of its implementation costs. Adequate stakeholder consultation is important to increase the perceived fairness of an allocation system and can help ensure that funding mechanisms respond to challenges that were not anticipated. For instance, the introduction of a new funding model based on per capita financing can set incentives for efficiency and balanced student-teacher ratios. However, where the school-age population declines, systems may be faced with pressures to keep existing teaching staff on the payroll or to find them alternative employment in the school system in practice. In such contexts, securing additional funding for teacher redundancy packages in advance may then be an important factor for success (OECD, 2017[4]; OECD, 2019[5]).

50. Example for the costs of implementation come from Australia and the Flemish Community of Belgium. In **Australia**, the government explicitly made the promise that no school would lose funding when responding to a major review of the country's funding model. The aim of the review was to better ensure adequate funding for students with greater educational needs. As such, the government needed to commit significant additional resources to implement the reform. In the **Flemish Community of Belgium**, changes to the system for distributing operating grants and staffing went in line with substantial increases in the overall budget.

51. The OECD School Resources Review has also highlighted the importance of conducting periodic reviews of funding allocation mechanisms to ensure they remain optimal. The experience of countries that engaged in such reviews, such as **England (United Kingdom)** and the **Flemish Community of Belgium** suggest some common procedural and design aspects. There is typically a substantive role for an independent body (e.g. existing independent agency or a panel of independent researchers) in providing recommendations for reform, with government officials providing administrative, data and analytical support. Other common elements include: a clear mandate for the review in terms of focus, scope and timeline as well as positioning within the broader policy context; information on mechanisms for collecting evidence (e.g. for stakeholder consultations, the analysis of funding in a sample of schools and research) (OECD, 2017[4]).

Current expenditure needs to be distributed in a predictable and transparent way

Funding formulas are a transparent mechanism to align the distribution of funding to schools with policy objectives…

52. Any funding allocation mechanism should be designed to fit the governance and policy context for the school system. In the allocation of funding for current expenditure, there may be different goals that are more important than others depending on the overarching policy objectives (OECD, 2017[4])

53. Funding formulas are used in many countries to distribute regular funding for current expenditure such as staff salaries. Through the weightings given to each of the main components included in the formula, funding formulas can be designed to support a balance of different policy goals (OECD, 2017[4]):

- Promoting equity – one of the most important functions of formula-based funding. To ensure horizontal equity (i.e. the like treatment of recipients whose needs are similar), the same basic allocation per student differentiated by grade can be allocated. To promote vertical equity (i.e. the application of different funding levels for recipients whose needs differ), differential amounts can be added to the basic allocation according to the assessed degree of educational need.
- Setting incentives for funding recipients and supporting particular policies (i.e. a directive function).
- Regulating the market (i.e. supporting school choice policies). The greater the proportion of funding that is allocated on a simple per student basis, the more this function will be emphasised.

54. While there is no single best practice funding formula, there are a set of principles that can guide the design of an effective formula. One major challenge lies in adequately reflecting 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 different adjustment components in the formula. However, a balance needs to be struck between a simple formula, which may fail to fully capture school needs, and a sophisticated one, which may be difficult to understand and discuss.

55. As a guide for designing formulas to better meet differing needs, research has identified four main components: 1) a basic allocation per student or per class that is differentiated according to the grade or stage of schooling; 2) an allocation for specific educational profiles or curriculum programmes (e.g. different vocational fields or special needs programmes); 3) an allocation for students with supplementary educational needs adjusting for different student characteristics or elements of disadvantage; and 4) an allocation for specific needs related to school site and location, adjusting for structural differences in operational costs, such as for rural areas with lower class size. Comprehensive and compelling analysis and empirical evidence on the exact cost differences can support policy discussions to adjust parameters included in funding mechanisms. Reliable evidence should be gathered on the adequacy of funding in general, and for specific elements that the funding mechanism aims to address (OECD, 2017[4]).

… and can be designed to set desirable incentives for schools

56. Funding formulas should also promote budgetary discipline at the local and school levels. Student enrolments will be an important factor determining resource allocations in all school systems to ensure sufficient teaching staff for the required instruction time. The required resources can be determined based on student numbers or the number of classes. Allocating funding on a per-student basis promotes competition and efficiency. At the same time, fixed costs do not diminish with the number of students. Per-student funding can therefore create pressures for schools with small or declining enrolments which have high numbers of staff for few students. To acknowledge that not all costs are linear, a funding formula can incorporate weights for smaller schools. Such an approach would keep the incentive for most schools to reduce the number of classes by raising class size, and target more resources to particular schools (OECD, 2017[4]; OECD, 2018[6]). Box 4 provides examples of some approaches to funding formulas in OECD countries.

57. Teachers' salaries (over which sub-central authorities or schools may have no control) will be a further important factor that determines the resources required to provide education. Some school systems therefore allocate funding based on some kind of estimation of average cost as part of their funding formula. Such systems: 1) provide a framework for balancing actual teacher salary expenses with the amount of funding available to pay for staff and 2) can act in an equalising way as they promote similar staffing levels across schools. In Estonia and Lithuania, for example, average teacher salaries have been important input variables in the formula determining resource allocations (OECD, 2017[4]; OECD, 2019[5])

58. To ensure funding formulas remain fit for policy needs (which may change), their periodical review is necessary. Identified improvements may include the need to increase or decrease the level of complexity in adjustments for student and school needs, as well as the weight of formula-based funding relative to targeted funding programmes within the overall funding envelope (OECD, 2017[4]).

Box 4. Examples for formula-based funding to schools in select jurisdictions

- **The Netherlands** have introduced formula-based funding for both primary and secondary education. Since a reform in 2019, the equity funding for primary education estimates the risk of students' disadvantage on the basis of an indicator, which consists of five background characteristics: the level of education of both the mother and the father, the country of origin of the parents, whether parents are in debt restructuring, the duration of the mother's stay in the Netherlands, and the average level of education of mothers of students at school. Schools receive additional resources for students belonging to the 15% with the greatest estimated disadvantage. The additional budget for secondary schools used to be calculated based on the number of students whose parents have a weak educational background and the socio-economic characteristics of the schools' neighborhood. A new indicator for secondary education is currently being developed, similar to the indicator for primary education. The Dutch equity funding system is an example of an encompassing index-based approach, although the share of index-based funding as percentage of total education funding is relatively low (about 4.5%).
- **Toronto (Canada)** applies a "Learning Opportunities Index" (LOI) to govern the distribution of resources across schools in the municipal school district. The funding needs of schools are evaluated based on six variables: 1) Median income in the students' residential area; 2) the share of low-income families in a particular area; 3) the share of families receiving social assistance; 4) the share of adults without high school diploma; 5) the share of adults with a university degree; and 6) the share of single parents. Students are matched to neighbourhoods

based on postal codes. Similar to the Netherlands, the share of resources distributed according to the needs-based formula only amounts to about 5% of total education spending.

- The **Swiss canton of Zurich** uses a social index to distribute teaching resources across schools since 2004/05. The social index contains three elements based on official statistics: first, the share of foreigners (not counting foreigners from Austria, Germany and Liechtenstein), the share of children receiving social assistance, the share of tax payers with a low income. Different from the other indices, this index does not provide additional resources for disadvantaged students, but uses the index to distribute regular teaching resources.

Source: Nusche, D., et al. (2016[27]), *OECD Reviews of School Resources: Austria 2016*, OECD Publishing, Paris, https://doi.org/10.1787/9789264256729-en.

… but indicators to distribute funding to schools need to be carefully selected

59. The OECD School Resources Review has revealed the importance of paying adequate attention to the choice of indicators for allocating funding and understanding the technical and analytical demands that the design of effective allocation mechanisms requires. This applies to funding systems using both funding formulas and other methods for allocating funding, which typically take different criteria into account when distributing funding, even if the same criteria are not used systematically (OECD, 2017[4]).

60. A range of different indicators can be used to determine the proportion of students with identified needs for additional resources. For instance, area-based funding aims to address the additional negative effects that socio-economic disadvantage has when it is concentrated in a particular geographical area. However, such approaches risk leaving out a proportion of the disadvantaged population and include many individuals who are not disadvantaged. There is also evidence that the "target area" label can be stigmatising and encourage flight of middle class families from these areas. As a result, there has been a broad shift to using indicators that are more specific to the actual population in the school (OECD, 2017[4]), as illustrated in Box 5.

Box 5. Initiatives to account for school-specific student characteristics in the allocation of funding: Examples from the French and Flemish Communities of Belgium

- In the **French Community of Belgium**, the socio-economic index (*indice socio-économique*) is based on the student's residential area, using indicators such as income, qualification level and unemployment rate. This is reviewed every five years. School leaders report this information in January of each year and this is centrally verified and each student is attributed a value on the socio-economic index. The average for each school is calculated and then schools are ranked according to their average socio-economic index value, with the bottom quartile of schools with the lowest values qualify for additional teaching periods or funding allocation.
- The **Flemish Community of Belgium** uses a similar system to provide schools with additional resources to compensate for socio-economic disadvantage. The Flemish school financing system is designed to support equal access to educational opportunities for all students and to compensate for differences in students' backgrounds. To help schools meet the needs of students from diverse backgrounds, a part of the school operating grants are weighted for socio-economic status (SES). This weighing is based on factors that are strongly associated with educational outcomes – the mother's educational level, (foreign) language spoken at home, the

family's financial capacity, and the student's neighbourhood characteristics. Students' socio-economic characteristics are also used in the calculation and allocation of teaching hours to primary schools (primary and pre-primary education), and secondary schools receive a top-up of teaching hours based on such characteristics. The SES weights may enable remedial classes to be run, classes to be split, and teachers to be released for a range of pedagogical and support activities. In these ways the Flemish authorities seek to balance choice and autonomy with equity.

Sources: OECD (2017[4]), *The Funding of School Education: Connecting Resources and Learning*, https://dx.doi.org/10.1787/9789264276147-en; Nusche, D., et al. (2015[28]), *OECD Reviews of School Resources: Flemish Community of Belgium 2015*, http://dx.doi.org/10.1787/9789264247598-en.

61. In all cases, whether indicators target specific areas, schools or students, there is a trade-off between simplicity and transparency, on the one hand, and accuracy and fairness, on the other (Atkinson et al., 2005[29]). No perfect indicator exists. 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. In many countries there is an ongoing debate as to how many indicators of need can be included in funding allocation mechanisms. There are also examples where the use of simpler indicators did not make a large difference to schools' funding levels (OECD, 2017[4]).

62. The availability and quality of data is a key concern when compiling indicators. A major issue of many indicators used to allocate additional resources to areas and schools is the lack of up-to-date data. 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 are often simply classified as not eligible for free school lunch (Harwell and LeBeau, 2010[30]). Finally, an additional consideration when choosing indicators is selecting data that cannot be manipulated when there is incentive to inflate or deflate numbers in order to benefit from additional resources, thus giving greater integrity to the funding system (OECD, 2017[4]).

63. Many funding systems aim to strike a balance between using census-based and school-based indicators. For instance, one option is to use individually targeted funding for students with 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. Using census-based data as a proxy for individual student needs can be less accurate, but research can help choose the best proxy indicator or combination of indicators. The use of census-based data also holds the advantage of reducing any reporting burden on schools. All systems should make sure to regularly review the indicators used so they reflect evolutions in data systems, and to build adequate technical and analytical capacity for the design, implementation and maintenance of an effective allocation mechanism (OECD, 2017[4]) (Box 6).

Box 6. Reviewing indicators used for the allocation of funding to schools: the French and Irish experiences

- In **France**, a new model for allocating teaching resources from the Ministry of National Education to the regional level – organised in the form of regional *académies* – for public secondary education was introduced in 2020/21. At the core of the model, teaching resources are allocated annually, taking into account available budgetary resources, changes in student

numbers, the impact of specific policy measures, and local needs (including socio-economic factors, school size, location and educational offer). This reform followed earlier changes to resource allocations for primary education (Le Laidier and Monso, 2017[31]). A new methodology and indicators were chosen, based on input by the ministry's Department of Evaluation, Foresight and Performance (DEPP) and involvement of selected regional authorities in a working group. The changes sought to address concerns that the existing model did not sufficiently reflect regional differences, account for educational inequities, or provide transparency in final resource allocations. In lower secondary education (*collèges*), the previous social criterion did not sufficiently correct for social disadvantage, while such a criterion was missing in the case of upper secondary education (*lycées*). Differences in resource needs between different vocational programmes were also not accounted for. Following technical work between 2015 and 2019, a prototype of the new model was discussed with the regions before finalisation. The new model calculates teaching hours for each school, which are then aggregated to a regional level. This better accounts for the heterogeneity within regions and provides a more stable parameter for resource allocations. It includes criteria related to students' socio-economic background (based on a social position index calculated by parents' socio-professional status and the share of students receiving grants) as well as schools' structural characteristics (such as programme offer, size and remoteness). Using two sources of information for the socio-economic criterion makes targeting to territorial contexts more accurate. Both types of variables – socio-economic and structural – are now almost exclusively continuous rather than categorical, eliminating previous threshold effects. The model is expected to evolve over time as new variables become available or others are deemed less important (Evain and Monso, 2021[32]).

- In **Ireland**, the government undertook a review of the basis used to determine the allocation of additional supports to schools with high concentrations of learners at risk of educational disadvantage through the country's Delivering Equality of Opportunity in Schools (DEIS) programme. The review highlighted the potential to exploit general developments in data collection in the public sector to improve the standardised system for identifying levels of disadvantage in schools, and reduce burden on schools to report data and the central education authorities to control data quality. The review underlined the importance of adequate resources within the education ministry to support the data collection and analysis functions associated with the identification methodology. In 2017, as a proof of concept, the new methodology was used to extend the DEIS programme to 79 additional schools. An extensive body of work has been undertaken since then to refine the methodology and it will be used to further extend the programme to additional schools with the highest levels of concentrated disadvantage from 2022 (OECD, 2017[4]).

Sources: Evain F. and O. Monso (2021[32]) , "La rénovation du modèle d'allocation des moyens d'enseignement dans le second degré public", in *Education et formations* n° 102, DEPP, pp . 235-260, available at https://www.education.gouv.fr/les-territoires-de-l-education-des-approches-nouvelles-des-enjeux-renouveles-education-formations-323741 (accessed on 18 January 2022). Le Laidier S. and O. Monso (2017[31]), "L'allocation des moyens dans le premier degré public : Mise en œuvre d'un nouveau modèle", in *Education et formations* n° 94, DEPP, pp . 59-89, available at https://halshs.archives-ouvertes.fr/halshs-01699266 (accessed on 19 January 2022).
Adapted from OECD (2017[4]), *The Funding of School Education: Connecting Resources and Learning*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264276147-en.

Capital expenditure needs to be distributed in ways that promote an equitable access to capital funding and the efficient management of investments

Countries typically rely on different funding streams for capital investments in school education

64. Although – compared to staff salaries – a relatively small share of educational expenditure is devoted to physical resources, funding for educational materials and the construction and maintenance of school buildings is one of the most significant investments in public infrastructure. Together with the effective management and steering of the school network in line with evolving needs, the mechanisms by which capital and maintenance funds are distributed play an important role in ensuring that these funds are used effectively and reach the areas and school facilities most in need of investment (OECD, 2018[6]).

65. Many systems use different funding streams to distribute funding for the construction of new schools, the expansion of established schools, or the renovation of existing facilities. While funding for current expenditure is usually allocated using different types of annually recurrent grant allocations, capital expenditure grants are more commonly allocated through ad-hoc grants or investment programmes. In some countries, funding from international agencies such as the European Commission's Structural Funds or the Inter-American Development Bank complements these national sources of infrastructure funding (OECD, 2018[6]; OECD, 2017[4]).

66. Box 7 illustrates some OECD countries' approaches to funding construction projects, maintenance or renovation through infrastructure investment programmes.

Box 7. Infrastructure investment programmes in select countries

- Following the 2007 global financial crisis, **Australia** launched a federal investment programme, Building the Education Revolution (BER), which provided AUD 16.2 billion in earmarked grants to fund infrastructure projects and the construction of primary and some secondary schools. The programme was intended to provide an economic stimulus to local communities and generated 23 675 construction projects delivered by 22 government and non-government education authorities (Commonwealth of Australia, 2011[33]).
- In **Austria**, long-term school development programmes (*Schulentwicklungsprogramm*, SCHEP) support the modernisation of the infrastructure of schools under federal administration, typically over periods of 5 to 10 years, and based on principles of results orientation, transparency and efficiency. The investments are transferred to the owners of school buildings, mostly the Federal Real Estate Company (*Bundesimmobiliengesellschaft*) and municipalities, via increased rental payments. Funding allocations are based on medium- and long-term prognoses for infrastructure needs developed with bottom-up input. The current programme (SCHEP 2020) provides EUR 2.4 billion for the period 2020-2030 to upgrade the federal school infrastructure in line with new pedagogical requirements (e.g. digital learning, all-day school), ecological considerations and spatial-demographic developments. A total of about 270 projects is envisaged (BMBWF, n.d.[34]).
- In **Chile**, a national Strategic Plan for School Infrastructure (*Plan Estratégico de Infraestructura Escolar*) made available an estimated investment of over USD 500 million to upgrade the school infrastructure between 2014 and 2018. The plan was based on an assessment of the state of infrastructure conducted between 2012 and 2014 that had identified serious shortcomings in a considerable share of existing school facilities (OECD, 2019[18]).

- As part of a national policy to extend the school day, **Colombia** has put in place a National Infrastructure Plan to create the necessary infrastructure requirements. To secure the resources to finance infrastructure and equipment, an Educational Infrastructure Fund (*Fondo de Financiamiento de la Infraestructura Educativa*, FFIE) was created, which seeks to consolidate resources from different sources, manage them efficiently, and prioritise projects with the greatest potential impact. The fund announces public bids for regional and local education authorities to put forward their investment projects, which are then co-financed nationally (MEN, n.d.[35]).

Sources: Commonwealth of Australia (2011[33]) Building the Education Revolution Implementation Taskforce: Final Report; BMBWF (n.d.[34]), Schulbau, https://www.bmbwf.gv.at/Themen/schule/schulsystem/schulbau.html (accessed on 06 December 2021); OECD (2019[18]), *Education Policy Outlook 2019: Working Together to Help Students Achieve their Potential*, https://dx.doi.org/10.1787/2b8ad56e-en;MEN (n.d.[35]), Fondo de Financiamiento de Infraestructura Educativa, https://ffie.com.co (accessed on 03 December 2021).

Funding allocations for capital expenditure are often based on an ad-hoc assessment of needs, providing flexibility to redress infrastructure needs…

67. In contrast to funding allocations for current expenditure, the level of capital expenditure grants is rarely determined using a funding formula. The value of capital resources fluctuates over time as they deteriorate and age or benefit from maintenance works and renovation. As a consequence, there are significant differences in the state and value of fixed assets and the associated need for capital funding across sectors and individual schools, which must to be taken into account when allocating funding for capital expenditure (European Commission/Eurydice, 2000[26]; OECD, 2018[6]).

68. Instead, the level of capital funding is typically based on an assessment of needs or administrative discretion, which commonly involves efforts to target funding to schools with the greatest need for renovations or emergency repairs. Some school systems also allocate capital funding on a competitive basis and many local authorities ask schools to provide an application dossier based on which their requests for financial support are assessed. Regular surveys assessing the condition of school buildings can support authorities in identifying the magnitude of overall and school-level needs and in evaluating the effectiveness of their interventions. Improved data on site conditions can inform the allocation of funding, and strengthen the education ministry's evidence base in inter-ministerial budget negotiations (OECD, 2018[6]).

… but potentially creating inequities in access to capital funding

69. While these funding mechanisms provide the requisite flexibility to redress the greatest infrastructural needs as they arise, they often require technical capacity and experience on the part of schools or local authorities, which can exacerbate inequities. Even if they succeed in accessing capital funding, some authorities may lack the means to effectively manage large infrastructural developments, procurement processes and the purchase of materials and services. This also applies to access to international sources of funding, which require capacity to apply for project resources and to then absorb and use funding at the local level. To ensure a fair distribution of capital funding, funding mechanisms should minimise barriers for recipients with less technical expertise. Central guidelines can reduce the costs of planning procedures and help ensure that quality standards and policy objectives are met (OECD, 2018[6]).

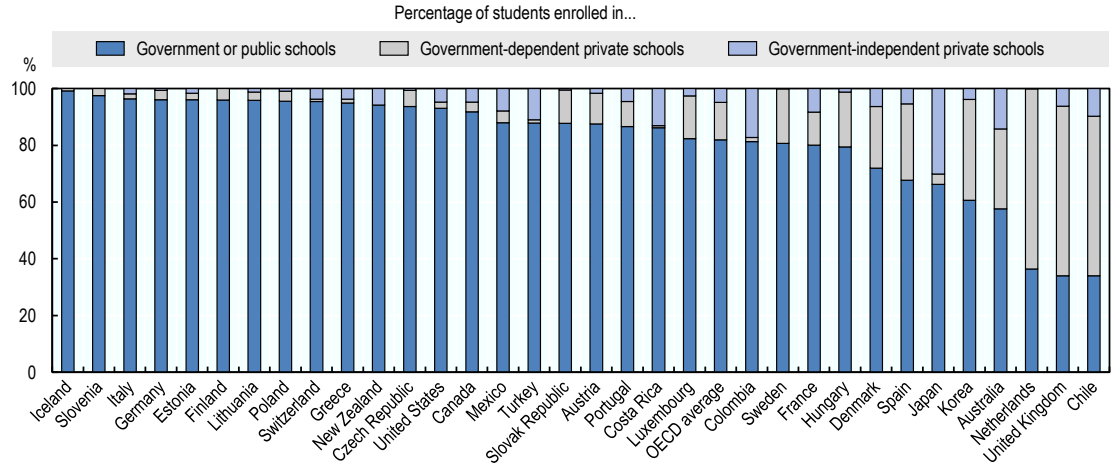
Setting regulatory frameworks for the public funding of private providers

The public funding of private providers seeks to improve choice and efficiency…

70. Over the past 30 years, more than two-thirds of OECD countries have introduced measures to increase school choice (Musset, 2012[36]), often by publicly funding private providers and letting students and families decide which schools to attend. Financial support for private providers is usually embedded in parental choice systems in which public funding may "follow the students" to whichever eligible school they choose to attend, or be used to compensate parents for their expenses on private school tuition fees through vouchers or tax credits. These measures have resulted in some countries developing a substantial publicly funded private sector (OECD, 2017[4]; OECD, 2018[6]) (Figure 4).

71. The public funding of private schools may be motivated by a range of different arguments whose relative importance varies across national contexts (for a review, see (Boeskens, 2016[37])). In some countries the policy focus is primarily on guaranteeing the rights of families to send their children to the school of their preference, free of legal restrictions or financial barriers. In other countries, there is greater focus on macro level arguments supporting that such subsidies can provide incentives for schools to improve quality, stimulate greater diversity in the educational offer or encourage innovative pedagogical and governance arrangements that will increase efficiency and improve learning outcomes in the long run (OECD, 2017[4]; OECD, 2018[6]).

Figure 4. Student enrolment in public and private schools (2018)



Note: Countries are ranked in descending order of the percentage of students enrolled in government or public schools.
Public schools are those managed by a public education authority, government agency, or governing board appointed by government or elected by public franchise. Government-independent private schools are those funded mainly through student fees or other private contributions (e.g. benefactors, donations); government-dependent private schools are privately managed schools that receive more than half of their funding from government sources
Source: Adapted from OECD (2020[38]), *PISA 2018 Results (Volume V): Effective Policies, Successful Schools*, https://doi.org/10.1787/ca768d40-en, Figure V.7.2.

…but there are risks of increasing social segregation and harming the public system

72. Experience from different countries indicates that the impact on equity and educational quality of publicly funding private providers is influenced by the institutional arrangements in which they are embedded (OECD, 2017[4]; OECD, 2018[6]). In particular, the conditions which private schools must fulfil in order to qualify for public funding are central to the successful governance of school choice systems.

Among these eligibility criteria, private schools' ability to select students and charge add-on tuition fees are particularly salient concerns. Allowing subsidised schools to select their students based on prior performance, aptitude tests or socio-economic background raises a number of concerns pertaining to both equity and educational quality (OECD, 2017[4]).

73. Selective admission permits private schools to "cream skim" high ability students from the public sector. Since parents often mistakenly evaluate a school's quality based on its student composition, engaging in selective admission can allow schools to attain a competitive advantage without actually improving their educational provision. Selectivity threatens to exacerbate student segregation between the public and private sectors and can widen existing achievement gaps. This process threatens to deprive the public school system of high ability students, which is likely to harm those who are left behind and deplete public schools of vital resources since disadvantaged students may have greater resource needs (Boeskens, 2016[37]). In addition, school choice systems that permit private schools to demand significant parental contributions above and beyond the amount covered by the public subsidy risk exacerbating socio-economic segregation across schools (OECD, 2017[4]).

To mitigate this risk, adequate regulatory frameworks are required for the public funding of private providers

74. To mitigate risks to equity, it is important that all publicly funded providers are required to adhere to the same regulations regarding tuition and admission policies, and that compliance with these regulations is effectively monitored. In order to ensure that vouchers and other forms of public funding increase the accessibility of private schooling options, regulations should prevent subsidised private schools from charging fees that could constitute a barrier to entry. Also, in order to ensure that school choice improves access to high quality education rather than leads to selectivity and "cream skimming", governments should regulate admission procedures and ensure that private providers adhere to the same standards of selection as public schools. Admission practices for oversubscribed schools should therefore be transparent and homogenous across school sectors. The use of lottery systems to assign places in oversubscribed schools or formulas aimed at maintaining a diverse student composition could be considered (OECD, 2017[4]).

75. Moreover, adequate accountability and transparency requirements are also important to ensure that subsidised private schools serve the public interest in providing high quality education, and to provide parents with the information they need to evaluate different schools' processes and outcomes. Finally, these measures need to be complemented with initiatives to raise awareness of school choice options, improve disadvantaged families' access to school information, and to support them in making better-informed choices (OECD, 2017[4]).

Questions for discussion

- What are the main challenges in governing and distributing school funding in your country? What strategies for distributing responsibilities for school funding and allocating resources are used to face those challenges?
- Are reforms being envisaged in your country to the governance and distribution of school funding? What is motivating those reforms and what are they trying to achieve?
- How do the finance and education sectors interact and collaborate in the governance and distribution of school funding in your country? How could such collaboration be strengthened in these areas?

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