



The World Bank

EDUCATION NOTES

February 2012



67647

EDUCATION FINANCE:

IT'S HOW,
NOT SIMPLY HOW MUCH,
THAT COUNTS

Why is Education Finance Important?

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 such as the Programme for International Student Assessment (PISA). Even within an education system, student achievement varies among localities that spend comparable amounts (Wagstaff and Wang 2011). The observation that learning outcomes are seemingly unrelated to spending levels supports the argument that **how** money is spent, not simply **how much**, matters in education finance.

Although the availability of financial resources does not guarantee quality education, it is impossible to achieve this goal without adequate resources (Reschovsky and 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). Governments are responsible for using these public funds in a way that promotes the highest possible learning levels, especially given the shrinking budgets produced by the recent economic crisis. Understanding how to use resources for education wisely should thus be a top priority for all education policy makers.

What are the Core Areas of an Education Finance System?

Education finance systems provide funding to schools so that, ultimately, all students can learn. To discern what matters in this complex process, it is important to understand the five core areas of an education finance system (Figure 1):

- **School conditions and resources.** Funding helps schools meet minimum quality standards—including essential teaching inputs, instructional conditions, and other basic resources—that attract students and teachers and also provide an adequate learning environment.
- **Allocation mechanisms.** Every education finance system has informal or formal rules that determine the size of the budget, distribution of resources across levels of government and schools, and in some cases, the nature of spending among different inputs, such as capital and current needs.
- **Revenue sources.** The composition and amount of revenue may differ across systems, but an appropriate balance among possible public, private, and international revenue sources is necessary, especially when the capacity to generate revenue varies among subnational or local divisions, which may create wide disparities in resources available for learning.

What matters in education finance is how money is spent, not simply how much. Research shows that learning outcomes are seemingly unrelated to spending levels.



Figure 1. Core Areas of an Education Finance System



Source: SABER-Finance Team, World Bank.

- **Education spending.** Education spending represents the point at which monetary resources begin to promote learning outcomes. National, subnational, and local governments; the private sector; and sometimes even international actors may spend money on public education.
- **Fiscal control and capacity.** Fiscal control mechanisms are crucial for understanding education finance systems; they are used to plan, monitor, and execute a country's education budget. If resources are not used for their intended purpose, it is unlikely that education services will be of adequate quality.

What are the Challenges of an Education Finance System?

Recently, many countries have begun to realign their education finance systems to respond to a new emphasis on educational quality. Some developing countries are struggling to finance quality improvements while simultaneously expanding access. As access increases to include students who were less likely to attend school in the past, improving learning outcomes becomes difficult on the basis of a similar composition of resources. Education finance systems also face the challenge of assuring that resources are used for their intended purpose at the school level. Some countries are accordingly making more of an effort to improve the accountability of education finance through better governance.

What are the Key Policy Goals of an Education Finance System?

Education finance systems should strive to achieve three essential policy goals: (i) ensuring adequacy; (ii) promoting equity; and (iii) performing efficiently (Figure 2). The World Bank SABER-Finance team targets these policy goals because they are widely shared across countries and allow education finance systems to promote learning. Adequacy and equity are foundational concepts that compel education systems to provide the minimum resources necessary for all students to learn, regardless of their backgrounds (Underwood 1995). Efficiency in education finance involves a close look at how these resources are allocated, distributed, and monitored.

Ensuring adequacy

Do education finance systems provide adequate resources for all students to receive a high-quality basic education? At a minimum, finance systems should put policies in place that ensure the provision of essential inputs to all students and then monitor access to these inputs. Ideally, these systems should provide inputs to all students at a minimally acceptable level. The precise mix of desired inputs is hard to identify; it is also difficult to demonstrate how individual inputs contribute to student learning (Hanushek 1986). However, findings show that some school inputs and, therefore, some educational investments, positively impact school outcomes, if used effectively (Pritchett and Filmer 1999; Glewwe and others 2011). This is particularly true in low-income settings or where enrollment is not yet universal (Heyneman and Loxley 1983; Harbison and Hanushek 1992). In addition, governments must make adequate efforts to commit appropriate funding to education based on their ability to spend—and do so over time in a way that reflects increases in national wealth.

Promoting equity

Do education finance systems seek to improve the education outcomes of students from disadvantaged backgrounds and reduce outcome gaps among students? Equity in this sense means that students with different educational needs receive different and commensurate levels of resources. Socioeconomic background is often the largest determinant of whether a student has difficulty in completing his or her education, but ethnicity, gender, native language, and urban or rural residence also influence attainment (Filmer 2008). Special needs (e.g., physical disabilities and learning difficulties) also require differentiated funding. Students' contributions to their schooling should, moreover, not represent a burden, especially for the poorest households. Private expenditures supplement public funding for education

in many developing countries, where governments may be unable to generate sufficient resources to provide quality basic education. In some cases, however, required household payments for schooling represent a substantial portion of the earnings of low-income households, which often discourages enrollment, especially of girls (Kattan 2006; Oosterbeek and Patrinos 2009).

Performing efficiently

Do education finance systems promote the effective use of resources in a transparent and accountable manner? Governance policies related to the transfer of education resources substantially influence the quality of service delivery at the school level (Fiszbein, Ringold, and Rogers 2011). Governance also makes a difference when actual education expenditures do not resemble planned budgets and thus weaken the implementation of education policy. Accountability means that education finance systems provide necessary resources, collect information about the education services made possible with these resources, and enforce quality standards (see World Bank 2003). In addition to providing and monitoring funding, an efficient education finance system confirms that resources are converted into learning opportunities. Because reported public expenditures on education do not guarantee the implementation of education policy, the World Bank and other donors have recently made an effort to track expenditures against the quality of service delivery at the school level using tools like Public Expenditure Tracking Surveys (PETS) and Quantitative Service Delivery Surveys (QSDS).

Examples of Effective Education Finance Systems

Ensuring adequacy with per capita funding in Armenia

Armenia has recently undertaken a series of major but incremental education finance reforms, including decentralization and the use of per capita funding, to respond to demographic and political changes¹. At the time of the dissolution of the Soviet Union in the early 1990s, Armenia experienced a decline in education expenditures and a decrease in enrollment, but an increase in the number of teachers. The inefficiency

in spending was the result of previous school-funding methods, based on a simple adjustment of historic levels, bargaining, and discretionary decisions. To increase efficiency, Armenia shifted the responsibility for managing education resources to administrators at the subnational level through decentralization, and to schools through school-based management reforms. In addition, a per capita formula made funding more transparent. Resources are now allocated on a per student basis and adjusted for rural location, level of schooling, and special needs. These structural reforms, first piloted in 1999 and implemented throughout the system by 2007, have improved the efficiency of education finance tremendously, increasing class sizes to appropriate levels and making excess teachers redundant.

Promoting equity with differentiated funding in Ontario, Canada

The Canadian province of Ontario has strong policies in place to provide additional resources to students from disadvantaged backgrounds. Despite the fact that 24 percent of the student population has an immigrant background and 15 percent come from a poor household, Ontario has been a top performer on the PISA international assessment since 2000. Of note, there is very little correlation between PISA scores and student disadvantage in the province. Many factors, including education finance policies, contribute to the high learning levels of students in Ontario, regardless of their backgrounds. The province distributes resources to school boards based on an equalization formula. Funding is equitably distributed so that all local education authorities have enough resources for education, regardless of a

Figure 2. Key Policy Goals of Education Finance



Source: SABER-Finance Team, World Bank.

¹ This section is adapted from Kataoka (2011).



locality's ability to generate revenue. In addition, the funding formula provides specific support to students who have special needs, speak a different first language, come from an indigenous background, live in an urban or rural location, or have certain socioeconomic backgrounds. These resources enable the provision of intensive language classes, student success coaches, special needs teams, and other programs designed to raise the achievement of student groups that face greater challenges.

Looking Forward

Diverse actors and stakeholders with different perspectives and motivations manage the flow of resources in an education finance system and hold one another accountable. The policy goals of ensuring adequacy, promoting equity, and performing efficiently should guide these actors so that the funding process provides resources to schools effectively and meets public finance objectives.

References

- Edstats (Education Statistics Database). n.d. World Bank, Washington, DC. <http://go.worldbank.org/ITABCOGIV1>.
- Education Week. 2012. "Quality Counts 2012: The Global Challenge." Bethesda, MD: EPE Research Center.
- Filmer, D. 2008. "Inequalities in Education: Effects of Gender, Poverty, Orphanhood, and Disability." In *Girls' Education in the 21st Century*, ed. M. Tembon and L. Fort, 95–114. Washington, DC: World Bank.
- Fiszbein, A., D. Ringold, and F. H. Rogers. 2011. "Indicators, Assessments, and Benchmarking of the Quality and Governance of Public Service Delivery in the Human Development Sectors." World Bank Policy Research Working Paper 5690. World Bank, Washington, DC.
- Glewwe, P. W., E. A. Hanushek, S. D. Humpage, and R. Renato. 2011. "School Resources and Educational Outcomes in Developing Countries: A Review of the Literature from 1990 to 2010." NBER Working Paper 17554. Cambridge, MA: National Bureau of Economic Research (NBER).
- Hanushek, E. A. 1986. "The Economics of Schooling: Production and Efficiency in Public Schools." *Journal of Economic Literature* 24 (3): 1141–77.
- Harbison, R. W., and E. A. Hanushek. 1992. *Educational Performance of the Poor: Lessons from Rural Northeast Brazil*. Washington, DC: The World Bank.
- Heyneman, S. P., and W. A. Loxley. 1983. "The Effect of Primary- School Quality on Academic Achievement across Twenty-Nine High- and Low-Income Countries." *The American Journal of Sociology* 88 (6): 1162–94.
- Kataoka, S. 2011. "Per Capita Financing of General Education in Armenia." In *Reforming Education Finance in Transition Countries*, ed. J. D. Alonso and A. Sanchez, 10–32. Washington, DC: World Bank.
- OECD. 2011. *Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States*. Paris: OECD.
- Pritchett, L., and D. Filmer. 1999. "What Education Production Functions Really Show: A Positive Theory of Education Expenditures." *Economics of Education Review* 18 (2): 223–39.
- Reinikka, R., and J. Svensson. 2004. "The Power of Information: Evidence from a Newspaper Campaign to Reduce Capture." World Bank Policy Research Working Paper 3239. World Bank, Washington, DC.
- Reschovsky, A., and J. Imazeki. 2001. "Achieving Educational Adequacy through School Finance Reform." *Journal of Education Finance* 26 (4): 373–96.
- Underwood, J. K. 1995. "School Finance Adequacy as Vertical Equity." *University of Michigan Journal of Law Reform* 28 (3): 493–519.
- Vegas, E., and C. Coffin. 2012. "SABER-Finance: What Makes an Education Finance System Effective?" Education Unit, Human Development Network, World Bank.
- Wagstaff, A., and L. C. Wang. 2011. "A Hybrid Approach to Efficiency Measurement with Empirical Illustrations from Education and Health." World Bank Policy Research Working Paper 5751. World Bank, Washington, DC.
- World Bank. 2003. *World Development Report 2004: Making Services Work for Poor People*. Washington, DC: World Bank.

Education Notes is a series produced by the World Bank to share lessons learned from innovative approaches to improving education practice and policy around the globe. Background work for this piece was done in partnership, with support from the United Kingdom's Department for International Development (DFID). For additional information or hard copies, please go to www.worldbank.org/education or contact the Education Advisory Service: eservice@worldbank.org.

Author: Emiliana Vegas and Chelsea Coffin **Photo Credit:** Jonathan Ernst/World Bank