



# Serbia

## SCHOOL FINANCE

SABER Country Report  
2012

### Policy Goals

**1. Ensuring basic conditions for learning**

There are policies in place to provide basic educational inputs and performance goals in education show ambition

**2. Monitoring learning conditions and outcomes**

Current monitoring systems do not track most learning conditions in schools; national large-scale student achievement assessments occur, but frequency and coverage are too low

**3. Overseeing service delivery**

Mechanisms monitor the availability of physical resources, but not how many days students are in school; there are systems to encourage teacher attendance, but substitute teachers are not provided when absences do occur

**4. Budgeting with adequate and transparent information**

The budget is informed by detailed forecasts of education expenditure but not explicit criteria; budget documents present adequate information, but some reports are not publicly available

**5. Providing more resources to students who need them**

System-wide policies provide additional resources to support students with disadvantaged backgrounds and special needs, but methods to identify these students do not follow best practices; fees for primary and secondary schooling do not exist

**6. Managing resources efficiently**

Open competition is the default method of procurement, but personnel and payroll databases are only updated once or twice a year; reporting procedures for internal audits do not involve outside authorities

### Status

Advanced



Emerging



Established



Established



Established



Emerging



## Introduction

In support of the multi-annual efforts of the Government of Serbia to advance financing policies and practice in the education sector, the World Bank conducted a review of policies related to school finance along the SABER-School Finance framework. School finance policy goals are observed in the following areas: the basic conditions for learning, monitoring learning conditions and outcomes, overseeing service delivery, budgeting with adequate and transparent information, providing more resources to students who need them, and managing resources efficiently.

The Serbia Report for 2012 is one of the first national reports under the global benchmarking exercise of the World Bank—Systems Approach for Better Education Results (SABER) in the area of school finance, aimed at outlining policies that drive performance in a school finance system.

*This report presents findings on the strengths and weaknesses of the school finance system in Serbia. It discusses the need to use more efficiently the public expenditure available for education in the country, and it looks at the policy goals in financing public education more broadly.*

*How money is spent, not simply how much, matters in education finance. All education systems rely on financing to function, but the characteristics and actions of a successful school finance system are not always clear. The precise relationship between spending and learning outcomes in education is unknown, which leads some researchers and policy makers to question whether the amount of spending in education matters at all (Hanushek 1986). Among countries with similar levels of income, those that spend more on education do not necessarily score higher on international assessments. Even within an education system, student achievement varies among localities that spend comparable amounts (Wagstaff & Wang 2011).*

*Understanding how to use resources for education wisely should be a top priority for all education policy makers. Although the availability of financial resources does not guarantee quality education, it is impossible to*

achieve this goal without adequate resources (Reschovsky & Imazeki 2001). Education spending comprises a large share of government budgets—particularly in low-income countries, where 18 percent of public expenditures, on average, is devoted to education (EdStats 2011). Wealthier countries also contribute substantial shares to education. Middle income countries spend about 16 percent of public expenditure on education and high income countries spend about 14 percent, on average (EdStats 2011). Governments are responsible for using these public funds in a way that promotes learning, especially given the shrinking budgets produced by the recent economic crisis.

## Overview of SABER-School Finance

*The SABER-School Finance exercise under the Systems Approach for Better Education Results (SABER) informs the conversation about the policies that drive performance in a school finance system. This initiative of the World Bank collects, analyzes, synthesizes, and disseminates comprehensive information on school finance policies in pre-university education across a range of different education systems. The goal is to enable policymakers to learn about how other countries address the same policy challenges related to school finance and, thus, how to make well-informed policy choices that will lead to improved learning outcomes. The exercise primarily examines education finance policy, not its implementation, due to the nature of the data collection process, which involves key informants and official document review<sup>1</sup>.*

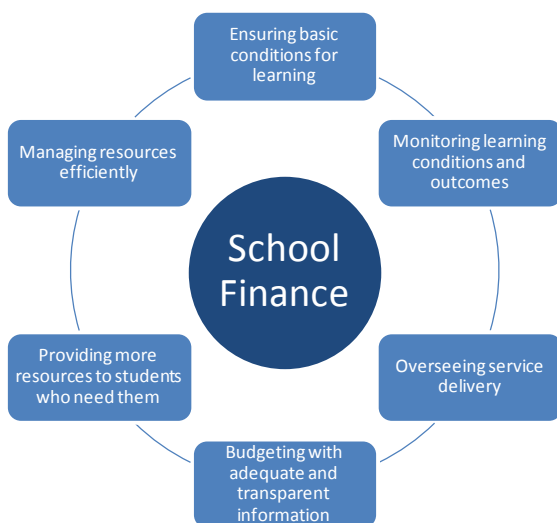
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<sup>1</sup> Education finance policy may include budget documents, national education policies, official processes, funding mechanisms, and other formal guidelines that influence school finance systems. When possible, the exercise incorporates complementary research that assesses policy implementation, which requires a different methodological approach and more resources.

To describe the essential functions of an education finance system, information is collected in five areas: (i) School Conditions and Resources (ii) allocation mechanisms; (iii) revenue sources; (iv) education spending; and (v) fiscal control and capacity. These areas follow resources for education throughout the complex funding cycle, although the activities do not necessarily occur sequentially.

After identifying how a particular education finance system functions, the focus moves to the extent to which it effectively provides resources so that all children can learn, using six policy goals widely shared across countries: (i) ensuring basic conditions for learning; (ii) monitoring learning conditions and outcomes; (iii) overseeing service delivery; (iv) budgeting with adequate and transparent information; (v) providing more resources to students who need them; and (vi) managing resources efficiently (see Figure 1). These policy goals reflect practical ways that school finance systems can follow three well-known foundational concepts in school finance: adequacy, equity, and efficiency. Progress in each of these goals is measured by policy levers, which are actions a government can take to improve its education finance system.

**Figure 1: Policy Goals in School Finance**



This report characterizes and assesses the school finance system in Serbia along the above-described framework. The results reference comparator countries

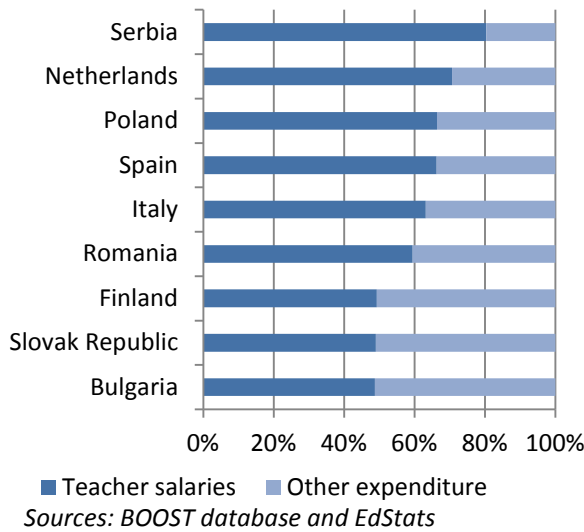
that were chosen based on a set of factors: (i) success on international assessments (Flemish community of Belgium, Finland, Hong Kong, the Netherlands, Ontario, United Kingdom, Chile (as a rapid improver)); (ii) regional proximity and similarity of the education systems (Croatia, Montenegro); or (iii) EU membership (Bulgaria, Italy, Lithuania, Poland, Romania, Slovenia, Spain).

Next sections of the report present detailed assessments of Serbia’s school finance system, and the final section summarizes findings and possible policy options.

### School finance in Serbia

In Serbia, the government financing is crucial to education since almost all primary and secondary schools are publicly financed and publicly managed. The Ministry of Education and Science directly controls teacher payroll at the central level, although local authorities finance about 10 percent of personnel expenditure. Serbia spends about 80 percent of education expenditure from all revenue sources on teacher salaries, more than comparator countries (See Figure 2). Teacher salary levels are established through collective bargaining between the Teachers’ Trade Unions, the Ministry of Education and Science, the Ministry of Finance, and its Treasury Administration.

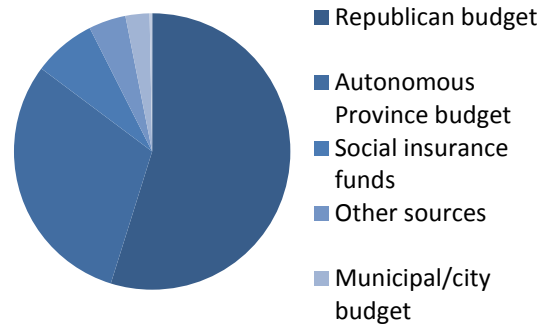
**Figure 2: Education expenditure on teacher salaries**



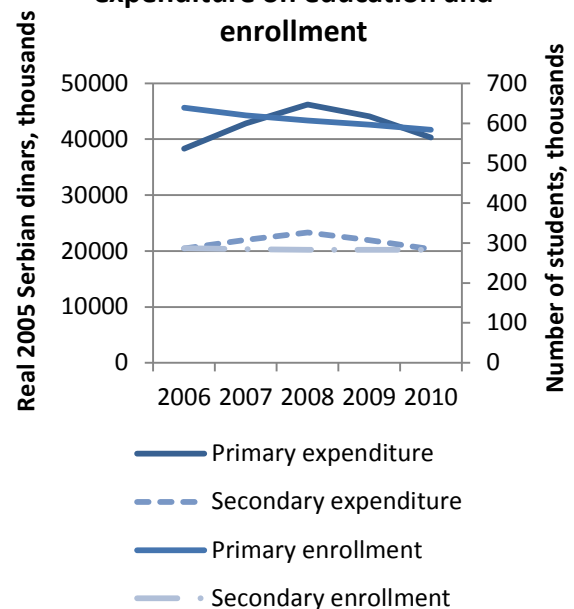
The Ministry of Education and Science and the Ministry of Finance jointly plan and monitor the education budget at the central (Republican) level. Just over half of the education budget is financed by the Republican budget, and about a third is financed by local authorities. Resources from the Republican government are transferred as earmarked for education to provincial governments, but not to municipalities. The Republican and municipal budgets comprise a larger share of the secondary budget than the primary budget. The remainder of the budget is financed by social insurance funds, municipal budgets, donations and other sources (see Figure 3). For all revenue sources, the budget for primary education was about three times the size of the budget for secondary in 2010, where primary education covers 8 while secondary education covers 3 or 4 grades of schooling<sup>2</sup>.

<sup>2</sup> In Serbia, primary education comprises of two education cycles, one from 1<sup>st</sup> to 4<sup>th</sup> grade, and the second from the 5<sup>th</sup> to the 8<sup>th</sup> grade. Secondary education covers the grades 9<sup>th</sup>-12<sup>th</sup>. In many other countries, the systems are classified as primary/basic covering 1-4, lower secondary covering 5-8 and secondary covering 9<sup>th</sup> grade and higher.

**Figure 3: Distribution of revenue sources for education expenditure in Serbia, 2010**



**Figure 4: Trends in public expenditure on education and enrollment**



From 2006 to 2010, the real public expenditure on primary and secondary education was increasing until 2008, when it started decreasing. As discussed below, the government's efforts to reduce level of public spending in education are linked to the overall pressure to cut on fiscal spending ever since the start of the crisis. Over the same period, primary enrollments declined slightly and secondary enrollments remained mostly constant (see Figure 4).

Since 2008, government efforts have been focusing on the medium-term structural reforms aimed at improving the efficiency of resource allocation in the sector. Several recent studies showed that there was scope for

reducing teaching staff (along with non-teaching staff) in schools without hampering the quality of education. Due to the Serbia's declining birth rate, the number of school age children has fallen. The number of teachers has not, at least not as fast, resulting in the extremely low student/teacher ratios in some classes. The studies show that some savings could be achieved merely by consolidating under-enrolled classes within the same grade in individual schools. Larger reductions could be achieved by closing or consolidating schools.

Government efforts to rationalize the school network have involved three initiatives: (i) the enforcement of the rules on minimum class sizes; (ii) the rationalization of the school network in primary education; and (iii) the education financing reforms leading to the introduction of per-student financing approach.

*The Ministry of Education and Science (MoES) began the enforcement of minimum class size norms for primary and secondary education in the 2009/2010 school year. For the 2009/10 school year, the standards were applied to the 1st, 5th, and 9th grades—the grades marking the start of every education cycle when re-organization of the classes makes most sense from a pedagogical point of view. In the 2010/2011 school year, these classes were kept intact as the students moved on to the 2<sup>nd</sup>, 6<sup>th</sup> and 10<sup>th</sup> grades, and the norms were applied to the incoming cohort of 1<sup>st</sup>, 5<sup>th</sup> and 9<sup>th</sup> graders. The Government continued this practice for the 2011/2012 school year, and will do so in 2012/13 until all grades 1-12 are subject to the minimum class size rule.*

*Because the minimum class size rule applies only to the schools with more than one class in the same grade, the program does not affect the Serbia's many small primary schools. It is, nevertheless, expected to have a fiscal impact. According to the MoES, the application of the minimum class size standards resulted in the closing of 658 classrooms in 2009/10, 533 classrooms in 2010/11, and 394 classrooms in 2011/2012, or about 5 percent of the total. As teachers are paid on the basis of teaching hours, this has had a corresponding effect on the wage bill. Extrapolating from these results, it is expected that roughly 2,400 classes—six percent of the total—will be closed due to classroom consolidation by*

the end of school year 2013/14, with a corresponding impact on staffing and wages in the sector.<sup>3</sup>

*The second aspect of the reform is aimed at rationalizing the school network itself. In 2010, the Parliament amended the law on education to require municipal councils to pass an “act on the consolidation of their school networks”<sup>4</sup>. Criteria for consolidation are defined in the new bylaw.<sup>5</sup> The bylaw requires each municipality to prepare a ‘plan for the number and territorial distribution of primary schools’ within its jurisdiction’. It sets out a total of fifteen ‘criteria’ that are to be used in preparing these plans. Among these is a stipulation that a primary school will only be considered a legal entity if: (1) it has a minimum of 400 students, or (2) it has less than 400 students but no other primary school exists within a 2 km-radius. Schools failing to meet these criteria would no longer be considered separate legal entities and would be merged with other schools in the same municipality. Although the bylaw would not affect rural primary schools (which tend to be more than 2 km apart), it would affect schools in urban areas, resulting in further reductions in classes and the corresponding reductions in teaching loads.*

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<sup>3</sup> To assess the impact of these measures, three of the 17 Regional School Administrations (RSA) were examined in detail: Belgrade (the largest RSA), Zrenjanin (a largely rural area in Vojvodina, where minority language requirements have a significant impact on class sizes), and Valjevo (a large rural area in central Serbia where teaching is done almost exclusively in the Serbian language). The number of full-time equivalent teachers and non-teacher personnel has dropped in all three RSAs (from -1.7 to - 2.9 percent) despite simultaneous measures that imply increasing staffing requirements. These include the introduction of new obligatory and elective subjects and pedagogical assistants in primary schools.

<sup>4</sup> In preschool and primary education only.

<sup>5</sup> Bylaw N°80-2010, “On Criteria for Passing an Act on Preschool Institution Network and an Act on Primary School Network”

*The most powerful incentive for an efficient system of education financing in the country, including school network rationalization, will be the introduction of per-student financing approach.* In effect, such financing system will set out the new rules which will increase efficiency and equity in education funding across the country. Given the demographic trends in Serbia, with less children enrolling primary education, the expected immediate effect of the new financing system will be the decrease in public spending in the sector. In the same way, in case of reversal of the demographic trends, the per-student financing will allow for an increase of public spending for education that will be adjusted to the number of children, their characteristics and the education needs.

*In late 2009, the Law on the Foundations of the Education system was enacted, creating the basis for per-student financing for primary and secondary education.* In the school year 2011/12, the Government has started the pilot of the central per-student formulae in 16 municipalities across the country (10 percent of all municipalities). Actual funds continue to be allocated on the basis of inputs, but the MoES calculates how much each municipality would have received if the capitation formula were in place. Full roll-out of the per-pupil financing reform would not occur until the start of the school year 2014/15, as stipulated by the Law.

## The Ongoing Education Financing Reform—Per Student Financing for Pre-University Education in Serbia<sup>6</sup>

The 2009 Framework Law on Education envisions the new financing system to be introduced gradually from 2011/12 and completed by 2014/15. The core principle is that the education institutions will be funded on the basis of a per student amount which covers all current costs of the educational program (Art. 155). The per student financing system should be designed to serve the following objectives:

- To ensure adequate funding for each institution to provide the educational programs for its students that are specified by laws and national standards;
- To promote efficiency in the use of resources in education;
- To distribute resources equitably;
- To promote inclusion in the education system where all children should have equivalent access to education regardless of differences in gender, religion, nationality, educational needs and family income;
- To have a transparent and accountable school financing system; and
- To stimulate greater involvement of parents and local communities in the education of the young people.

The Serbia's Ministry of Education and Science opted for the two-stage model of financing in the transfer of funds from MoES to schools. At the first stage, the central government would use a per student formulae to determine the amount of education transfer each municipality receives, and, at the second, the municipalities would have some flexibility in redistributing the municipal education transfer between schools according to a local per student formulae.

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<sup>6</sup> Adapted from the 'Policy Options: A Per Capita Financing System for Pre-University Education in Serbia' by the MoES's consultant Rosalind Levacic.

In this system, in order to give flexibility to the schools in deciding the best use of the available resources, the schools would receive a lump sum budget allocation. The school principal, in co-operation with the School Board, would develop a budget plan for the school which is then executed over the financial year by the principal, and monitored by the School Board and municipality. The two-stage transfer model has considerable advantages over the direct transfer for the Republic of Serbia as it is a medium sized country, with too many schools with different characteristics for the MoES to be able to use a formula only to fund the schools directly.

In a per student funding system, different groups of students are identified according to distinct differences in unit costs. The MoES will need to determine, in consultation with other stakeholders, the student categories that are included in the per student funding formulae and the relative cost weightings of these different categories. In addition to the cost differentials caused by differences in student grades and types of schools they are attending, class hours per week, class size and teacher class hours per week, as specified in the Serbian laws and by-laws, the new financing model will introduce the additional weights for the following student categories:

- Minority national language students who need to be taught more hours or in smaller classes than majority language students;
- Students in municipalities where small schools must be maintained in order to ensure access;
- Socially disadvantaged students in order to promote social inclusion; and
- Students with special educational needs who are integrated into regular schools.

As a result of the introduction of this system, in some cases small schools that are located near to other schools with spare capacity could be closed and the students transported to a nearby school. The money saved can then be used to improve the facilities at the remaining schools. However, in sparsely populated rural areas many of the small schools will need to be kept open in order to preserve access to education, as it is

not possible to transport students to another school within an acceptable journey time. Consequently, it is recommended that the MoES sets criteria for 'protected schools' that should be kept open in order to ensure access to education for all students.

The proposed model is currently piloted in 10 percent of all Serbia's municipalities (16 of them). The purpose of the pilot is to develop the centre-to-municipal formulae (state formula) for determining education transfers to municipalities, and to pilot municipal-to-school funding formulae and to gain experience in schools managing their own budgets. As this is a pilot, the selected municipalities are fully protected, and are receiving an equal amount of funding as if they had continued to be funded according to the present system. The criteria for selecting pilot municipalities were: (i) interest in participating in the pilot; (ii) administrative capacity; and (iii) selected municipalities reflect a range of different characteristics in the country including different challenges of inclusion of the vulnerable children in education.

## Serbia’s School Finance System Results

### Goal 1: Ensuring basic conditions for learning

Advanced ●●●●●

School finance systems should create an environment that supports and encourages learning. To do so, systems must provide adequate resources to ensure that all students have the opportunity to receive a high quality basic education and set performance goals to drive the effective use of resources. Although standards of student achievement, as well as the costs to reach those standards may vary across countries and student groups, there is a minimum amount of resources required to produce learning outcomes. SABER-School Finance uses two levers to assess progress in this goal: (1) Are there policies to provide basic inputs? and (2) Are there established learning goals?

**(1) There are policies in place to provide necessary educational inputs.** In Serbia, policies ensure basic infrastructure, instructional materials, and qualified teachers. Using policies to stipulate which inputs should be provided is in line with successful education systems such as Ontario, Canada, where the school funding policy explicitly provides resources for qualified teachers, textbooks, librarians, classrooms computers, and other inputs. In Serbia, teacher qualifications of at least ISCED 5A (a Bachelor’s degree) for primary and secondary school teachers meet standards that are required in most high-performing systems.

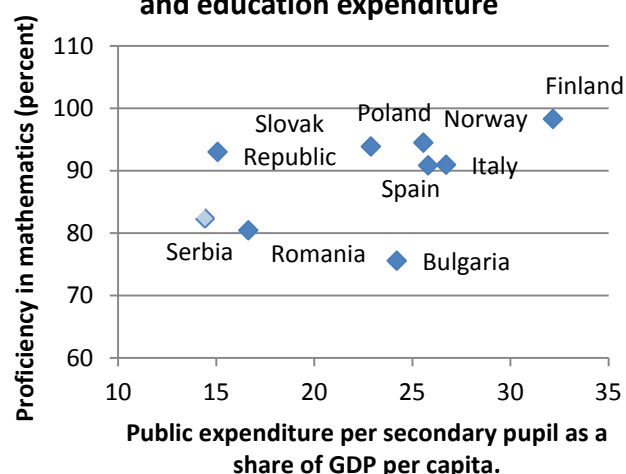
**(2) Performance goals in education show ambition, requiring that primary and secondary students progress to the next level of education or enter the workforce successfully, as well as meet intermediate targets.** Specific and limited performance goals, such as proficient scores on a national assessment or students that are well-prepared to enter tertiary education, allow successful school finance systems (such as France, Japan, and the Netherlands) to set targets and measure success in delivering quality education. Serbia’s performance goals also include increased levels of enrollment, completion, and proficiency.

#### Box 1. Policy in practice

Although policies to ensure basic conditions are strong in Serbia, less students have proficiency in mathematics than students in comparator countries of the Finland, Italy, Norway, Poland, Slovak Republic, and Spain. Serbia also spends less on secondary education per pupil as a share of GDP per capita (see Figure 5). Serbia does provide some basic inputs widely, as almost all secondary schools have access to computers, more than comparator countries (see Figure 6).

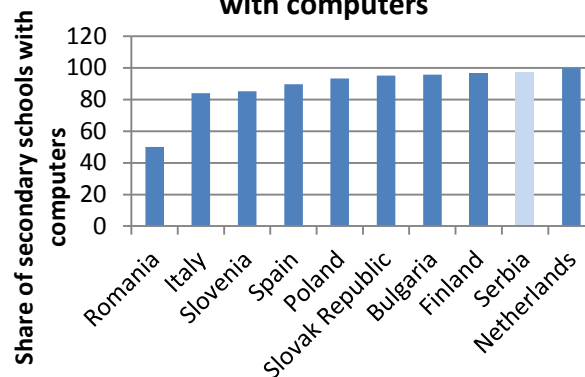
Source: SABER-School Finance (2012).

**Figure 5: Proficiency in mathematics and education expenditure**



Source: Public expenditure as a share of GDP per capita (EdStats and PISA 2009 (OECD))

**Figure 6: Share of secondary schools with computers**



Source: PISA 2009 (OECD) and SABER - School Finance



## Goal 2: Monitoring learning conditions and outcomes

### Emerging ●●○○

Accurate information on learning conditions and outcomes is necessary for informed decision-making about spending. Data are particularly useful to encourage objective decision-making in challenging political economy environments. As more data become consistently available, policymakers are more likely to use them (Crouch 1997). Knowing which inputs are available will inform school finance policymakers about how funds are being used at the school level, and access to assessment results will show whether funds are being used effectively. SABER-School Finance uses two levers to assess progress in this goal: (1) Are there systems in place to monitor learning conditions? and (2) Are there systems in place to assess learning outcomes?

**(1) Current monitoring systems do not track most learning conditions in schools.** Student enrollment and teacher rosters are reported at least annually, but there is no school census to document other school characteristics. Indeed, systems do not exist to monitor the availability of basic infrastructure (such as potable water, electricity, and functional hygienic facilities) or textbooks. Successful education systems, including the United Kingdom and Ontario, Canada, usually document other learning conditions as well as enrollment and teacher information. With these data, policymakers can consider the availability of basic infrastructure and instructional materials in order to redirect resources to the neediest schools or to take action with schools that do not provide the desired inputs. Additional administrative information on current enrollment and teacher rosters at the school level allows budgets to be systematically allocated to represent school and student needs (Porta & Arcia 2011). Ultimately, the monitoring of learning conditions is only useful if the data are actually used by the actors in school finance system (Amin et al. 2008).

**(2) National large-scale student achievement assessments occur, but their frequency and coverage are too low to inform school finance decisions.** In Serbia, a representative random sample of students allows policymakers to make assumptions about the student population as a whole, but assessments only

test the abilities of primary school students. The extent to which exams cover students in all grades on a regular basis influences the scope of information available to policymakers on student performance (Clarke 2011), and the degree of disaggregation of student assessment results (for example, by student group or school) influences how well data can be used to inform school finance decisions (Ferrer 2006). Most importantly, assessment results should be available to those in the planning unit so they can make information on resource allocations.

#### Box 2. Use of data in Ontario, Canada<sup>7</sup>

In the province of Ontario, Canada<sup>8</sup> the Ministry of Education's (MOE) performance goals include increases in proficiency and secondary graduation rates. In order to meet these defined targets, the MOE began collecting regular data on student assessment results under the Literacy and Numeracy Secretariat and identifying underperforming schools. Learning outcomes data are then used by the Turnaround Schools Program to provide additional assistance of funding and coaching by experienced school administrators where these resources are needed most. This targeted support has influenced improvement over the years: from 2003 to 2007, the share of schools meeting the literacy standard increased from 53 to 64 percent.

## Goal 3: Overseeing service delivery

### Established ●●●○

In addition to creating and monitoring education policies, an efficient school finance system should confirm that financial resources are converted into learning opportunities at the provider level. The provision of high-quality education requires adequate service delivery in addition to physical inputs. There is no guarantee that reported public expenditure on education even reaches schools (Reinikka & Svensson 2004), let alone that resources are used well to provide

<sup>7</sup> Adapted from Orland, M. (2011). *School Turnaround Policies and Practices in Australia, Canada, England, and New Zealand*. WestEd. Available online: <http://www.wested.org/>

<sup>8</sup> In Canada, provincial governments are responsible for primary and secondary education.

schooling, so it is imperative that school finance systems have mechanisms to measure the quality of service delivery at the school level. SABER-School Finance examines these mechanisms using two levers: (1) What mechanisms are in place to verify the availability of physical resources at schools? and (ii) What mechanisms are in place to verify the availability of human resources in schools?

**(1) Mechanisms to monitor availability of learning materials and school construction exist, but mechanisms could be established to track effective school days.** In Serbia, school construction is monitored by a government authority (not just the contractor), which should reduce corruption. In addition, systems to check how many primary and secondary schools have the prescribed textbooks within 1 month of the start of the school year exist, which may shorten delays in the disbursement of textbooks. However, there is no information on how many days students actually spend in school. Research shows that increases in instructional time are linked to learning gains across subjects and settings (Lavy 2010; Bellei 2009; Cerdan-Infantes & Vermeersch 2007). School finance systems should make sure that resources are used to the fullest extent possible, including maximizing potential learning time. The number of hours that students spend in schools can vary widely, making it crucial to monitor the number of school days that take place at each school. For example, in Chile, a rapidly-improving education system, hours of instruction varied by school from 900 to 1,600 hours (UNESCO-UIS 2008).

**(2) There are systems in place to monitor teacher attendance and penalties for absenteeism if necessary, but substitute teachers are not provided when absences occur.** In Serbia, teacher attendance is monitored by a school authority, and penalties for unexcused absences include dismissal. Instruction, and therefore teacher attendance, is the most crucial factor in the use of education resources; student learning will not occur if teachers are not present. Serbia does not provide substitute teachers, but expects present teachers to stand in for those absent. Hong Kong, the United Kingdom, Japan, and Ontario, Canada provide substitutes. In some countries, substitutes rarely replace absent teachers, and so students simply mill around, go home or join another class, often of a different grade. Because higher-income areas have

lower absence rates, lack of substitute teachers can increase inequality in learning opportunity as well as diminish the level of learning outcomes (Chaudhury et al. 2006).

### Box 3. Substitute teachers in the Flemish community of Belgium

In education systems without established mechanisms to identify and pay substitute teachers, it is difficult to provide replacements for absent teachers. To confront these issues, the Flemish Community of Belgium's Ministry of Education has created an efficient and stable supply of substitute teachers in the Replacement Pool of substitute teachers. The pool provides a supply of teachers available for short-term teaching who receive consistent salaries from the Ministry of Education. The teachers choose a preferred geographic area, and then are assigned to an anchor school, where they work when they are not required to replace teachers in other schools, making it is easier for schools to find substitutes for absent teachers, and beginning teachers have job security and a salary for at least one year.

## Goal 4: Budgeting with adequate and transparent information

### Established ●●●○

Although the Ministry of Finance often sets the overall allocation of resources for the education budget, sound budget preparation requires participation from many actors in the school finance system, including central and subnational education authorities. Throughout the process, information is essential to develop a budget that reflects sector priorities and to communicate that budget to education stakeholders. SABER-School Finance uses two levers to assess progress in this policy goal: (1) Is information used to inform the budget process? and (2) Is the budget comprehensive and transparent?

**(1) Detailed forecasts of education expenditure are prepared for multiple years, and explicit criteria are used to determine capital budgets.** In Serbia, forecasts of education expenditure are prepared for 3 future years in addition to the current year, and include predictions of expenditure by current, capital, primary and secondary breakdowns which is mostly based on historical spending levels. In the same way, student enrollment and teacher demographics are taken into account during budget preparation, but these factors

only impact the capital budget, not the current – which constitutes the largest share of the education spending. Some successful school finance systems, including Poland, the United Kingdom, and the Netherlands, use per student formula to allocate current expenditure as well. A clear and rule-based funding method allows educational stakeholders to hold the education system accountable as it transfers resources between levels of government and finally to schools (Alonso & Sanchez 2011).

**(2) The education budget presents extensive information on budget classification and history, but more budgetary information could be publicly available.** Serbia’s education budget provides thorough information on the amount of the current year’s budget, the share of budgeted resources that were spent in the previous year, and explanations of budget implications for new policy initiatives. The budget is also classified into a few categories: administrative, economic, and sub-functional. In addition, subnational education transfers and expenditures are reported in a timely manner. However, Serbia does not provide information on the mid-year execution of the budget or availability of resources at schools, which would increase transparency. Successful education systems such as Ontario, Canada and New Zealand report on the availability of resources at the school level.

#### Box 4. Per student funding in Lithuania<sup>9</sup>

In 2002, Lithuania instituted per capita financing of education to increase efficiency of spending. Education was already managed by rayons (municipalities), who received negotiated transfers from the central level, but funding on a teacher basis encouraged schools to employ more teachers than necessary. The Student Basket financing reform directs funding based on enrollment, and clearly defines municipal and central responsibilities. The central government uses the Student Basket to finance the *teaching process*, which includes teacher salaries, education support staff, textbooks, and other education functions (about 65% of total education budgets). The Student Basket is calculated primarily by factors of school size and number of lessons taught, as well as equitable considerations such as special needs and at-risk students. Municipalities finance the *teaching environment*, which includes the salaries of maintenance staff, energy and transportation costs, and other remaining school expenditures. This approach provides municipalities with stable funding from the central government and increased efficiency, as decision-making occurs closer to those who directly provide services.

### Goal 5: Providing more resources to students who need them

#### Established ●●●○

Promoting equity in financing of education is essential for several reasons. Access and the opportunity for success in education should not depend on a student’s background. However, socio-economic background, as well as other non-school factors, is often the most important determinant of completion and learning by students (Glick & Sahn 2009; Filmer 2008; Patrinos & Psacharopoulos 1992). Additional resources in schools may compensate for disadvantaged backgrounds (Baker & Green 2008; Rivkin, et al. 2005). Efforts on the demand side to reduce fees may increase the opportunity for the poorest and girls to attend school

<sup>9</sup> Adapted from Herczynski, J. (2011). “Student Basket Reform in Lithuania: Fine-Tuning Central and Local Financing of Education.” In J.D. Alonso and A. Sanchez (Eds.) *Reforming Education in Per Capita Financing Systems*. Washington, DC: The World Bank.

(Kattan 2006). SABER-School Finance considers two policy levers that education systems can use to distribute funds according to students' needs: (1) Are more public resources available to students from disadvantaged backgrounds? and (2) Do payments for schooling represent a small share of income for low income families?

**(1) There are system-wide policies in place to provide additional resources to support students with disadvantaged backgrounds and special needs, although methods to identify these students could be improved.** Additional resources are provided to all municipalities and schools with eligible students from disadvantaged backgrounds under the Delivery of Improved Local Services (DILS) and the Instrument for Pre-accession Assistance (IPA) programs. These programs provide school grants to increase inclusion of students from socio-economically disadvantaged backgrounds, Roma students, and students with special educational needs (including visual, hearing, mobility, cognitive, and socio-emotional). Special needs students receive their education in both special schools and mainstreamed education, as they do in successful education systems such as Finland and the Netherlands. There are also policies to target demand side constraints, including secondary school scholarships for Roma students and cash transfers to households of poorer students. However, Serbia identifies the needs of disadvantaged students by projections of historical levels, not by the best practices of household survey analysis or current student demographics (Coady et al. 2003).

**(2) Payments for primary and secondary schooling do not exist.** In Serbia, there are no primary or secondary school fees for tuition, Parent Teacher Associations, textbooks, matriculation, or assessments. School fees, or direct costs of education, may seem small, but they should be considered as additional burden to the indirect opportunity costs creating by attending school (Kattan 2006). Serbia is in line with other successful education systems that have eliminated school fees,

including Finland, Ontario, Canada, and Belgium (Flemish community).

#### Box 5. Identifying disadvantaged students in the Netherlands<sup>10</sup>

The Netherlands was recently identified by its PISA scores as a country where disadvantaged students are more likely to succeed than elsewhere (OECD 2011), as almost one-half of disadvantaged students are high achievers in PISA assessments. To close the performance gap between disadvantaged students and their more advantaged peers, the Netherlands provides disadvantaged students with funding to support additional learning opportunities. Students are identified as disadvantaged on an individual basis by their parents' educational levels and immigrant status. Although it requires effort to identify students individually instead of geographically or historically, individual identification ensures that funding follows students that are in need. The funding mechanism is successfully implemented: primary schools with the highest proportion of disadvantaged students have on average about 58 percent more teachers and more support staff than schools with the lowest proportions.

## Goal 6: Managing resources efficiently

### Emerging ●●○○

Experience in developing and developed countries has shown that providing resources is not enough to ensure good learning outcomes. Tracking inputs and outputs well is another important step, but it is not sufficient either. Well-developed school finance systems also include governance arrangements that can hold all parties accountable for using resources effectively for their intended purposes. Such mechanisms include ways of paying and monitoring teachers and education staff, for example (Fiszbein et al. 2011). SABER-School Finance uses two policy levers to assess the efficiency of the expenditure process: (1) Are there systems in place to verify the use of educational resources? and (2) Are education expenditures audited?

<sup>10</sup> Adapted from Ladd, H.F. and Fiske, E.B. (2009). "The Dutch Experience with Weighted Student Funding: Some Lessons for the U.S." Durham, North Carolina: Duke Sanford School of Public Policy.

**(1) School construction contracts are procured through open competition, but personnel and payroll databases are updated infrequently.** Governments should award contracts for school construction through open competition as Serbia does in order to ensure the best value for money and reduce corruption. However, teachers' salaries often account for a larger share of the budget than capital expenditures, making an accurate list of all education staff who should be paid every pay period necessary. In Serbia, the personnel database is only updated and checked against the payroll database 1 or 2 times a year, unlike the recommended 6 to 8 times per year (PEFA Secretariat 2005). The personnel database should be updated frequently to account for transfers, dismissals, and new hires, and verified periodically against the payroll database to reduce waste.

**(2) Both internal and external audits of education expenditure take place, but reporting procedures for the internal audit could be improved.** In Serbia, internal audits are issued annually, and have possible consequences of improved financial supervision. However, these reports are not shared with the Ministry of Finance or Supreme Audit Institution as best practices advise (PEFA Secretariat 2005). External audits in Serbia are of a high quality, as they cover revenue and expenditure, take place regularly, and include formal follow up. External audits verify whether resources have been used for their intended purposes, and quality internal audits are necessary to provide regular feedback on the management of funds before a formal external review.

#### Box 6. Validating teacher payroll and personnel data in Montenegro<sup>11</sup>

In Montenegro, teacher payroll and personnel databases are reconciled on a monthly basis before payments of teacher salaries are made. Education sector employees, including teachers, are paid indirectly through schools, which verify teacher rosters to submit a monthly payroll request to the Ministry of Education. The Ministry of Education adjusts its request for payment from the Ministry of Finance accordingly. After the Ministry of Finance transfers funds to the schools' bank accounts, the schools distribute the salaries electronically to individual teachers' accounts. Thus, there is a clear trail of teacher salary payments, and employment status is confirmed on a monthly basis.

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<sup>11</sup> Adapted from PEFA. (2009). "Montenegro: Public Expenditure and Financial Accountability Assessment, Public Financial Management Performance Report." Washington, DC: The World Bank.

## Main findings of the SABER-School Finance Exercise in Serbia with recommendations

In addition to laying out the ongoing efforts of the Serbia's government in managing public expenditure in education, as discussed in the introductory sections, there is a separate school finance policy agenda focusing on a set of areas contributing directly to the results of school learning: the basic conditions for learning, monitoring learning conditions and outcomes, overseeing service delivery, budgeting with adequate and transparent information, providing more resources to students who need them, and managing resources efficiently.

### 1. Ensuring basic conditions for learning



There are policies in place to provide basic educational inputs, and performance goals in education are ambitious.

### 2. Monitoring learning conditions and outcomes



Current monitoring systems do not track most learning conditions in schools; national large-scale student achievement assessments should occur more frequently and cover grades in secondary schools as well. To advance in this area Serbia could:

- Increase efforts to monitor basic infrastructure and learning materials, as well as the student achievements at primary and secondary level of pre-university education;
- Develop a policy framework for monitoring student achievements using a mix of assessment types aligned with the education system objectives, which should have clear calendar, costing and funding sources; and
- Include in Serbia's developing EMIS the updated information on school-level indicators on schools finances and student outcomes.

### 3. Overseeing service delivery



Mechanisms to monitor the availability of physical resources do not exist, neither the system to monitor the number of days students actually spend in schools; there are systems to encourage teacher attendance, but qualified substitute teachers sometimes are not provided when absences occur.

- Regular reports on the status of physical resources in the primary and secondary schools are needed to inform investment in the country's school infrastructure. This planning should be aligned with the government's effort to increase efficiency in education, i.e. tightly coordinated with the plan for the optimization of the school network.
- Information systems to track teacher roster and its deployment are needed to enable human resources management for better system results.

### 4. Budgeting with adequate and transparent resources



The budget is informed by forecasts of education expenditure and a set of criteria; budget documents provide expenditure information, but the wage bill data are not adequately reported.

- Although budget planning takes place within the three-year cycles, it is based on historical budgets instead of the actual data. The budget is still organized based on the demand for inputs and is not led by the information on student cohorts and its characteristics.
- The country should continue to implement its education financing in line with the plans to roll-out the per capita formulae in the school year 2014/15, as defined by the 2009 Framework Law on Education.
- Introduction of an operational Education and Management Information System will make possible greater accountability of spending education resources.

## 5. Providing more resources to students who need them



System-wide policies provide additional resources to support students with disadvantaged backgrounds and special needs, but methods to identify these students do not follow best practices; payments for primary and secondary schooling do not exist.

- In addition to having the advanced policy framework for education of the disadvantaged and special-needs students, Serbia will need to base the implementation of these policies on the data from household surveys and student demographics.
- Education financing reform will be help in these efforts as the per-capita formulae in education designed for Serbia is weighted for disadvantage.

## 6. Managing resources efficiently



Open competition is the default method of procurement, but personnel and payroll databases are only updated once or twice a year; reporting procedures for internal audits until recently did not involve outside authorities

- Serbia should develop systems to increase the frequency of updating the personnel and payroll databases for teachers and other education staff on a monthly basis.
- Data on personnel and payroll should be subject of the internal audits with the Ministry of Finance and/or the Supreme Audit Institution.

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